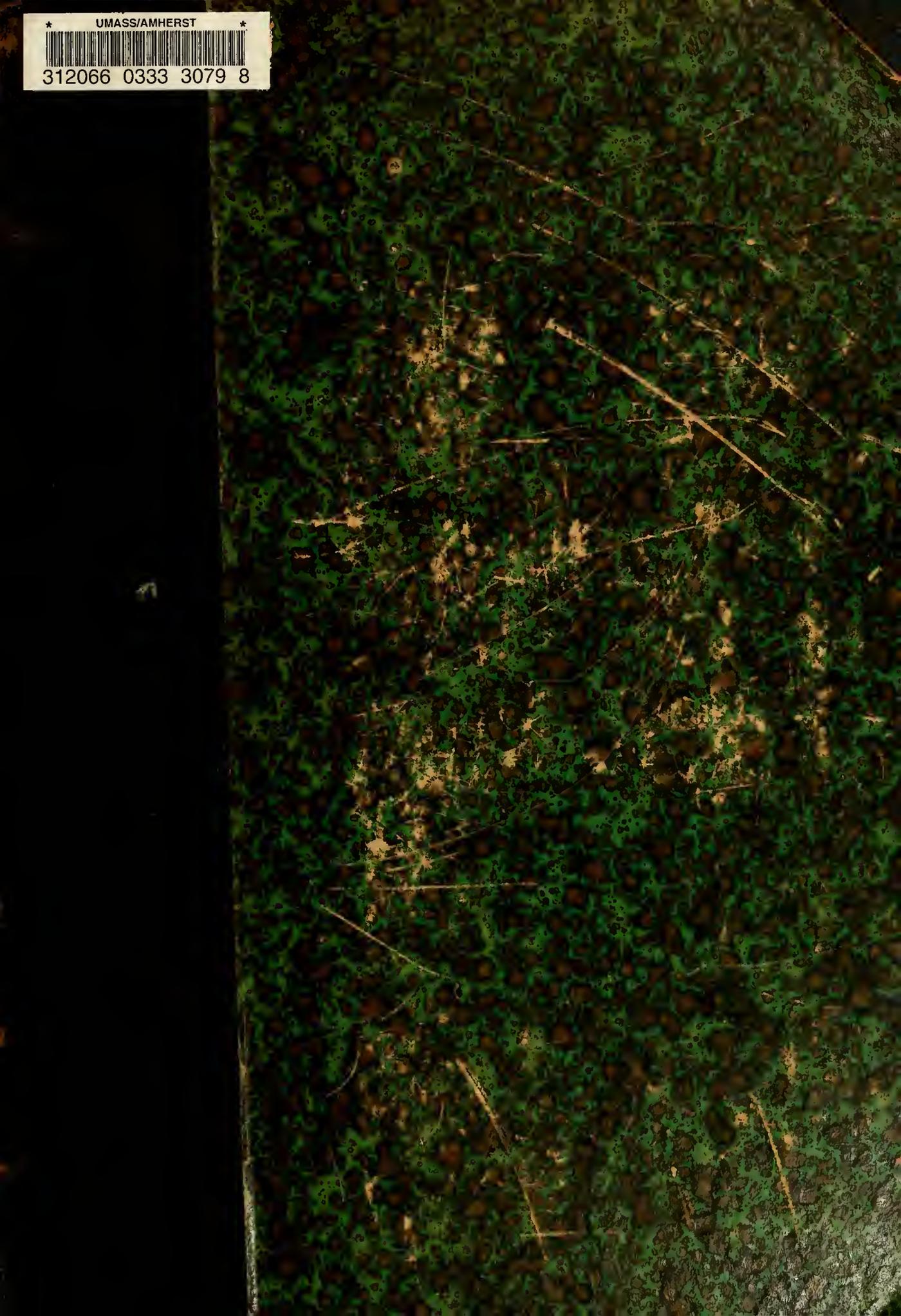


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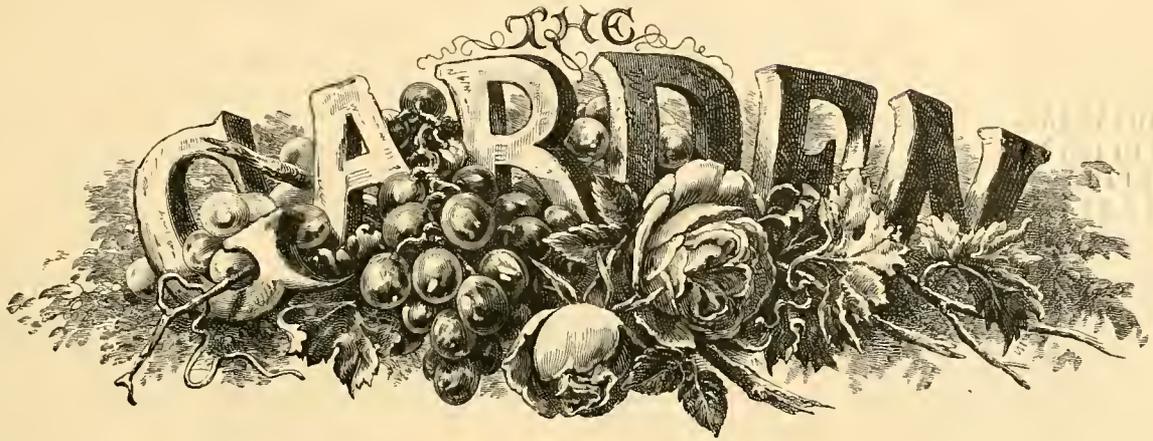
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THE REV. W. WILKS, M.A.



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— TO THE —

REV. W. WILKS, M.A.,

VICAR OF SHIRLEY, SURREY, AND SECRETARY OF THE ROYAL
HORTICULTURAL SOCIETY,

THE SEVENTY-SECOND VOLUME OF "THE GARDEN"

Is dedicated.

IT is with pleasure we are able to dedicate the present volume of THE GARDEN to one of the most enthusiastic and practical workers among the flowers of the present day. Much of the success of the Royal Horticultural Society is due to Mr. Wilks, who has been not only secretary, but an organiser of remarkable capabilities. The Royal Horticultural Society has been rescued from financial troubles; its influence for good in the world of Horticulture is immense, and the fortnightly meetings held in the spacious hall are filled not only with rare and beautiful exhibits, but they have fostered a deep love of gardening in the hearts of those that crowd to see them, especially in the height of the London season. Mr. Wilks for many years gave his services to the society, and in many ways has shown his interest in Horticulture. We think of his generosity in distributing seeds of the exquisite Shirley Poppies, famous the world over, to the Fellows of the Royal Horticultural Society, and of his love for the Church which he serves so well.

Mr. Wilks, who was born at Ashford, in Kent, on October 17, 1843, is one who requires understanding, but he commands respect and admiration—a straightforward, business-like, Christian gentleman—and of such men England may well be proud. An account of Mr. Wilks's life appeared in THE GARDEN of May 26, 1900.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices : 20, Tavistock Street, Covent Garden, W.C.

GOOD EARLY PEAS FOR AMATEURS.

THE question often arises at this season of the year as to which are the best early Peas. Amateurs frequently have the means at command to get the best results, as the earliest sorts are usually small or compact in growth ; and if these are given a sunny south border and a friable, fairly rich soil, excellent dishes may be had in May and June, according to the locality. The old method to get early dishes was to sow in December, indeed, even earlier ; but this is not wise, as there are so many losses and the crop in our variable climate is so uncertain. There are two alternative plans, one which concerns glass or frame culture at the start, and the other growing entirely in the open.

CULTURE.

Glass or frame culture has been referred to, and by this is not meant using fire-heat. Cold frames are preferable, but it may be necessary in January or February to cover the frames during severe weather, as the plants are not far from the glass. The seeds should be sown in 5-inch pots not too thickly, and only just covered with soil. The latter should be made firm in the pots before sowing, and it should have been under cover for a time so as to be in a workable condition. Smaller pots may be used if desired, but if so less seed must be sown, as it is a mistake to crowd the seeds, which should be evenly distributed over the surface. After this work is done stand the pots in the frame on a firm bottom, water very carefully and keep the frames shut quite close for a month, covering with mats at night to exclude frost. Any warmth from sun-heat is beneficial and will assist germination.

The after-management is most simple. As growth is made ventilate more freely. Early in March the seedlings are ready to plant out in their permanent quarters. A south border or under a wall is a good position, and the ground should have been deeply dug and enriched with manure some time in advance of the planting. The rows should be from 2 feet to 3 feet apart, according to the variety. It is best to draw a rather deep drill for these early Peas, as

this protects from wind at the start and facilitates watering in dry seasons. Care should be taken not to break the tender roots, and it is a simple matter when planting to open out or spread the plants a little ; plant firmly, covering the roots with the fine top soil.

SOWING IN OPEN GROUND.

Many growers may not have frames at command, and the next best plan is to sow the same varieties in the early part of February, should the weather permit, on a well-drained sunny border, and in drills the same distance apart as suggested above. A sloping border should be given in stiff soil, but here it is advisable to lighten the land by a free use of old spent manure, fine mortar rubble, burnt garden refuse or wood ashes. The seeds require to be sown a little thicker at this season than they would three months later, but, should the plants be at all close, it is well to thin early, so as to give each plant room.

For this sowing a shallow trench or deep drill is recommended, and in covering the seeds it is not well to bury them under more than 2 inches of soil. In severe weather it is a great gain to place a little strawy litter over the rows, always removing it in fine weather, as if left on then it retards growth. Peas sown thus in good land will give dishes at the end of May or early in June, according to locality, and only a little later than those sown in frames.

VARIETIES TO SOW.

These are very numerous, but only those with a robust growth are quoted. The small round white Peas which looked so much favour years ago are not advised. Sutton's Pioneer is a splendid new Pea that grows nearly 2 feet high, is of unusually robust habit, and bears large pods. This Pea, sown early in March, was ready late in May. It is equal in quality to a maincrop Marrow, and is a remarkable cropper for such a rapid grower. Reading Wonder is also a splendid early Pea ; it is very dwarf, but bears a fine pod. Sown in February, it may be had for use by the middle of May. As this has a strong growth, it does grandly in a poor soil. Little Marvel is also a beautiful early variety, a great cropper and certainly rightly named, as last year it was our earliest variety. It is of splendid flavour and grows from 12 inches

to 18 inches high. The Peas are a dark green and the pods are closely packed. Early Giant is a little later and grows 3 feet to 4 feet high.

May Queen, 2 feet to 3 feet high, has splendid cropping qualities. Last season we had a splendid early Pea in Veitch's Langley Gem; this is one of the best for early borders. It has pods of the Chelsea Gem type, but larger, and is equal in quality to that excellent variety. It is also more robust, and constitutes a splendid forcing variety with branching habit. Veitch's Acme is also a fine early Pea of great merit, and Earliest Marrow is much liked. For forcing in frames or open ground, Carter's Eight Weeks is a grand variety and one of the earliest to mature. Carter's Early Morn and Daisy are also most reliable. G. WYTHES.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

APPLES COX'S ORANGE AND ALLINGTON PIPPINS.

Mr. Arthur Mountain of St. James's House, Grimsby, sends magnificent fruits of these two popular Apples, which would probably have taken first prizes at the Royal Horticultural Society's fruit show in October last. They are the best we have seen or tasted this year, which shows how excellent is our correspondent's system of culture, especially when it is considered where the trees are grown. Mr. Mountain writes: "I am again sending you a few Cox's Orange and Allington Pippins. I have, as usual, had an excellent crop of both varieties, good as regards flavour, colour and size. Last year and this I have taken nine firsts for dessert Apples with nine entries. The system on which the trees are grown is that of nine to twelve cordons very closely spurred, hollow centre, and little or no stopping of terminals. The result gives long straight branches studded with short spurs from bole to base of present season's growth."

SHRUBS FLOWERING IN WINTER.

Mr. H. A. Tipping, Mathern Palace, Chepstow, sends an interesting collection of flowering shrubs, which he describes below; the Winter Sweet was particularly good. "This season's somewhat queer climatic conditions are causing some vagaries among my shrubs. I send you sprays of Winter Sweet in bloom and of Myrtle, Ceanothus puniceus, Cydonia japonica and Ceanothus Indigo in bud. The former is normal enough; I often get it in bloom by Christmas if the weather is mild, but why buds on the Myrtle, which bloomed, as usual, last summer? You will notice the same condition of things on the Ceanothus twigs; beyond the well-developed seed-pods of the summer flowering are trusses of flower-buds already showing the blue colour of the blooms. The Ceanothus, I regret to say, has every shoot of the whole of its 10 feet of height covered with buds, not one of which, I presume, can live through the winter to bloom in the spring."

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

January 6.—National Amateur Gardeners' Association.

January 12.—Royal Horticultural Society, Meeting of Committees, 12 noon; Horticultural Club, 6 p.m.

January 18.—French Horticultural Society's Annual Dinner, Mr. H. J. Veitch in the chair.

January 23.—Gardeners' Royal Benevolent Institution Annual Meeting.

Coming of Age of the Royal Gardeners' Orphan Fund.—The Coming of Age festival in aid of this charity will take place at the Hotel Cecil on Tuesday, May 12, when the president of the fund, the Duke of Bedford, K.G., has kindly consented to preside.

Dedication to Miss Willmott, V.M.H.—We are very pleased to learn that the Editor of the *Botanical Magazine*, Lieutenant-Colonel Prain, C.I.E., LL.D., F.R.S., has dedicated the new volume to Miss Willmott, V.M.H., of Warley Place, Brentwood, Essex, to whom he alludes in appreciative terms.

Winter-flowering Carnation Society.—The spring show of this society is to be held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, on April 1 next. During the afternoon a lecture will be given by Mr. P. Smith, on "The Winter-flowering Carnation."

Kent, Surrey and Sussex Daffodil and Spring Flower Society.—The annual show of this flourishing society is to be held in the Great Hall, Tunbridge Wells, on Wednesday, April 15. With Earl Cranbrook as treasurer and Mr. Herbert Chapman, 101, High Street, Rye, Sussex, as hon. secretary it is safe to predict a splendid show of bulbous and other spring flowers on the date named. Copies of the schedule are now ready and can be obtained from the hon. secretary.

Rubber planting in Mexico.—The October and November "Bulletin of the Department of Agriculture for Jamaica" contains a most interesting article on the cultivation of rubber in Mexico and Central America, an industry that many will be surprised to learn has already become fairly well established there. The author apparently makes out a good case for using the name Castilla instead of the generally accepted Castilloa as the genus of South American rubber-producing plants.

Celery trial at Wisley.—A meeting of members of the fruit and vegetable committee of the Royal Horticultural Society was held in Wisley Gardens on the 18th ult., Mr. O. Thomas presiding, and a full quorum being present. The special object of the visit was to examine a large collection of Celery. This being the last trial of the year, some forty-four stocks of Celery and four stocks of Celeriac had been planted in trenches and in double rows, the Celery being well moulded up; but, because of the breadth of double rows, the tops of the ridges were flat, not a defect in dry weather, but with so much rain as has fallen of late it did serve to collect too much of it to the detriment of the outer leaf-stalks of those varieties that were rather of soft or hollow texture. In any case no variety or stock showing the latter defect obtained an award. Of those so honoured, all, with one exception, were coloured varieties, that one exception being the good old dwarf White Incomparable, put into commerce many years since by the late Charles Turner, and which so far has never had an award. This stock came from Nutting and Co. It was agreed that this and a stock named Sandringham Dwarf White were identical. Awards of merit were unanimously granted to the following: Early

Rose (Veitch and Sons), William's Matchless Red (Veitch and Sons), Grove Pink (Nutting and Co.), Pink Beauty (Barr and Sons), New Solid Pink (Barr and Sons); and previous awards to Standard Bearer (James Carter and Co.) and Ivery's Non-such Pink (Veitch and Sons) were confirmed. Evidently coloured Celeriac stand excessive wet better than white ones do, and generally seem late to show best flavour. Of the four stocks of Celeriac, one, the best, came from Veitch and Sons, and that had an award of merit also. Some four plants from every row were lifted, cut through the middle to expose the heart, and all rigidly examined. In no case was the name of the sender of the stock given until after the award to it had been made.

A new Pear.—A fine new Pear was placed before the fruit committee at the Royal Horticultural Society's meeting in December last. It was shown by Messrs. Cheal and Sons. The committee unanimously voted it an award of merit with an alacrity which was quite refreshing to witness, as it is so seldom that the committee is moved to enthusiasm by exhibits placed before it. The opinion generally expressed afterwards by those who had tasted the fruit was that this variety will at once take its place in the front rank of high quality Pears. It is named Beurré de Naghan, is of large size, pale golden in colour, reminding one a little of Duchesse d'Angoulême in size and outline, but infinitely superior to that variety in the texture of its flesh, being buttery, mellow, juicy and perfectly free from grittiness or hardness at the core, while for a Pear of its size the flavour is very sweet. It is a Continental variety, and if its other attributes, such as hardiness, free growth and fertility are equal to its appearance and flavour, there is no doubt whatever we have a valuable acquisition.—OWEN THOMAS.

A beautiful new Chrysanthemum.—A beautiful Chrysanthemum which will doubtless become popular is the Marquis of Northampton. This is a sport from W. A. Etherington. The flowers are of a lovely golden bronze colour, a colour that is particularly welcome to many lovers of Chrysanthemums. This new Chrysanthemum was awarded the first-class certificate of the National Chrysanthemum Society on November 18, 1907, when it was exhibited by Mr. A. R. Searle, Castle Ashby Gardens, Northampton.—C. RUSE.

PRIZES FOR READERS. JANUARY.

THE BEST POTATOES AND HOW TO GROW THEM.

A First Prize of FOUR GUINEAS,

A Second Prize of TWO GUINEAS,

A Third Prize of ONE GUINEA,

And a Fourth Prize of HALF-A-GUINEA
are offered for the best essay on "The Best Potatoes and How to Grow Them."

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Friday, January 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Tree Poppy (Romneya Coulteri).—The Rev. E. M. Hill, Holy Trinity Rectory, Dorchester, sends a photograph of this beautiful shrub; but, unfortunately, it will not make a good reproduction. The following note, which accompanied the illustration, is interesting: "I am sending you a photograph of Romneya Coulteri, and am sorry it does not give a better idea of the extreme beauty of the plant. It flourishes exceedingly well here in a cold soil with chalk subsoil, but no wall or other shelter near it. The plant measures 42 feet round, and some of the shoots are over 6 feet high. We attribute our success with this plant in a great measure to the fact that the original plant was by chance placed where there had been an old path; it now spreads rapidly, and throws up shoots at a great distance. It dies off every year, and we cut down the old shoots in the spring, just before the young ones begin to shoot up. At one time (last September) there were almost 100 blossoms out at once, and it flowered freely from July till the heavy rains in October stopped further blooming. Considering how very hardy Romneya Coulteri is, it is strange that we do not see it grown oftener, the plants being now quite moderate in price. It seems to flourish in the open much better than near a wall, where I have often seen it doing very badly."

Almonds fruiting.—With reference to the correspondence about Almond trees, we picked some Almonds on December 16 from our trees and they were quite good to eat.—ALDERSHOT.

Bees in the garden.—One or more hives of bees should be in every garden, both large or small, for, apart from the advantage of always having a supply of wholesome honey for home use, much interest and benefit may be derived in various ways. In the first place, they are profitable when well managed. In this neighbourhood honey is readily disposed of to the retailer at 9s. per dozen 1lb. sections, and I have no doubt that a remunerative price may be obtained in other localities, provided that the sections are full of light-coloured honey and are presented to the purchaser in an attractive manner. During summer bees do a vast amount of good in the fertilisation of fruit blossoms, besides visiting daily other flowering vegetable and fruit crops. Even in glass structures containing various fruit trees, besides Cucumbers and Melons, the bees will enter when they are opened in sunny weather, and carry on their good work, which would otherwise need to be done by hand. There are many kinds of hardy flowering plants that the bees abstract large quantities of honey from.

The best winter Pear.—The belief has been hitherto pretty general that to grow Winter Nelis Pear to perfection the assistance of a warm wall is necessary. In warm and favourable seasons the best results are to be obtained from this variety on pyramid trees grown in the open. Growers should make a note of this fact, and hasten to plant this, certainly one of the best and most indispensable winter Pears in cultivation, in some warm corner or other of their garden. It will be well to qualify the above by saying that in cold and unfavourable seasons this variety is a disappointment in the open, and therefore a reserve of trees on a warm wall should be provided where possible.—B.

Planting shrubs against walls. As many gardeners and amateurs will still have some shrubs to plant against walls, it may be well to remind them that the colour of the walls and the flowers or fruits of the shrubs should be considered. The other day I saw a splendid fruiting plant of the Fire Thorn (*Cratægus pyracantha*), that was entirely spoiled by the dull red brickwork to which it was nailed.—H.

THE GREENHOUSE.

FREESIAS.

THESE sweetly-scented flowers are exceedingly beautiful, and also useful in winter and early spring. Potting should be done in good time, so that the plants can be got forward as needed. Nearly all the failures met with in trying to flower the Freesia are from one cause, which is late potting. They should be potted early in August, and grown on as cool as possible, as the longer they are kept in a cold frame and the more air they have so much sturdier will be the growth, while the flowers will be finer and more lasting. The soil should be light and rich, consisting of three parts of turfy loam to one part leaf-soil, with a sprinkle of sand added. This will suit them admirably, other conditions being favourable. Five-inch and 6-inch pots are most suitable, with nine to twelve bulbs in a pot, covering them with about half an inch of soil. If the soil be fairly moist no water need be given until some signs of growth are seen. After potting, place them in a cold frame where they should remain as long as the plants continue to grow, giving air on mild days, and covering up with mats in case of severe frost. Under this treatment the plants should be ready to remove into a cool greenhouse about the first week in November, where they should be kept near the glass and plenty of water given.

At this time the plants will need staking, which should be done with very thin sticks and fine raffia or the effect of the plants when in flower will be spoiled. When the pots are full of roots and the spikes are forming weak liquid manure about twice a week will be of great benefit. If forcing is resorted to it should of the very gentlest description, otherwise both plants and flowers will be a failure. The best sort is *F. refracta alba*, white, sweet scented. After flowering is over is a critical time for Freesias, as then the new bulbs are just swelling and finishing growth. Between the dropping of the flowers and the beginning of the leaves changing colour the plants should be given liquid manure when required until the foliage dies down. When this has taken place the pots should be placed in a position, no matter how hot or dry, and let the bulbs roast in the pots until potting time comes again. A shelf in a vinery or similar place will answer where rain cannot penetrate. The following season the bulbs should be sorted and the best potted and grown in the same way, when the result will be most satisfactory and pleasing.

Elsham Hall Gardens, Lincoln. G. SIZER.

WHY GROW SO MANY SCARLET GERANIUMS FOR SUMMER BEDDING?

AMATEUR gardeners, and jobbing gardeners especially, nurse up with expensive fires and a great amount of trouble hundreds of cuttings year after year, and the resulting sameness of the bedding out becomes very monotonous to those who look for variety in the annual garden plan. It may be of interest, therefore, to indicate a change of tactics in the preparations for the ensuing summer, instead of so much of this now customary red Geranium bedding. What could be more beautiful and novel than a scarlet bed of the lovely *Sutherlandia frutescens*, named after the compiler of a botanical catalogue. This splendid species was grown last year in Finsbury Park (throughout a bad summer), reaching the highest state of perfection. Some few seasons ago a plant of this species was seen growing out of doors in a pot in grand style, and this seems to point to its coming usefulness for our summer bedding out. The writer secured a packet of seed and has been growing the plants along ever since, with

the result that, at the moment, they have become fine specimen standards already nearly 3 feet high, while the seedlings, some of which have only just been sown, will be brought on as dwarf plants to use next season for the groundwork of the bed, in which, to add further brightness, will be planted standard pink *Lantanas*, *Cyperus Natalensis* (ornamental grass), yellow *Begonias*, *Anthericum variegata*, blue *Lobelia* and the edging all round the bed will be *Alternanthera versicolor grandis*. Another good bed for effect which was found to grow to perfection last year was planted as follows: One standard *Heliotrope* in the middle, two *Kochia Scoparia* round the *Heliotrope* to hide the stem, two *Eucalyptus cordata* and two *Artemisia abrotensis* in front, the latter's most beautiful silvery leaves just rising like a bouquet around below the umbrella of the standard *Heliotrope*. In front of this was planted the *Sutherlandia frutescens*, *Solanum pyracanthum* (Holy Thorn) and *Cnicus Chamæpence Diacantha* (cultivated Thistle) alternately. The edging used round the bed was white *Alyssum Koeniga maritima* grown from cuttings, and here is a point: Do not grow this from seed or you will find the plants anything but compact. The effect given by this bed was much admired by many gardeners. For his part, the writer will certainly aim more and more at this style of bedding in the future, and this in spite of the fact that he grew some fine beds of *Cannell's Paul Crampel Geranium* last year with blooms more than a hand across and petals over 2 inches wide. It should be mentioned that *Sutherlandia frutescens* is quite easily grown from seed sown at the beginning of December and in practically a cold greenhouse. Keep the seedlings close up to the glass and frequently syringe when the plants are about 2 inches high, then, as the days draw out and the sun's rays become more powerful, remove the plants to a cooler situation.

H. SELBORNE BOOME.
Holwell Hyde, Hatfield, Herts.

PLEROMA MACRANTHUM.

THIS beautiful flower is often met with under the name of *Lascandra macrantha*. It is suitable for the conservatory or cool greenhouse, and should be planted against a wall where it has plenty of room to develop. Its value is very much increased by the fact that it flowers during winter, a season when flowering roof plants are very scarce. Here it is growing over the roof of a corridor, where its beautiful deep violet-purple flowers are very attractive. It is planted in a shallow border in a mixture of turfy loam and peat. During the summer months when growth is active plenty of water is needed, and old-established plants also enjoy stimulants. After flowering the growths are shortened back near their base, and the plants given a short season of rest till growth is again active. It is easily propagated from cuttings taken from the plants in a half-ripened condition during the spring.

Frogmore. E. H.

CHRYSANTHEMUM MME. PAOLO RADAELLI.

THIS is a grand variety, and the raiser (Calvat) may well be proud of the high position it has occupied since he first sent it out. Its deep yellow sport (*Mme. G. Rivoli*) is also a flower worthy of its parent, and there may possibly be a whole family of sports, as there have been with some other well-known show flowers. At the recent Paris Show an exhibitor staged a large number of blooms from another sport of *Mme. Paolo Radaelli* called *Mlle. Marthe Raffard*. The flowers are reddish buff, the build and form of the sport otherwise resembling the parent. It is worthy of note that *Mme. Paolo Radaelli* was awarded the second prize for the finest bloom in the Paris Show. C. H. P.

THE FRUIT GARDEN.

HOW TO GROW GRAPES IN POTS.

THE pot Vines in fruit represented in the illustration are one year old plants, or sixteen months from the "eye" to the time the fruit was ready for use. The most important point connected with the fruiting of Vines in pots is to have well-grown and well-ripened canes. To produce fruiting canes in one

trained up the back of the house, which is a three-quarter span. As soon as they have grown about 8 feet they are "stopped," and all laterals stopped at the first leaf. I like to have them potted in their fruiting pots as early in August as possible; the pots used are 14 inches in diameter.

In these they can be cropped for two seasons with success. The soil for this potting is made somewhat richer than before by the addition of some half-inch bones and Thompson's Vine Manure, and some brick or mortar rubble should also be added. After potting they are placed in a cooler house, the house in which they will fruit the following year. Here they are tied up to the wires, fully exposed to sun and light, where they remain until the beginning of October.

By this time the pots should be well filled with roots and the canes beginning to ripen. They are now placed out of doors in a sheltered position, where the pots can be covered in the event of frost or heavy rains. About the second week in December they are brought into the house again (having been pruned a month or six weeks previously), and started in a temperature of 50° to 55°, allowing a rise of 5° when the buds begin to break, gradually increasing it to 70° by the time they are in flower, always allowing a further rise by sun-heat. Very little water will be required at the roots for the first few weeks. As soon as the buds are seen to be breaking well, the back and front of the pots and the intervening spaces are packed well up with leaves and stable litter; this will assist root-action and also prevent the soil from drying so quickly in hot weather. As regards stopping, ventilating, &c.,

they will now require the same treatment as permanent Vines. When carrying a crop of fruit, they will require abundant supplies of water and plenty of liquid manure. For a change I find Thompson's and blood manure very beneficial.

The varieties in the illustration are Black Hamburgh and Foster's Seedling. The heaviest bunch of Black Hamburgh weighed 2lb. 15oz.; the two best bunches totalled 5½lb. No doubt such varieties as Black Alicante and Madresfield Court could be grown much larger, but I have not tried them.

W. R. CATT.

[Hodnet Hall Gardens, Salop.

COLOURED PLATE.

PLATE 1340.

HOW TO GROW SWEET PEAS.

I AM frequently asked whether the present popularity—it is sometimes miscalled a boom—in Sweet Peas will ever wane, and while I should not like to positively affirm that they will always enjoy the remarkable position to which they have attained during the past seven or eight years, I most certainly do not think that they will ever fall into a low estate. They are essentially the summer garden flowers for all, as they will thrive and produce hundreds or thousands of blooms in conditions in which other plants, equally as cheap to purchase and simple to grow perhaps, would do little more than eke out a bare and unsatisfactory existence. I am firmly of the opinion that if the craze for the distribution of novelties, more or less good and distinct, is not carried to an extreme degree, and that those which are sent out are properly fixed (this, however, seems an almost impossible matter with some of the waved standard forms) that the Sweet Pea will be a far greater favourite at the end of the next decade than it is at the present time.

It is to be feared that some growers will become tired of the constant increase in the number of varieties, especially when they find three or four that are so close that it is practically impossible to distinguish the one from the other when they are apart. What is far more desirable with varieties that are almost identical with others already in commerce, is a still further reduction in numbers, so that growers may feel when they are ordering that they will be sure to receive something that is at once good and perfectly distinct. There is little doubt in my mind that when the floral committee of the National Sweet Pea Society gets fairly settled down to work it will go far to clear up all matters in connexion with varieties, and I am perfectly certain that, no matter whence it comes, the new variety that receives the first-class certificate of the National Sweet Pea Society will be of outstanding merit, and that such distinction will come to be regarded ere long as a reliable hallmark of excellence. The start this season was full of promise of the greater and better work that is to follow year by year as long as the society continues in its present course of prosperity.

SOIL PREPARATION.

In the successful culture of Sweet Peas, whether they are grown for the adornment of the garden or for exhibition, I do not think that there is any point more important than this. To attempt to grow the finest plants in shallow soil that is in poor heart is to court comparative failure, but to sow the seeds or set the plants in deep land that is in perfect heart is to have taken a long stride towards success. The minimum depth to which the soil should be worked is 2 feet, and if it is possible to go half as deep again so much the better. As far as the addition of manure is concerned I would urge the desirability of generosity tempered with judgment, and especially the thorough incorporation of the material with the soil, as I do not consider the laying of manure in solid masses is wise or advantageous. With the second spit natural manure may be mixed in digging, working it in as early in the year as possible, that is to say, where the work was not done in the autumn. If manure is put in the surface soil it should be perfectly sweet, and if it has had its more active virtues taken from it by Mushrooms or some other crop, it will yet serve the Sweet Pea in excellent stead.

SEED SOWING.

Whether the seeds are sown in single or double lines the drills should always be flat-bottomed, and never cut triangularly with the corner of a



POT VINES IN HODNET HALL GARDENS.

season, they require much care and attention. Our method here is as follows: The eyes are inserted singly in 3-inch pots in the early part of February and placed in the propagating frame. As soon as they have rooted sufficiently they are potted into 6-inch pots and grown on in a temperature of 65° to 70°, keeping them well syringed morning and afternoon. As soon as these pots are well filled with roots, they are transferred into 8-inch pots. A suitable compost for this potting is three-parts good fibrous loam, one-part well-rotted manure and wood ashes, with a little charcoal. After this shift the pots are plunged to the rims in leaves and the shoots

draw hoe as is sometimes done. For double lines the flat drills, more correctly perhaps trenches, should be at least 15 inches in width and 2 inches in depth, and a row of seeds should be set 1 inch from each side. I say that the seeds should be "set" and not sown continuously along the entire length, as the latter practice involves waste of seeds, and it is seldom when they all germinate that an individual will be found with sufficient courage to thin them out to the proper distances. For single lines the flat drills should be 5 inches or 6 inches wide and 2 inches deep. If the seeds are placed 3 inches asunder the seedlings should subsequently be thinned as necessary until each has from 12 inches to 18 inches of space in which to grow. Thus it will be seen that we shall sow some five or six times as many seeds as we require plants, and allow a margin for the birds and slugs to have the share to which they apparently think themselves entitled. Of course this practice is only possible of adoption with standard sorts, as when we come to anything under a dozen seeds for 1s. it is not wise to permit the natural enemies to have any at all, and steps must be taken to prevent them from doing so.

It is common and excellent practice to sow seeds in pots and place them in cold frames in January and February, and when this is done I would again urge the necessity for hardy culture. To treat the plants as though they were tender is an error that is certain to be followed by disastrous results, and it should be strenuously avoided. Fill 6-inch pots to within 1 inch of the rim and place five seeds round the sides of each; or put one seed in the centre of a small pot. Have the soil pleasantly moist at the time of using, stand the pots in a cold frame, never putting on the light except during snow or torrential rain, and the progress will be steady and strong. As soon as the seedlings appear the frame should be covered with fine-meshed wire netting to keep the birds at bay, or they will top the plants quickly and effectually. The soil in the pots should never become sodden.

STAKING THE PLANTS.

This is another operation to which the amateur does not always attach sufficient importance. No matter what the variety may be or where it is growing, the young plant ought to have support when it is 3 inches or 4 inches high; this may take the form of twiggy stakes, such as the pieces from an old besom, and they should stand about 12 inches out of the ground. Before the plants have reached the top of these the permanent stakes should be put in position, and if necessary the growths should be lightly attached to them with bass, but this is not invariably essential. Hazel makes the best supports, and should be procured if possible, and there ought to be at least 7 feet clear of the ground—more in those climates where the plants attain to a height of 10 feet or 12 feet. Wire

netting of very large mesh answers splendidly as a support, and, although somewhat expensive at the outset, is cheap in the long run, as with care it will last for several years.

When a plant has ample space in which to grow, it will make a natural break close to the base and produce many shoots (my friend Mr. Apps of Hastings had one plant with twenty-five stems this season, and he sold the flowers from that one plant for 25s., at which price one does not mind giving 1d. or 2d. per seed), and these should be reduced to three, four or five, according to judgment, this reduction being done in stages so as not to cause a severe shock to the plants.

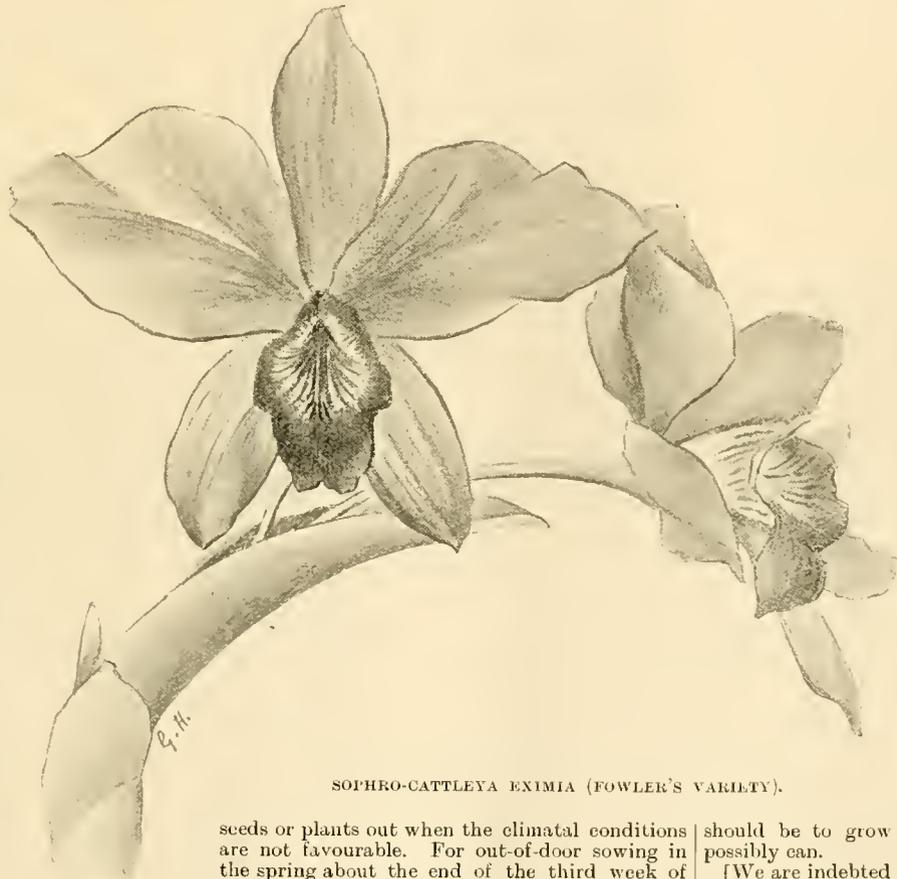
TIMES OF SOWING AND PLANTING OUT.

Both of these operations are largely governed by the weather, as it is far better to be either a few days early or a few days late than to put the

article readers are referred. I should like, however, to say just a little about St. George. This is the brilliant scarlet-orange-coloured variety that received the first-class certificate and silver medal of the National Sweet Pea Society in July last. That it is superior to any of its shade I have little doubt, but I am not by any means satisfied that it can fairly be termed a waved variety, although I have several times seen it described as such. In this respect it appears to be somewhat unstable, for some flowers show signs of waviness, while others have perfectly smooth standards. I am awaiting the next flowering season with much interest, as the point will then be quickly settled. If, as is said, the blooms do not burn, all will agree that St. George is one of the most desirable Sweet Peas that has been introduced during recent years. Sutton's Queen, of which a coloured

plate is given, is a new variety that was shown last summer; it is a beautiful sort, the flowers being very large, waved, of a cream colour, delicately edged with pink. Under the provisional names of Mrs. Rothera and Miss Hilda Chamberlain it received an award of merit from the National Sweet Pea Society and a first-class certificate at Wolverhampton.

Many other new varieties are excellent, and one might quote many names. The thing to aim at in the future will be the retaining only of those new varieties that are a decided advance in habit, colour, size and form on those now in existence. The Spencer or waved sorts seem to be the most favoured at present, and Mr. Cole considerably changed the form of the flowers when he introduced that still charming variety Countess Spencer. The grandiflora sorts, however, still find many favourites, their bold, upright standards giving them quite a distinct appearance. No matter what type we favour most, our object



SOPHRO-CATTLEYA EXIMIA (FOWLER'S VARIETY).

seeds or plants out when the climatal conditions are not favourable. For out-of-door sowing in the spring about the end of the third week of March gives excellent results, and successive sowings may be made if necessary up to the end of April. Plants from seeds sown under glass in spring or autumn should be put out into their permanent positions as soon as the weather and soil are suitable towards the end of April.

FEEDING THE PLANTS.

As soon as the plants are well in bud, never earlier, feeding may commence if it is considered necessary; but as long as the plants grow strongly and appear to be getting abundance of good food from the soil, there is no advantage in having recourse to special feeding. When it is done let the liquid, whether it is made with natural manures or concentrated fertilisers, be given in a weak state when the soil is pleasantly moist; if it is applied when the soil is dry at least half of its virtues will be lost to the plants.

SELECT VARIETIES.

I do not purpose taking up valuable space by naming a selection of varieties, as Mr. Alexander Malcolm gave an admirable review of the best in THE GARDEN for November 2, 1907, and to this

should be to grow the plants as well as we possibly can.

H. J. WRIGHT.

[We are indebted to Messrs. Sutton and Sons for the flowers from which our plate has been prepared.—Ed.]

SOPHRO-CATTLEYA EXIMIA (FOWLER'S VARIETY).

This is a lovely form of the hybrid Sophro-Cattleya eximia, the parents of which are Sophronitis grandiflora and Cattleya bowringiana. The result is a dwarf plant that has more the habit of a Cattleya than a Sophronitis, while the flowers partake of both. This variety is of larger size, and constitutes an all-round improvement on S.-C. eximia. The flowers measure about 2½ inches in diameter, the sepals and petals being of a lovely magenta-crimson hue. The lip is rich crimson streaked with rich gold at the base. It was shown by Mr. J. Gurney Fowler, Glebelands, South Woodford, before the Royal Horticultural Society on December 10, when it received a first-class certificate. As will be seen in the illustration, two flowers were borne on a rather stout stem.

THE ROSE GARDEN.

WILD ROSES (SPECIES).

MAY I put in a plea for the increased planting of some of the more interesting and beautiful forms of the wild Roses that have been obtained from all parts of the globe, and which, when rightly planted (referring more particularly to situation) flower, as a rule, before the cultivated varieties, which generally satisfy the requirements of most Rose-lovers? Apart altogether from the interest which they possess as the parents (in some cases) of our garden Roses, they are in many instances deserving of culture for their own sakes, and it adds immensely to the interest of one's Roses if one can find room for a few of the very many wild Roses that can now be obtained from most Rose nurserymen worthy of the name, some of whom, at any rate, of recent years have made a speciality of the species.

There is an excellent article on this subject in "Roses for English Gardens," which book I would recommend to all your readers who may not have come across it as the best all-round Rose book yet published, of which I should like to see a second edition, revised and brought up-to-date with detailed descriptions of our best exhibition and garden Roses. Perhaps the proprietors of the *Country Life* library will take the hint. Allowed to grow naturally, unpruned in the ordinary sense of the word, with an occasional thinning out of the old wood, some of the species grow into most beautiful garden plants that are quite a revelation to those who do not know them. The majority of them flower early, and only once; but they quite make up for this by their wealth of Rose hips of all kinds, colours and shapes and their often beautiful foliage. I can recommend any and all of the following varieties to those who like to have something out of the ordinary (and who does not?) in their garden; they can be obtained, as a rule, at a cost of 9d. to 1s. 6d. per plant.

Rosa acicularis (the Needle Rose) is a native of Siberia, and in the winter months might easily be mistaken for one of the various forms of *rugosa*, as its stems are as thickly covered with sharp spines, but it is distinct at other seasons. Its flower is a bright deep pink of medium to large size, and the foliage might be termed glaucous, and the flowers generally appear by the middle of May; it is, therefore, one of the early Roses; sweetly scented. Its good points do not end there, as its fruit is quite distinct, being long and Pear-shaped, not round like the *rugosa*s, with a few spines seen on the fruit, so that it might be termed the Prickly Pear Rose. Coming as it does from Siberia, there is no doubt about its hardness. Best on its own roots, and not difficult to raise from cuttings.

R. alpina (the alpine Rose, not the flower which goes by that name in Switzerland, which is a species of *Rhododendron*) is a native of Europe, and there are at least three distinct forms, of which I have only two—the type, always the earliest Rose to flower with me (often weeks before our native Dog Rose). The stems of one year's growth assume a reddish hue, and are almost without thorns. The flowers are bright rose-pink in colour, and can generally be picked in an ordinary season the first week in May. The type is the parent of the Boursault Roses; there is a double form of it that is free and of good habit. Another variety that comes from the Pyrenees, and is so called, is of much dwarfer habit, and a good subject for the rock garden. It, unlike the type, has spiny foliage, and has been sent to me under the name of *nitida*, which, however, is something quite distinct, having round hips instead of the very long ones that are typical of all forms of *alpina*.

R. altaica.—A native of North Central Asia and China, allied, no doubt, to *Rosa spinosissima*, but of more robust growth. This makes a

fine bush; it can also be recommended for a hedge. Fairly early, this season it bloomed twice with me, quite a number of flowers being produced in August; its beautiful pale lemon-white flowers are always much admired. Small foliage that turns to a pretty variegated brown shade in late autumn, which contrasts well with the small deep black hips.

R. arvensis (Native).—The variety known as Miss Jekyll's is the only one I have. (The type can be met with in most of our hedges). It is rather larger in flower than the ordinary type, and is a very rampant grower. *R. arvensis* is the parent of our Ayrshire Roses, those free-



PROTECTING STANDARD ROSES WITH OLD WINE-BOTTLE CASES.

flowering ramblers of which Bennett's Seedling is probably the best.

R. Banksie (China).—Too well known to need comment. All who have a warm sheltered corner should grow the small yellow-flowered variety against a wall. It is exactly one hundred years since this Rose was introduced into England, and the centenary might well be celebrated by planting it largely. There are, I believe, four varieties, but the double yellow and the double white are the most popular. It rarely flowers the first season after planting; but if left alone and not pruned will well reward you for the necessary patience. Thornless.

R. beggeriana (Central Asia and the Himalayas). Not particularly beautiful; interesting owing to its unpleasant smell; the small white flowers are produced in July.

R. blanda (North America).—This and its double form (fl. pl.) are both worth growing. It makes a good bush; its flowers are salmon pink in colour, and of rather larger size than usual with these wild Roses. It is sometimes called the Labrador Rose.

R. bracteata (China and Central Asia).—One of the most beautiful of the species, one might almost say of all single Roses. It is very distinct, and also very tender, must have a sunny, sheltered wall, and is well worth taking care of. Practically evergreen, it objects strongly to be covered with a mat, but protection is absolutely necessary. The flowers, which are freely produced on established plants, contrast well with the beautiful dark green shiny foliage. There is a double form called Marie Leonida, which is not, by my way of thinking, half as beautiful as the type. One misses the contrast of the yellow stamens and the white petals.

R. Carolina (North America).—This somewhat resembles *Rosa lucida*, but it has the advantage of flowering right through August and September when all the species have finished. The flowers are freely produced and are of a light pink shade; it makes a fine bush and will grow 6 feet high; the foliage is thick and the leaflets long and narrow. Smooth wooded with few thorns.

R. cinnamomea.—I am not sure of the native habitat of this Rose. The flowers are small, flattish, and produced on yellow-brown wood, not very freely, and are of a pale pink in colour; it will grow into a medium bush.

R. Fendleri.—The feature of this scarce species is the colouring of its foliage in the autumn, helped by the bright stems; it is then a very pretty picture.

R. gallica (*centifolia* × *damascena*).—The ancestors of our modern Hybrid Perpetuals, hence here grouped together, although quite distinct otherwise. Their varieties are numerous, and cover all the Damask, Cabbage and striped Roses of our forefathers. Mostly sweet-scented. *Ballata*, a variety of *centifolia*, is sometimes known as the Lettuce-leaved Rose, and the foliage is distinct. Mrs Orpen is a good type of Hybrid Damask, large single pink flowers, and *Rosa Mundi*, sometimes, but erroneously, called York and Lancaster, a type of the *gallica*. Otto of Roses is largely made from a variety called *Kazanlik*, one of the Provence Roses allied to this group.

Purley.

HERBERT E. MOLYNEUX.

(To be continued.)

PROTECTING STANDARD ROSES.

THE accompanying photograph, kindly sent by Mr. F. Sanderson, Bower Mount Road, Maidstone, shows a method of protecting standard Roses with the straw covering from wine bottles.

MAKING FIRM ROSE ARCHES.

MAY I offer a small tip for a sound foundation for Rose arches, pillars and so on? Worried with the decay of the wooden plugs to which the iron rods used to be secured causing fungus on the Rose roots in addition to the general collapse, I cast about for a better plan, and hit upon the following: Take a drain-pipe, say, 6 inches or 8 inches in diameter, fill with concrete and insert, say, three pieces of old gas-pipe. When properly set, place in its position, then insert your iron arch—in my case a triangular one with three rods—level properly and pour in a little liquid cement. In a little while the whole thing is as firm as need be and will last as long as the ironwork or the Rose.

Suthampstead

J. T. STRANGE.

ROSE LINA SCHMIDT-MICHEL.

I HAVE an impression that this will become a general favourite as a decorative Rose. It is one of those large-flowered, semi-double sorts we all admire so much, especially when possessing, like this one, lovely colouring. We naturally look for something good from a seedling of Mme. Abel Chatenay, and I am sure one will not be disappointed. It is a fine bold grower and just the sort of Rose to plant in an isolated position on the lawn; have them well cared for, but spare the knife. We want to encourage the growing of more of this type. It is quite a pleasure to meet now and then real good large bushes a blaze of flowers, and there are numbers of Roses suitable for such a mode of culture. There is a novelty of last season's introductions, which will become, if I mistake not, a general favourite. Its name is Sarah Bernhardt. Its colour is as vivid as that of Duke of Edinburgh; the blooms, however, are semi-double. It will be a gorgeous garden Rose if it proves to be free-flowering enough. We should be thankful for these large-flowered, semi-double Roses. They provide some beautiful groups of colour. For instance, where can we surpass Bardou Job? P.

THE ROCK GARDEN.

THE ROCK GARDEN IN WINTER.

IN midwinter the appearance of a rock garden is certainly not very attractive, owing to the many bare ledges and pockets which in the spring and early summer months are occupied with plants showing beautiful patches of colour. Apart from the Christmas Rose, one of the most beautiful and welcome of our hardy flowers which is now about at its best, and the Algerian Iris, with its lovely purple and white flowers, there is little else to be seen in bloom. However, the place is not entirely devoid of interest, with the silvery cushions of crusted Saxifragas, and the bright green carpets of the mossy sorts, to say nothing of other evergreen plants such as Stonecrop (Sedums), Sempervivums, Pinks, Galax, and Shortia, with their various forms and shades of colour. At the same time there are the Snowdrops, Winter Aconites and Anemones ready to push their way up and unfold their welcome flowers with the least encouragement of mild and sunny days.

WORK TO BE DONE.

All through the winter months there is much to be done in the rock garden. If not previously done in the autumn, all plants that require it should be top-dressed, using a mixture of fine soil, leaf-mould and sharp sand. Many plants, like some of the Primulas, have a tendency to form stems and grow away from the surface of the ground, with the result that they appear leggy. If top-dressed, fresh roots are emitted higher up the stem, and thus the plants benefit to a great extent by this being periodically performed. Mossy Phloxes, Achilleas, Aubrietias and other similar carpeting plants should have a like compost worked in between their prostrate stems. Where there is room between the plants, the soil should first be stirred up slightly with a handfork and all weeds cleared off before putting on the top-dressing. A sharp look-out must be kept at all times for

SLUGS AND SNAILS,

which have their special favourites among alpine plants. Among those especially liable to attack are *Omphalodes Lucilie*, *Aster alpinus*, *Campanulas* of the smaller sorts like *C. Saxifraga*, *Crepis aurea*, and other kinds which have succulent leaves and buds. If neglected, the growing points are liable to be eaten off, with the result that there is no flower the following season.

For smaller choice things a good protection is a zinc hoop about 3 inches deep placed round the plant. A good method of catching slugs is to put down here and there little patches of bran covered with a piece of slate or glass to keep it dry. This forms an attraction for them, and they can be caught in great numbers at night. One of the best ways of keeping down their numbers is to frequently examine their known favourite plants at night when they come out to feed.

TRANSPLANTING.

If not previously carried out in the autumn, which is the best time for replanting early spring flowering plants, all transplanting should be finished off as soon as possible. Pockets that have got sour should be emptied and refilled with good soil, taking care to put plenty of drainage at the bottom. The stronger free-growing plants that show signs of having exhausted the soil of the pocket in which they are growing should be taken up and replanted in a larger one with fresh soil, while the pocket from which it came may be renewed ready for something else. Where there is danger of a choice plant being overrun by a coarser-growing kind, one or the other should be moved to a more suitable position, so that the weaker one will have a fair chance to develop.

LABELLING

is important, and usually occupies a great deal of time where large collections are to be kept

but a useful size is one with letters three-sixteenths of an inch. Except for larger plants this makes a plain enough label. After the letters are punched in the lead they are filled up with white enamel, the whole surface then being wiped over with a cloth so as to leave the letters clear and distinct. When dry the labels should be wiped over again with a rag saturated in linseed oil to preserve the lead from oxidation. All dead leaves and decayed matter should be cleared away from the plants, as it only harbours snails and slugs, and the rock garden should be made tidy ready for the promised display of beautiful sheets of flowers in the near future.

W. IRVING.

NOTES ON A ROCK GARDEN.

THE rock garden shown in the illustration has been planned and made during the last five and a-half years by Mr. Montgomery, with the help of a willing and intelligent gardener, but without the aid of a landscape gardener. The space which the rock garden now covers was originally a wood, and the trees which still remain round the garden give great shelter from the north and east winds. To the left in the illustration is a large bed of *Anemone japonica*, which in a mass is very effective in September. The tall shrub nearly in the centre of the picture is the beautiful *Spiraea flagelliformis*. This specimen is over 5 feet high and each shoot is

covered early in June with clusters of white rosette-shaped flowers. The white flowers seen at a distance to the right are blossoms of *Romneya Coulterii*, which does extremely well in this garden, dying down in the autumn and coming up with renewed vigour every spring; it only requires a few branches as protection in the winter. The rock garden is approached by a stepping-stone path through a very damp piece of ground, and at the side of this path is a small pond, on the edge of which a large patch of *Iris Kämpferii* flourishes.

THE GLADWIN.

THIS *Iris foetidissima* is one of those good plants that is much and undeservedly neglected, and it is much to be regretted. When in fruit the open capsules, showing their beautiful orange-coloured seeds, are most ornamental. When tastefully arranged in a vase, with some of its own foliage and fine grasses, the combination forms a useful room decoration for the winter season. This native *Iris* does well in almost any moist position. The spikes of seed vessels should be supported with sticks in early autumn to prevent them falling to the ground, which would probably spoil many of them.



A CHARMING ROCK GARDEN WHICH WAS ORIGINALLY A WOOD.

correctly named. Lists should always be made in fair weather of all plants that want relabelling, so that it is ready on wet days when one cannot work outside or in hard frosty weather. Various kinds of labels are used, one of the best being made of sheet lead, cut to shape. This makes a most serviceable label, which at the same time is not conspicuous enough to mar the general effect. For making these labels it is necessary to have a flat piece of iron or steel on which to lay the lead for punching in the letters. The size of the type is optional,

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

FLOWER GARDEN.—In frosty weather, when the ground is hard, wheel on manure and fresh soil where digging operations are necessary. Now is an excellent time to prepare new beds and borders and to renovate old walks and make new ones. Relay or level turf and sweep and roll lawns during open weather.

Roses.—Protect dwarf, Tea and other Roses. Ample protection can be afforded by placing a plentiful supply of Bracken among them and by drawing the soil round the base of the plants. Standard Briars to be budded next summer should be planted now.

Greenhouse and Conservatory.—Keep the glass clean, as this greatly promotes healthy plant life. Plants in the cool greenhouse should be watered only when they are dry at the roots, and this should be done in the morning. Ventilate with care, as sudden bursts of sunshine unduly raise the temperature. Close the ventilators an hour or two before sunset, and thus conserve the warmth. Bulbous subjects for forcing may now be brought indoors in successive batches.

Chrysanthemums.—Propagation by cuttings may now proceed apace. Select shoots that are free from buds and that have developed 1 inch or 2 inches from the base of the old stems. Send orders for novelties and scarce sorts without delay, or there may be delay in executing the same. For decorative uses propagate batches of the singles, Anemones and Pompons. The best position to root the cuttings is in an improvised frame on the side benches of the greenhouse.

Cold Frames.—Open the frame-lights on every possible occasion, as an hour or two of such treatment of the occupants is beneficial. Remove

decaying foliage, and stir the soil between the plants and cuttings, as this does much good and saves many plants. Very little watering will be required at this season. Provided adequate protection can be afforded, Chrysanthemums may be rooted in small pots in the cold frame. Prepare for severe frosts by securing an abundant supply of litter and good mats.

The Vegetable Garden.—Ground intended for root crops, such as Carrots, Parsnips, and Beet, should be trenched without delay, frost and the weather at this season contributing so much to its value and fertility. Vacant ground generally should be dug over forthwith, incorporating at the time heavy dressings of good manure. Deep culture invariably answers well for vegetables; for this reason, therefore, let the ground be



THE WASHINGTON THORN.

deeply dug, and all kinds of decaying garden refuse be dug in. Leave the surface soil in a rough condition.

The Window Garden.—Window plants should be watered with rain-water that has been made slightly tepid. Water carefully, however, treating only dry plants to this consideration. The well-being of plants may be encouraged by periodically sponging foliage plants, using tepid water and milk. Window-boxes may be planted with small shrubs, in this way imparting a pleasing appearance to the windows. It is early yet to think of repotting plants that need fresh soil or pots of larger size; leave this operation until the end of February. The more tender plants in rooms should be removed from the windows in frosty weather, as the contrast between the day and night temperature is often very extreme. Plants may be screened from the cold by placing muslin or newspapers between the windows and the plants, allowing the screens



THE AMERICAN HOLLY.

to remain for some hours during the day if frost has reached the plants.

TREES AND SHRUBS WITH ORNAMENTAL FRUITS.

NOW IS THE TIME TO PLANT.

WHEN planting trees and shrubs the effect in spring and summer is too often the only consideration, the remaining six months of the year not being thought of. The fact, however, that a number produce ornamental fruits in autumn and winter must not be overlooked; they serve to brighten up the garden and give it an added interest during the dull season. Sprays of many of them can also be cut for indoor decoration, being especially useful during the Christmas season, forming a welcome relief to Holly berries. A number of the larger fruited Crabs can be utilised for making jelly when fully mature. Some of them, in addition to the highly-coloured fruits, are useful when in flower. The illustrations will give an idea of what the plants are like, but it is impossible to do them full justice, as most of the fruits are red, and this, as those who dabble in photography know only too well, is one of the worst possible colours to deal with, invariably coming out black.

Crabs.—These attain to the size of small trees. The best known with ornamental fruits is the Siberian Crab. The Cherry-like fruits are yellow, tinged with red. The Japanese Pyrus Ringo has small yellow fruits. There are a number of varieties of the White Beam Tree (*P. Aria*) with highly-coloured fruits, the variety *Majestica* being one of the best. Quite distinct in appearance to those already mentioned is the Mountain Ash (*P. Aucuparia*). This is sometimes met with in villa gardens and also occasionally as a street tree. It has large leaves and clusters of scarlet fruits. The upright growing form var. *fastigiata* can be highly recommended.

Hawthorns (*Crataegus*).—These can usually be depended on to carry a heavy crop of fruits. The



THE SEA BUCKTHORN.

Evergreen Thorn (*C. Pyracantha*) is the one most generally met with in gardens grown for the berries. It is no uncommon sight to see it trained up a dwelling-house 20 feet or more in height, and literally aglow with clusters of orange red berries in early winter. It is often necessary to hang nets over the trees to protect the berries from birds. Planted in the border it forms a nice bush. The Washington Thorn (*C. cordata*) attains the size of a small tree. The small red fruits often remain on the trees after many others have disappeared. There are a number of varieties of the Cockspur Thorn (*C. Crus-galli*). Like the last, this also grows into a small tree. The small scarlet fruits are edible, so that it is not advisable to plant it in the front garden, as small boys are very partial to them. In contrast to these, we have the Chinese (*C. pinnatifida*) with much larger fruits and *C. nigra* with black fruits. An interesting form of our common hedgerow Thorn has rich yellow fruits. Its botanical name is *C. Oxyacantha* var. *fructo luteo*.

Sea Buckthorn, or, to give the tree its Latin name, *Hippophae rhamnoides* is well shown in the illustration. A frequent cause of failure to



ONION PLANT OVERPOTTED, AND DECAYING IN CONSEQUENCE.

obtain fruits on this tree is that many persons are unaware that there are male and female forms. As fertilisation of the flowers must take place before berries are produced, two plants, one of each sex, must be planted together. One male tree, however, is sufficient to fertilise several females. Except when the trees are fruiting, an expert has a difficulty in distinguishing the two trees. In addition to the orange yellow fruits, the greyish green foliage is highly ornamental in summer.

Holly.—This is such a well-known tree that no description is needed of our common forms. The fact, however, that there is a variety with yellow berries is not usually known. The Latin name is *Ilex aquifolium* var. *fructo luteo*. Our common Holly is a native of Europe and Asia. An illustration of the American Holly (*I. opaca*) is given to show how nearly it resembles some of the forms of the European plant.

Rose Box.—This common name very well describes the members of the *Cotoneaster* family, for the leaves resemble those of the Box and the plant belongs to the great natural order *Rosaceae*.

Planted in the open several of them are low-growing shrubs; they will also clothe low walls and fences when planted against them. *C. rotundifolius* is useful for this purpose; the small fruits are scarlet. *C. horizontalis* is naturally a low-spreading bush; planted against a fence it will grow 6 feet or more in height. *C. frigida* and *C. Simonsii* are more upright growing plants, having prominent fruits in autumn and winter.

The foregoing families by no means exhaust the list of trees and shrubs with showy fruits. The Roses have not been touched upon, as several illustrations and descriptive notes have appeared in the pages of THE GARDEN during the past year. The Snowberry is a very easy shrub to grow, with conspicuous white fruits in autumn and winter. The common Spindle Tree has reddish fruits enclosing orange-coloured seeds. There are several forms of the Prickly Heath, *Pernettya mucronata*, differing in the colour of the fruits, which are red, white, purple or pink. It forms a close-growing bush 2 feet to 3 feet high.

Where to obtain the plants written about is sometimes difficult. Readers need have no fear of being unable to obtain any of the plants named here from advertisers of trees and shrubs in the pages of THE GARDEN. A. N.

THE ONION PLANT.

THE Onion Plant, which rejoices, or otherwise, under the botanical appellation of *Ornithogalum longibracteatum*, is among the oppressed and downtrodden of the plant world, for one rarely indeed sees an attempt made to do the plant bare justice. Judging by the treatment generally meted out to this long-suffering flower-pot decoration, there would appear to be a popular idea abroad that it can live without soil or water, so little of either does the plant generally get.

But every rule has its exception, and in the illustration is shown a plant which has had too much of both soil and water. Too much soil began the trouble, and the owner was told that his plant required a bigger pot; he interpreted the hint too liberally. More soil, he thought, meant more water, and again his liberality outran his discretion. Result: the soil became sour and stagnant, and the plant drifted into the state of ill-health in which it is portrayed.

To remedy this state of affairs—not only with Onion, but with other plants—all the old soil should be shaken away, the roots washed in tepid water, and all brown and decayed ends cut off. Then the plant should go into a clean, well-drained pot only just large enough to receive it comfortably, some light and sandy soil used for filling up, and little water given for a few weeks. If slightly warmer quarters can also be given, the progress of the plant to robust health will be facilitated.

FORCING CHRISTMAS ROSES.

To force Christmas Roses in perfection the plants are best lifted and potted in October, and grown as cool as possible until their flower-buds show prominently, as do those in Fig. 1. But Christmas Roses are fairly good-natured plants, and one may even now lift them from the outside border and hurry them into flower in the greenhouse.

They should go into a deep pot or tub, according to their size, injuring the roots as little as possible in the process, and be well watered in. A week or fortnight in a cold frame will help them to get accustomed to their new quarters, and by that time they should have somewhat the appearance of Fig. 1, from which, by the way, the leaves have been removed in order to show the condition of the flower-buds.

Plants in this condition very soon open their flowers in a warm greenhouse, and rather less soon in a cold house or room. They must have plenty of water during their development, and an occasional dose of liquid manure will be appreciated; if in a living room, the plants should be taken to



CHRISTMAS ROSE AS TAKEN FROM COLD FRAME.

the scullery sink to receive their manurial stimulants. As showing that good plants and flowers may be grown in an ordinary sitting-room, it may be mentioned that the plant shown in Fig. 2 was grown entirely in dwelling-rooms; in a cold room until it had reached its first stage, and in a warm room to open its flowers. If placed again in a cold room when the flowers are about two-thirds expanded a good plant will remain in bloom several weeks.

FLOWER-BEDS AND BORDERS IN WINTER.

EXPERIENCED flower gardeners are quite agreed that the majority of the plants now used for making masses of bloom are very exhausting to the soil, and require to have a good foundation laid for their culture as do many of our vegetables. Few plants are more exhausting to soil than *Verbenas*, *Heliotrope*, *Calecolarias* and *Geraniums*, and the unsatisfactory appearance which these frequently present can be as often attributed to the want of liberal treatment as to anything else. If deep draining and cultivation are needed to produce good crops, certainly such conditions apply to the flower garden. An accumulation of water about a bed of flowers is productive of evils that will thwart the efforts of good management in all other respects; it will keep down the temperature of the soil, prevent the natural action of the atmosphere, and lessen the chances of getting the soil pulverised and sweetened. Every flower-bed that is wet should therefore be well drained, as this is the first step in successful flower gardening. As to deep cultivation, the benefits derivable from it are so many that it would be difficult to enumerate them all. It opens the soil so that the roots can penetrate it more easily, and in dry seasons go down where the soil is moist and escape to a greater extent the evils of drought. In wet seasons the water escapes more freely to the drains or subsoil.



CHRISTMAS ROSE: THE SAME PLANT IN FLOWER.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

KITCHEN GARDEN.

IF the weather is wet or frosty work must be arranged accordingly. Walks may be mended or regravelled during wet or showery weather and the edgings made good, and if too wet for outside work the roots may be examined and any decayed specimens removed. Large labels for the vegetable quarters might be prepared. Painted well and clearly written much time may be saved and the work better executed if done on bad days. In frosty weather manure should be got on to the ground.

Forcing Seakale.—Put in more Seakale to force, and cut any crowns as soon as long enough. If more are desired stand the ends in dishes of water.

Forcing Asparagus.—Make up another frame of stable manure and leaves for a second lot of Asparagus. As soon as the temperature is about 65° to 70° the roots should be placed in thickly and covered over with 3 inches of fine soil. On the surface sow very thinly a pinch of Carter's forcing Radish, and endeavour to keep the temperature of the frame at 55° to 60°; if kept hotter the growths will be very weak and the bed not so lasting. Asparagus should be cut when about 6 inches long, tied in bundles, and placed in water till ready for cooking.

FRUIT HOUSES.

Pruning.—Continue to prune and clean Peach, Nectarine and Cherry trees; thoroughly wash the woodwork, wire and walls of the houses. This is very important, and after the painting or whitewashing of the walls see that the ventilating gear is in proper order. This work should be done at this season when the houses are empty, and nothing should be overlooked that may be likely to cause trouble later on. In pruning the Peach and Nectarine cut out as much of the old wood as possible and lay in the young shoots straight up from the base. The earliest Peach house may now be closed for forcing. See that the border has been well cleaned and prick it over with a fork. If it is at all dry give a thorough watering.

GREENHOUSES AND CONSERVATORY.

Late Chrysanthemums.—These structures should now be gay with late Chrysanthemums, Lily of the Valley, Spiræas, Cyclamen, Azaleas, Camellias and Roman Hyacinths. Keep the conservatory spotlessly clean and at a temperature of 55° to 60°, as this will suit most plants. The plants that require most heat, such as Poinsettias and that class, should be kept at the warmest end and be free from draughts. Chrysanthemum cuttings may now be put in. Bouvardias that have finished flowering should now be rested.

HARDY FRUIT.

Pruning.—Proceed with pruning the Pear and Apple trees, also with root-pruning. Do this thoroughly, as most probably a tap-root may have gone straight down under the centre of the ball.

Currant and Gooseberry Bushes.—These may be sprinkled with lime mixed with petroleum. This is a very good way to keep birds from destroying buds, and they have already commenced. Another good plan is to put black cotton over the top of the trees. This I have found very effective, especially in isolated cases, such as Almonds, where they are placed for spring effect.

FRUIT ROOM.

See that all varieties are clearly labelled, as the owner may like to go and see them. This is always a distinct advantage. Each variety should be labelled when sent in for dessert. If

hard frost prevails, put up shutters to the windows, or, failing these, mats over, as a protection against frost. This will be found much better than fire-heat. In modern fruit rooms this is scarcely ever provided, but I know it is in some old-fashioned ones.

W. A. Cook.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardlee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

KITCHEN GARDEN.

TENDER VEGETABLES.—There will now be more demand for tender vegetables than can be supplied from the open, unless some means are taken to eke out the supply. Brussels Sprouts and early Broccoli are not so plentiful as usual; Broccoli will lift well and give heads just the size needed if taken up before severe frosts check the growth. It is not safe after this date to rely upon tying up the leaves over the flowers; it is better to house the plants. The Cardoons this season have made a much later growth than usual; but it will now be well to lift them and place them under cover. They will remain good a long time in a cool store. Good use may now be made of the Large Batavian Endive as a vegetable if the plants are fully grown. Chicory forced in the same way as Seakale, if grown slowly and the growths out when 4 inches to 6 inches long, makes a good vegetable and an agreeable change. Vegetables stored some weeks ago must be kept as cool as possible. I find Potatoes are growing out badly, and it should be borne in mind that all roots that grow freely in the store will soon lose quality.

FRUIT UNDER GLASS.

Early Vines.—Black Hamburg and Foster's Seedling which were started in November will now be moving into growth, and should be treated to a slight increase of both day and night temperatures, 55° at night and from 60° to 62° through the day will be suitable. With sun-heat the thermometer may be allowed to touch 70° before air is given, and if cold winds prevail allow the temperature to run up a little beyond the fixed standard rather than open the ventilators.

PLANTS UNDER GLASS.

Double Chinese Primroses.—The huge plants of these which are now to be seen in quantity, demonstrate in a forcible way the ease with which not only the finest varieties may be grown, but their exceeding value for supplying beautiful double flowers during the winter. The process of propagation, which should begin in January, is first to remove some of the outer leafage, then to notch slightly the bases of the crowns in layer fashion, then to drop the plants into pots a good size larger, and place round the tops an inch of fine sandy soil. If stood in gentle warmth rooting soon follows, and when each plant is lifted from the pot and the newly-rooted parts are severed from the old, then get into small pots and return to gentle warmth, very quickly are sturdy plants obtained. When shifted into larger pots later on, the best for them is a cool span frame, where, standing on a firm ash bed, good growth is continued. Eventually they may be got into 6-inch, or, if very strong, into 7-inch pots, and in these well established, soon begin to carry bloom.

FLOWER GARDEN.

Getting Work Forward.—Should the weather be favourable it will be advisable to take every opportunity of getting work forward in this department. Live edgings of all kinds may be planted at any time during the winter when the weather is suitable. In the formal part of the garden neatness is imperative, and all edging plants should be kept trim.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

THE KITCHEN GARDEN.

TWO EASILY - GROWN WINTER SALADS.

DURING the dull, short days of winter there is always a scarcity of salads, but this shortage may be remedied to a great extent and with little trouble by those who are the fortunate possessors of a heated greenhouse. Mustard and Cress is a salad crop that is already largely grown by amateurs, but it is certain that the majority of them do not get the best possible results for their labour and expenditure. A few shallow boxes—1½ inches deep is quite sufficient—some finely-sifted but sweet soil, some crocks and a good supply of seed are all that is required. One good-sized crock over each hole in the bottom of the box will provide ample drainage. Old potting soil is frequently used, but this is not desirable, fresh soil, finely sifted and containing a large percentage of sand, being by far the best. Fill the boxes so that when the soil is pressed moderately firm the surface will be slightly below the edges of the boxes. Scatter the seed on the surface fairly thick and even, press it in slightly with the bottom of a clean pot or pan, give a watering with a fine-rosed can and stand in a warm, semi-dark place until germination is effected. Never cover the seeds with soil and do not use the same soil for more than one crop. Mustard and Cress are usually wanted together, therefore the former should be sown three days later than the Cress, as it grows faster and consequently becomes ready for cutting more quickly. After germination stand the boxes in full light and avoid watering overhead. If water is required it is much better to just dip the boxes in tepid water and allow the latter to permeate the soil from below upwards. This system of watering avoids damping off, a fungoid attack that is exceedingly prevalent among seedlings of all sorts during the winter. When ready for cutting insert the teeth of a coarse comb between the tiny stems and cut above this. Grit will thus be avoided and the Mustard or Cress can be transferred in an upright and attractive position to the dish.

Chicory or Witloof is the other salad that is easily yet seldom grown in this country. Seeds are sown in drills 1 foot apart in April in any good garden soil and the resultant seedlings are thinned to 9 inches apart in the rows. Summer treatment consists in keeping the hoe going frequently between the rows and seeing that the plants do not suffer for lack of water, this seldom happening except in very light soils, owing to the plant's deep-rooting proclivity. In late autumn some growers lift the large Parsnip-like roots and store them in soil in an outhouse or other position where they are easily accessible during the winter months, but the only advantage in this system lies in the fact that the roots can be readily got at during severe frosts. If some protection can be given to the bed wherein they are growing, so that the ground does not become frozen so hard as to make lifting them difficult, they may well remain in their summer quarters until required for forcing.

One of the easiest and simplest methods of forcing is to procure a deep box—a Tate sugar box answers well—make a few holes in the bottom, and cover them with good-sized crocks, and then put in about 3 inches of soil. This may well be the ordinary garden soil, providing it is not too wet nor of a heavy, close nature, or old soil from the potting bench, or even leaf-mould answers admirably, a rooting medium irrespective of nourishment being all that is required. Place the roots in this layer of soil crowns upwards about 6 inches to 9 inches apart all over the box, and fill in with soil made moderately firm to within 1 inch of the crowns. Give a good watering with a coarse-rosed can, leave a few hours for superfluous moisture to dissipate, and then

cover over with a clean mat or cloth of sufficient thickness to absolutely exclude light. The box or boxes may then be stood under the stages, or anywhere out of the way in a warm house, taking care, however, to see that water does not drip among the plants when growth is taking place. With a temperature of 50° the crop of white crisp leaves will be ready for cutting in about four weeks, less time being required for producing a crop the nearer we get to spring. A succession is easily kept up by filling a fresh box every nine days. A second crop of leaves is sometimes secured from the same roots after the first batch has been gathered, but unless the supply of roots is short this course is not advisable. It is also unwise to use the same soil for more than one batch of roots. Plants for forcing can occasionally be obtained from local nurserymen.

RIVIERA NOTES.

ROSA SINICA ANEMONE is flowering in this month of December as freely and finely as if it were spring. When young it hardly ever showed a winter bloom, but each year it has proved a better autumnal till this year, when it has far exceeded its previous performances. It is flowering almost entirely on the older side shoots, while the long new summer growths are reserving themselves for the true spring. It seems probable this season that there will be no cessation of bloom all winter.

Rose Noella Nabonnand is another winter-blooming Rose of great beauty and freedom in sunny situations, but it requires plenty of space for its vigorous shoots, and summer-heat and drought to ripen them. Its rich velvety crimson petals and its remarkably powerful scent make it quite indispensable on a pergola near the house, where its colour can be seen and its fragrance felt. As a cut flower it is not so satisfactory.

Nerine Manselli has, I fancy, been raised in Japan as well as in England, for I got from Japan under the name of *Nerine tardiflora* a late flowering sort, which on blooming proved undistinguishable from *N. Manselli*, although slightly more vigorous in every respect. This has proved most useful as a hardy garden plant whether in pots or in the open ground, multiplying and flowering in December each year most abundantly. A plant that seems as if it would take care of itself, and when in quantity would be admirable as a cut flower.

Acacia podalyriifolia.—This pretty winter-blooming shrub or small tree, which has been adopted as the badge of Queensland, opened its first fluffy lemon yellow balls very early in December, and promises to continue a long time in flower. When better known it must prove a great favourite, as even on this coast a shrub or tree that is in fullest flower in December and January, and is, moreover, frost-proof to an unusual degree, is something that approaches to the impossible. Like its near relative *A. cultriformis*, it is a lime hater, and likes a dry soil; but grafted on the ubiquitous *A. floribunda* it will grow on all soils on this coast. Its very glaucous or silvery foliage and the abundant clusters of flower are quite fairy-like on a young plant. I wonder if it will prove useful as a cut flower, as *A. cultriformis* droops and dies when cut under any conditions. Should it prove fairly lasting in water, it will entirely displace any other winter-flowering *Acacia* and prove a plant for every garden.

Bignonia venusta is already in great beauty before the first breath of winter is felt. It is not seen or grown as much as it deserves, perhaps on account of its thin and straggling growths, but when allowed to run wild and clamber through Bougainvillea or any other vigorous and leafy climber it is a beautiful thing, and one, moreover, that stands 5° of frost without harm on a dry south wall.

Thumbergia laurifolia.—To my surprise this tender climber has survived the frosts of the last

two severe winters, though cut down to the ground each year. This seems to be the best way to grow it, for certainly the finest plant I know was apparently lifeless till last April, and now it covers a very large space on a south wall and is smothered with its lovely lavender flowers and handsome foliage, which would soon suffer if cold came. But if it can be cut down and cleared away at once without suffering when unsightly, it is a plant that should not be left out by those who come out before Christmas and enjoy their early winter flowers. An old and nearly-forgotten shrub of much beauty just now is the Cape Evergreen,

Eriocephalus capensis.—Its abundant heads of white Daisy-like flowers, with dark purple centres, are most attractive at this Christmas season, and later on, when the white petals die, the purple centres fluff themselves out into white woolly balls, which at a distance give the effect of flowers for several months. Like many Cape plants and shrubs, it needs a dry and sunny bank, otherwise it does not flower freely, and soon perishes from a frost when well wetted. Nevertheless, no garden in these parts should be without it.

Clematis balearica is another pretty December flowering plant of great charm and freedom. As it is very hardy it may be placed in a cool and shady position where it can climb either among other shrubs or up a pole, where its pretty creamy white bells and finely-cut foliage will show to great advantage during the months of December and January. Like the *Eriocephalus*, its seed-plumes are silvery and persistent, so that it keeps ornamental till quite late in the spring.

Nice.

EDWARD H. WOODALL.

TREES AND SHRUBS.

DECIDUOUS TREES AND SHRUBS WITH WINTER BEAUTY.

ALTHOUGH during the winter months the majority of our deciduous trees and shrubs present their worst appearance, the leafless period has certain redeeming features. In the case of large trees, for instance, the outline of trunk and branches is hidden throughout summer by the leaf canopy; but during winter it is fully apparent, and is often very striking. Then in the case of trees that shed their bark, such as the Planes, the peculiar patchy appearance of old and young bark is seen to advantage during the leafless period.

The best winter effect is, however, produced by those trees and shrubs that have bright-coloured bark, and many of these are so beautiful that they are planted extensively solely for their winter appearance. With no great effort of memory we can recall very effective features on bright wintry days produced by the reflection of red and yellow-stemmed Willows in the water of lake or stream, or, again, by the silver trunks of the Birches standing out among the dark browns of Oak and Elm.

In addition to these there are, however, a large number of other plants equally effective. In the case of many plants the colour is most brilliant on the past season's wood, and when they are grown specially for their winter beauty this fact is taken into account. With such things as Cornuses and Willows the method of culture adopted to obtain the most satisfactory results is to plant them in masses in rich ground, and cut them down to the surface of the soil annually just as the young shoots begin to push in spring. This ensures a constant supply of strong young shoots without the darker and heavier effect of old branches. The colours most prominent during winter-time are red, yellow, green, brown and white. The best reds are furnished by the Dogwoods (*Cornus*), *Berberis* and Willows (*Salix*). Of the *Cornus* *C. alba* and its varieties *Baileyi* and *stolonifera* are the best.

As the types of these are not of any decorative value during summer, people who wish for shrubs with both winter and summer beauty should select the gold and silver variegated varieties of *C. alba*. The best of these are *Spæthii*, with golden variegated leaves; and *elegans*, with silver marked foliage. *Berberis virescens* is an effective shrub, the young wood being of a pretty red hue; it does well as a large bush without an annual cutting back. The red-stemmed variety of *Salix alba vitellina* is an excellent shrub for marshy ground, its branches being very bright. Among the *Roses* several sorts are notorious for their bright stems, two very conspicuous ones being *Rosa alpina* and *Rosa sericea pteracantha*; the latter is of recent introduction, and is chiefly conspicuous by reason of its enlarged bright red spines.

YELLOW-STEMMED SHRUBS

are furnished by *Salix alba vitellina* forms, varieties of *S. fragilis* and a yellow-barked variety of *Cornus stolonifera*. Green stems are prominent in the *Cytisus* and *Genista* families, *Kerria japonica* and the *Ephedras* being also noticeable. Perhaps the best of the bright green-barked shrubs is *Lycycteria formosa*; this forms an excellent shrub for cutting back. Among the browns are several shrubs that are also very prominent as flowering plants. One of the very best is *Lemoine's Philadelphus*. This grows 2 feet to 3 feet high, and if cut back as soon as the flowers are over, strong young shoots are formed, which are effective for many months. Other *Moek Oranges* are also effective; in fact, all the species have bright-coloured bark. In addition to these, brown bark of various shades is produced by the various *Deutzias*, *Forsythia suspensa*, some of the *Ribes*, *Spireæas*, *Rubus spectabilis*, &c.

WHITE-STEMMED SHRUBS

are fewer in number, and the *Brambles* (*Rubus*) are possibly the most prominent. Such as *R. occidentalis* and *R. leucodermis* are effective, but they have to give place to *R. lasiostylus* and *R. biflorus*. Both these have quaint white stems, which have the appearance of having been whitewashed; in fact, the latter is known under the common name of *White-washed Stemmed Bramble*. Both of these should have the old stems removed as soon as new ones begin to grow, and it is essential that they should be given rich soil to secure robust growth.

Glancing at trees we find, in addition to the common *Silver Birch*, several others with silver trunks, notably *Betula ulmifolia* and *B. Ermanni*, *B. papyrifera* (the *Paper Birch*) is also a remarkable tree by reason of its reddish brown bark, which is constantly peeling off. Several of the *Maples* are remarkable, as their trunks are prettily striated with white. Two notable ones are *Acer Veitchii* and *A. Pennsylvania*. A beautiful variety of the latter has recently been introduced under the name of *erythrocladum*; its special feature is its brilliant scarlet bark. The golden-barked *Ash* is an effective tree when denuded of leaves, all the young wood being of a golden colour. It may be had in two forms, one of upright growth and the other of weeping habit. Another beautiful effect is noticeable in winter by the

BRIGHT FRUITS

of some deciduous trees, which are retained for a considerable period well into the new year. The *Siberian Crab* is very noticeable, as also is the *Washington Thorn*. Other *Thorns*, such as *Crataegus cordata*, *C. mollis*, *C. Carrieri*, *C. Douglasii* and *C. Crus-galli prunifolia* retain their fruit for a long time. Some sorts of *Roses* hold their fruits very late, as also do several *Coton-easters*. As most of these fruits are bright red, scarlet or yellow they are very beautiful on bright days. A few deciduous shrubs open their blossoms during January, the various *Witch Hazels* (*Hamamelis*) for example, the *Mezereum* (*Daphne Mezereum grandiflorum*), winter-flowering *Honeysuckle* (*Lonicera fragrantissima*),

winter-flowering Jasmine (*Jasminum nudiflorum*) and the Winter Sweet (*Chimonanthus fragrans*) being the best.

With these subjects at hand it is not difficult to imagine that a garden may be made bright and cheerful with deciduous shrubs, even during the winter months. W. DALLIMORE.

THE SHRUBBERY.

It will improve the general appearance of the garden if all dead leaves are removed from under trees and shrubs and the surface of the soil left clean. Recently-planted trees should be examined and where necessary new supports given them. In digging among the shrubs care should be taken to avoid damaging the roots. All dead branches should be cut from trees and shrubs, and if the growth is too crowded, remove with a sharp knife some of the branches. Established shrubberies which have become so crowded that no room is left for further development should be carefully gone through and the worst or least interesting plants entirely removed. This will allow space for the remainder to grow into handsome specimens, whereas if all are left the result in a few years will be an uninteresting wilderness.

Choice varieties of trees planted during the autumn should be given a mulching of strawy manure. This will protect the soil about the roots during severe weather, and by maintaining an even temperature of the soil new root-action is promoted. If in an exposed position, or the appearance of the manure is an objection, cover this with a layer of soil. As a pillar plant the yellow winter-flowering Jasmine is very striking when judiciously planted in the shrubbery, particularly when viewed from a distance. Tender subjects should be afforded protection when severe frost threatens. A neat protection for medium-sized shrubs may be arranged by enclosing them with wire netting. Place a layer of leaves around the roots and finally thread branches of some evergreen through the meshes of the wire. C. RUSE.

ORCHIDS.

ONE OF THE MOST EASILY GROWN ORCHIDS.

(*CYPRIPEDIUM INSIGNE* AND ITS VARIETIES.)

DURING the last ten years the varieties of *Cypripedium insigne* have been greatly improved, and they have become very popular winter-flowering plants. They have much to recommend them, as they are easily cultivated and the flowers last for nearly three months in perfection during the dullest period of the year, and they stand well the injurious effects of fogs. The varieties are very numerous, and many of the finest forms have been raised by crossing two distinct varieties. There is plenty of scope to raise even better forms now that we have got such a noble variety as Harefield Hall to work upon.

CULTIVATION.

Cypripedium insigne will grow freely in an ordinary greenhouse where a temperature of 55° to 60° is maintained. The plants require plenty of atmospheric moisture during the spring, summer and autumn months, and should never be allowed to remain dry at the root, but they should always approach the stage of dryness before water is applied. Soft water about the same temperature as the house should always be used. From the end of February to October shade them from direct sunlight. Canvas roller blinds are most suitable for this purpose, and they should be raised 6 inches or 8 inches above the glass, so that a current of air will pass between. When the weather is dull these

blinds should be raised, and during the winter months keep the roof-glass clean inside and outside, so that the plants may get all the light procurable. On bright, warm days syringe them overhead, but this should not be done during the autumn and winter months.

POTTING THE PLANTS.

The best time to repot them is about the end of February, but this need only be performed every second year if good fibrous compost is used. Clean pots of a suitable size should always be selected, and crocked to about one-third their depth with clean crocks. Before placing the plant in its new pot, pick away all the decayed compost and cut off any dead roots that may be present.

SOIL.

The most suitable compost or soil for the purpose is two-parts good fibrous loam, one-part fibrous peat and one-part chopped sphagnum moss. Mix the whole well together and add a quantity of finely-broken crocks and a liberal sprinkling of coarse silver sand. Spread the roots out in the new pot, and press the compost moderately firm between and about them to the level of the base of the plant, which should be kept a little below the rim of the pot. Great care must be taken with the watering of the newly-potted plants. Until they become established they should be allowed to get moderately dry between each watering. Syringing between the pots should be done morning and afternoon, and damp the floors and stages as often as may be necessary to keep the atmosphere well charged with moisture.

PROPAGATION.

The usual way to propagate is by division of growths, and this should be done when they are turned out of the pots. Old flowered back growths will readily break if cut away from the plants with some roots and potted up separately. Many of the choice varieties, such as the beautiful yellow *C. insigne Sanderæ*, have been raised from seed. The seed takes about a year to ripen, and then it should be sown on the surface of newly-potted plants. It is a good plan to sow the contents of one capsule over the surface of several old plants, because the conditions on one pot are not always suitable for the seed to germinate, whereas in most cases the seed will germinate on one or more pots. These seedlings should be pricked off as soon as the second leaf is about a quarter of an inch long, and three or four should be made secure in small seedling pots in finely-chopped soil of equal parts fibrous loam, peat and sphagnum moss, with coarse silver sand added to keep it porous. These seedlings should be grown on in a temperature of 65° if possible, and, as soon as the plants are strong enough, they should be potted singly in small pots. Never allow them to get dry, but, on the other hand, if they are always kept saturated they will make very slow progress. It is quite easy to keep them moist by allowing them to become moderately dry before applying water.

INSECT PESTS.

The worst insect pests to *Cypripediums* are thrips and red spider; the former will soon spoil a batch of seedlings and check the old plants if they are not destroyed. This is easily done by fumigating about every second or third week with XL All or other good compounds. The plants should also be sponged occasionally with weak insecticide, in order to make them look presentable.

VARIETIES OF *C. INSIGNE*.

Some of the finest spotted varieties are Harefield Hall, *montanum magnificum*, *holfordianum*, *berryanum*, James Renwick, Aberdeen, E. Ashworth, Amy Moore, *montanum anreum*, *Al. majestica*, Victor, and Monk's Hood. The yellow varieties consist of *Sanderæ*, *Sanderianum*, Dorothy, Laura Kimball, *cobbiana*, *Amesiae*,

Johnsonæ, *Chantini Lindeni*, *Ernesti*, *Balliæ* and *youngianum superbum*. The majority of the above may be obtained from most of the Orchid nurserymen and are well worth cultivating.

W. H. PAGE.

Chardwar, Bourton-on-the-Water.

[Visitors to the December meeting of the Royal Horticultural Society will not easily forget the magnificent group of *Cypripediums* and other Orchids which came from Chardwar. No finer group has ever been seen before in winter.—Ed.]

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Carnation leaves diseased (*S. H. C.*).

The disease is of a fungoid nature and commonly known as "spot." As a rule, it is most prevalent and troublesome in those instances where the surroundings are too damp or cold. Plants in a closed or poorly ventilated frame would be especially susceptible to the disease, and in those instances where a frame is necessary the lights used for covering should never be closed down, but used merely to throw off the wet. Light and air are among the chief enemies to such pests as these, which are more easily kept at bay by these means than eradicated once they obtain a footing. If your plants are not near the glass place them there at once by standing them on pots, as in this way abundance of air will be circulated about them. Remove all the affected leaves and burn them; and, finally, dust a little black sulphur over the plants. Keep the frame-lights constantly raised, so that while a free circulation of air is admitted stagnant air is impossible. No water at the roots should be given until the plants are perfectly dry. The surface soil of the pots may be stirred occasionally with advantage.

Herbaceous border (*O. C. C.*).—We think the *Pæonies* would do well under the circumstances you name, but you do not give the width of the border, and we are, therefore, precluded from giving you a definite list of suitable subjects. Frequently a border facing north is a most valuable one, and with due cultivation we should not hesitate to plant the *Pæonies*, *Michaelmas Daisies*, *Heleniums*, *Sunflowers* of many sorts, *Trollius*, *Lenten Roses*, *Megaseas*, *Spiræa Aruncus*, *Astilbe Davidii*, a great variety of herbaceous *Phloxes*, the entire group of *Flag Irises* with many species of the same family, *Oriental Poppies*, many kinds of *Lilies*, the bolder sorts of *Primula* as *P. Sieboldi*, *P. japonica*, *P. rosea*, &c. Any of the *Peach-leaved Campanulas* would do quite well, and there are others of equal worth. It is always best in the case of *Pæonies* and other things that are slow to establish that good plants be procured at the start. Are you convinced that the border receives the best cultivation, as it is unfortunate so good a border is not well planted? Did we know the width and other particulars as to the cultivation of the soil, we might assist you more definitely.



THE NEW SWEET PEA
SUTTON'S QUEEN.

but some would choose *Syringa* (so-called), Apple blossom, Lime tree blossom, Almond, Acacia or the budding Larch. We do not put the scents in order as they come, but as remembrance conjures them. Of sweet-smelling shrubs among the most delectable is the old-fashioned red Ribes, with its strong Black Currant smell and taste, so pungent, so irresistible, that one cannot pass it without rifling the bush of just one leaf to play with.

SCENTED FLOWERS OF SUMMER AND AUTUMN.

Quite different in quality from flowers of spring are these. Roses, of course, come first, for they give us both scent and beauty as a rule, with equal generosity. Everyone loves Roses, and no one needs to be reminded of them, but there are fragrant annuals that are sadly neglected. Numbers of people omit sweet white Alyssum when they are making out their seed lists. It is sweet as honey, smelling very much like it, and goes on blooming till November. Stocks, Mignonette, Sweet Peas, Sweet Sultan and Sweet Scabious are in fairly common use; not so the aromatic herbs, however, many of which are well worth growing for their perfumes, either sweet or aromatic. Woodruff is a plant that might often be given a place, for the sake of the new-mown-hay-scented foliage that so prettily sets off its starry white flowers. And in early summer who can have too many beds of Lilies of the Valley or too many clumps of damask and pink Carnations, of the common Pinks, Heliotrope, Sweet Williams, Woodbines, clustering white Clematis, Southernwood, Lavender, Cottage Lilies, Day Lilies, Meadow-sweet, Sweet Cicely, Heart's-ease, Musk and best of all as regards fragrance the Lemon Verbena? All the sweet-leaved Pelargoniums, too, so out of fashion now, that we must never forget to take our own cuttings, for florists seldom keep them. Magnolia should have a west wall and Rosemary a south one. Honeysuckle and Jasmines should wreath the windows, intermixed with climbing Roses. Then when the summer wind blows in there will be scented draughts. What more delightful?

THE GARDEN OF SWEET-SCENTED FLOWERS AT NIGHT.

The hot day over and the western sun gone down, how happy then the flowers of night—moon-flowers, as some have called them. At dusk the Invisible must hold sway. We wander down the shadowy garden paths and cross the dim and fragrant lawns. All the dumb flowers have now found voices. The Evening Primrose opens out, the double white Rocket remembers his old message, and the Night-scented Stock says gently, "I am here!" Honeysuckles breathe out a richer fragrance and hawk-moths quaff deeply from their delicate drinking-horns; Nicotianas (please keep to the white ones) pour forth heavenly scent that does not in the least suggest Tobacco. Some of us have built castles in the air about having a special garden all of night-scented flowers; the Night-blooming scented Cactus is enough to tempt anybody, but really it is better that we should dot the flowers about in careless fashion and let them take us by surprise, like children who hide their treasures and then forget them on purpose, to have the pleasure of finding them again.

THE HEALTHFULNESS OF THE SCENTED GARDEN.

Floral and leaf odours are antiseptic, the essential oils of Rosemary, Lavender and Eucalyptus being among the most efficient. Perfumes made from flowers possess special health value. Why not scent cures? To smell Sweet Briar, they say, makes anybody cheerful. The perfume of a Rose will often take away a headache, and any scent in which Rose is the principal ingredient is highly tonic and invigorating. Lavender has similar refreshing qualities, and flowers of delicate perfumes soothe the nerves of invalids. "A Rose garden is no place for grief," said Sadi of old.

FRANCES A. BARDSWELL.

Mundesley, Norfolk.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

January 14.—Royal Horticultural Society, Meeting of Committees, 12 noon; Horticultural Club, 6 p.m., lecture by Mr. E. A. Bunyard.

January 18.—French Horticultural Society's Annual Dinner, Mr. H. J. Veitch in the chair.

National Sweet Pea Society's Annual and Schedule.—We are requested to notify our readers that the above interesting Sweet Pea publication will be sent free to members about the 16th inst.

National Sweet Pea Society's trials.—The following circular is being sent to members of the National Sweet Pea Society who are raisers of new varieties: "My committee propose holding a further trial of Sweet Peas at the University College Gardens, Reading, during 1908, and I shall therefore be very glad if you will assist us in making these trials as complete as possible by sending seeds of new Sweet Peas you may be distributing in 1908, or are getting forward for distribution in 1909. I need hardly add that the trial will be an absolutely independent one, and under the able management of Mr. Charles Foster. Not fewer than fifteen seeds of each variety should be sent, and they should reach Mr. Charles Foster, Assistant Director in Horticulture, University College, Reading, on or before January 14th, 1908. You will greatly oblige by indicating the colour section to which each variety belongs, whether it has waved or plain flowers, and whether you would care to have it tested by the side of any standard variety. This information should be on a separate sheet of paper, and a duplicate copy sent to me will further facilitate matters. My committee does not propose to make a charge for these trials, but suggests that a donation be sent to the honorary secretary to help defray their cost. The trials conducted in 1907 necessitated considerable expenditure and this was defrayed chiefly by private donations. No awards to new varieties will be made at the society's exhibitions in 1908; awards of merit or first-class certificates will be granted only to meritorious varieties tested in the society's trials at Reading. The value of these trials to all raisers and growers is so great that I trust you will kindly render whatever assistance you can."—CHARLES H. CURTIS, *Hon. Secretary.*

Pear President Barabe.—A dish of this Pear was submitted for the inspection of the fruit committee at the Royal Horticultural Society's Hall, on Tuesday, the 31st ult., by Mr. Allen of Gunton Park Gardens. Were it not that it had previously obtained a first-class certificate from the society one would have been granted to it on this occasion, as the committee were unanimous in their estimate of its great excellence from all points of view as a Christmas dessert Pear. In size it is moderate to large, of a deep golden colour, flesh melting and juicy and the flavour exquisite. Provided the variety is hardy, of free growth and a good bearer, then it ought to find its way into every garden.

Seeding of the English Elm.—The December number of the *Kew Bulletin* contains an interesting account of the seeding of the English Elm (*Ulmus campestris*), at Terling Place, Essex, the seat of the famous scientist Lord Rayleigh. Although some little doubt appears to exist as to the identity of the Terling Elms, the official description being that it "appears to be *U. glabra* with a certain leaning towards *U. campestris*," the fact of the trees producing fertile seeds was established beyond doubt. This is the first recorded instance of the English Elm producing fertile seeds in this country, but other instances may have occurred, and possibly have been noticed, without being recorded. It would, of course, be more interesting still could the trees have been declared the

true *U. campestris*, but possibly some of our readers will look out for seeds and seedlings in the future.

PRIZES FOR READERS.

DECEMBER COMPETITION—AWARDS.

In this competition readers were asked for essays on a garden of sweet-scented flowers. The prizes are awarded as follows:

The first prize of four guineas to Mrs. Frances Bardwell, Meadow House, Mundesley-on-Sea, Norfolk.

The second prize of two guineas to A. W. Podger, 1, Forest View Avenue, Whippis Cross, Leyton.

The third prize of one guinea to Miss Hopkinson, Sutton Grange, Wansford, Northamptonshire.

The fourth prize of half-a-guinea to Mr. James Pounsett, 22, Naunton Park Terrace, Cheltenham.

This was an exceedingly popular competition, the number of essays sent in being very large indeed, and all were of high quality.

These from the following, which we highly commend, were little inferior to the winning papers: Miss E. P. Martin, C. W. Caulfield, Thomas Gough, H. Rowles, A. L. Simpson, E. I. Lloyd Edwards, Miss Beatrice A. Hinton, P. Reid, W. H. Walters, Frank Lee, V. H. Lucas, W. A. Cook, W. L. Lavender, James Rae, J. Morton, H. Tomalin, R. McHardy, E. Montague, E. F. Davis, Arthur J. Cobb, T. E. Newman, S. Gordon, Major W. P. Bunbury, Mrs. E. Gaye-Hodge, Miss E. A. Patch and W. R. Dykes.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Chrysanthemum Mrs. J. Hygate.

In referring to the certifying of this new Chrysanthemum as an incurved variety, Mr. Crane does not tell his readers that the introducer catalogues it as belonging to the Japanese section, and believes it to be none other than a true Japanese of the incurving type. As far as I have seen all catalogues so class it. Such action by the central body, to which inexperienced persons look to for guidance, cannot be other than misleading. No person with any knowledge of a true Chinese Chrysanthemum could say this newcomer belongs to that type at all. Such a misleading example of using power cannot do other than place the floral committee in a sceptical position with those who do know how a flower should be placed in its proper section. Being at the close of the season the bloom produced from a later bud would be neater than earlier in the season, naturally, and to those of inexperience this error could have easily been made. Those who saw the variety at the November show at the Crystal Palace knew quite well to which section it should belong. Now that especial care is needed to keep an interest in the incurved section, such action by the central body is distinctly of a retrograde character.—E. MOLYNEUX.

Apples for flavour.—The letters which have appeared in THE GARDEN on the best six Apples to grow for a small garden have been very interesting. I think it would also be both interesting and instructive to have the various opinions of growers on, say, twelve of the best dessert Apples to grow for flavour, with particulars of each as to growth, cropping and faults.—I. M., *Leominster*. [We shall be delighted if our correspondent's suggestion is taken up by fruit growers.—ED.]

Maidenhair Fern fronds eaten. I suffered very severely from the above cause in the case of a house of *Adiantum cuneatum*, thousands of small transparent slugs inflicting the mischief. Orange peel laid among the plants

proved the remedy, the plants being well furnished with fronds again. I have no doubt if your correspondent will apply the same he will soon see his plants perfect again. Orange peel in the case of slugs of any kind is an excellent trap, both in plant houses and out of doors.—**FREDERICK PERKINS.**

Hydrangeas.—As I have read several letters about these shrubs in THE GARDEN lately, I am sending you a photograph of some that I have growing close to our church at Manby in Lincolnshire. This parish is about five miles from the sea, and the plants are growing in the corner between the buttress and wall of the church facing the south. Several of these plants every year have more than 100 heads of blooms on them, and they are about 7 feet high. I give them no protection whatever during the winter, and I do not water them at all in the summer (there being a spout above to carry the water from the roof), so that they are often in the summer very dry. To the best of my knowledge these plants are at least forty-five years old. I only cut off the dead flowers in the spring, just cutting them back to the first healthy and strong bud below the old flower. They are quite the admiration of people who see them.—(Rev.) F. D. HALL, *Manby Rectory, Louth, Lincolnshire.*

Dividing Daffodil bulbs.—I think much more remains to be said on this subject than appears on page 624 of THE GARDEN, Vol. LXXI. From the remarks of your correspondent "W. A. W." concerning the "embryo roots," and others to the same effect, it would appear that division, where this was necessary, was left much too late in the season. One notices, too, that root fibres are indicated on both the mother bulb and the offsets in the sketch accompanying the note. If this is really so, and the whole tenor of the note in question is well in line with the illustrated bulb, there is ample room for the remark that the operation has been performed at too late a date. Daffodils may be divided too early, to the detriment of the offset, and the same work may also be done too late, to the detriment—i.e., the subsequent progress—of the offset itself. Quite early in the Daffodil-lifting season of 1907 some Daffodil bulbs reached me displaying obvious injury to the basal seat of the bulb with the enquiry how the injury could in future be avoided. The injury in question consisted in the central basal cores being torn completely out of the offsets, and was due in its entirety to the undue haste and impatience—possibly not a little ignorance—of the operator. In the instance referred to the bulbs had clearly been lifted too early from the soil, and an attempt made to separate bulbs not reasonably ripe for the operation. These circumstances combined to an unsatisfactory result generally, and in the case of a rare variety would mean considerable loss. Taken at the right time such a bulb as the one depicted on page 624 could be divided by finger and thumb with the greatest of ease. Indeed, in a large number of varieties properly dried it would only be necessary, assuming the bulbs to be in a small heap, to rub the hand over the bulk to bring about separation of the most perfect kind. In no case should there be any attempt at separation so long as the offset is contained within the tunics of the mother bulb and these tunics remain unbroken. Attempts at separation at such a time are calculated to result in injury all round unless the work is being performed by an expert. Some varieties, more particularly if left in the soil, will reach the double or treble-nosed stage without revealing the least inclination to separate naturally. Other varieties, similarly situated if not actually separated, reveal a number of flatish or wedge-shaped members that only require the exposure consequent upon lifting and drying off to give them the freedom the soil has not permitted hitherto. The difference of varieties is considerable, however, hence the need for definite references thereto.—**E. H. JENKINS, Hampton Hill.**

THE FRUIT GARDEN.

RENOVATION OF OLD FRUIT TREES.

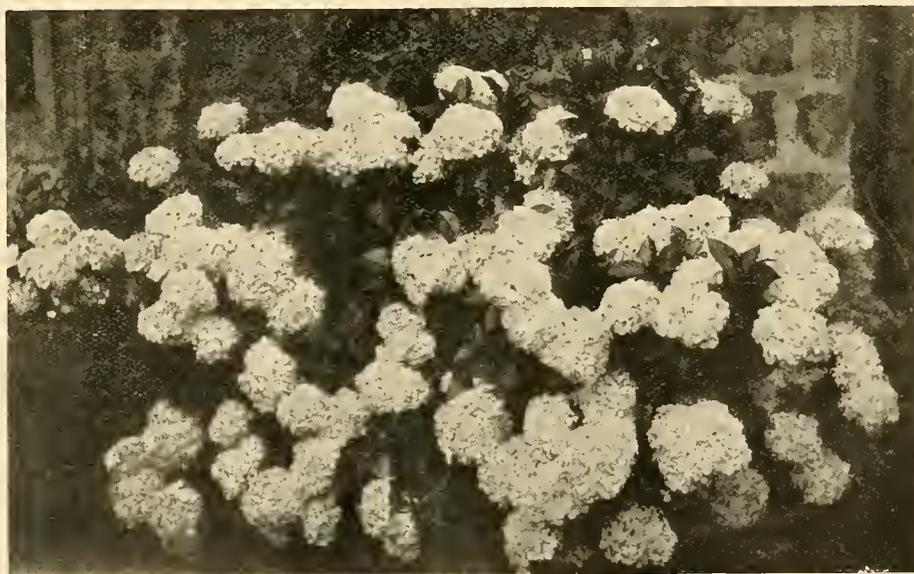
DURING the winter months in old gardens and orchards the question as to whether an old fruit tree is worth retaining or not is almost sure to crop up, and often, one fears, remains unanswered until the rushing work of the spring months detracts all thoughts from the subject. In the case of Plums little can be done in restoring vigour to an old specimen; but with Apples, Pears and Cherries good results may, with judicious treatment, be obtained from an old tree that has hitherto been regarded as a veritable cumberer of the ground. If it is decided to retain such a tree, the first operation must be to set about thinning its branches, cutting out all old worn-out wood and retaining only that which is of comparatively young formation. If it is a wall tree that is being dealt with, it may be, and often is, a good plan to remove entirely all the old spurs and depend upon the new shoots that will be produced for supplying a new set the following year. This will, of course, mean that no fruit

together and used at the rate of 4oz. per square yard. Top-dressings, whether of natural or artificial manures, should always extend from the stem of the tree to the outermost spread of the branches.

Liquid manure is often available in large quantities during the winter months, and much of it is often wasted. These old trees that are undergoing renovation will be enormously benefited if holes 18 inches deep and 18 inches apart are made among the roots by means of a crowbar or similar implement, and then frequently filled during the winter with the liquid manure, it being well nigh impossible to apply it too strong. In the spring the holes may be filled with good soil rammed firm. Old wall trees are especially amenable to this liquid manure treatment.

BRADLEY'S KING OF DAMSONS.

FEW Damsons are equal to Bradley's King, and as regards quality, I give it first place. Damsons are not often grown for dessert, but this is excellent, being sweet though of a brisk flavour, and if left late on the trees the fruits are delicious, very juicy, and hang a long time. It may be



A BEAUTIFUL HYDRANGEA GROWING IN MANBY CHURCHYARD, LINCOLNSHIRE.

will be produced next summer, but the tree will benefit materially by this lapse.

After pruning must come a cleansing process, every scrap of rough bark, moss and lichen being removed. If much is present it will be necessary to use an iron scraper of some approved pattern, afterwards washing or spraying the stem and branches with the winter caustic wash now so well known, or else the still efficient and perhaps better-known dressing of quite fresh lime. If the tree is standing in an orchard and grass has been allowed to grow right up to the stem, the turf should be removed from an area corresponding with the spread of the branches, lightly forking over the soil afterwards. Where natural manure is available, it will do an immense amount of good to old fruit trees of any kind if a little of the surface-soil is removed from over the roots and replaced with a 6-inch thick layer of well-decayed stuff. But natural manure is not always to be had, and we must then fall back on artificials, excellent results having been obtained by the use of the following mixture used as a surface-dressing early in February: Four parts nitrate of potash, six parts superphosphate, three parts basic slag, three parts sulphate of lime and three parts nitrate of soda, the whole well mixed

termed a medium-sized fruit, and the tree is a great bearer; indeed, it is one of the best in this respect, and well worth the attention of amateurs who only have small space and require the best. Young trees soon bear, and as the fruits in a favourable season mature and ripen from early October or earlier in light soils, it should find room either for the dessert or cooking. It grows freely, and should, if possible, be planted in the open, at least not too much shaded by other trees. Grown thus, it rarely fails. Even when other stone fruits are barren in many localities, it is known as the King, and is a great favourite; it makes a delicious preserve. **G. WYTHES.**

RASPBERRY PROFUSION.

I HAD this excellent variety on trial this season for the first time, and was surprised to note its excellence in a poor soil and in anything but a suitable position. Profusion differs from many others as the plant has such robust growth, and this in a poor fruit soil is a great advantage. It often happens that Raspberry canes do not thrive in some gardens as one would wish, and here I would advise a trial of the above, not only on account of its fine growth, but its admirable

fruiting qualities. It is rightly named, being a free and constant bearer and of rich flavour. To do it justice, the plant should have ample room on account of its vigorous growth. As this is the season for planting, I feel sure amateurs would do well to give it a trial, first well trenching or double digging the land and manuring, and by early planting secure a strong growth next season. W. M.

HARDY LADY'S SLIPPERS

(CYPRIPEDIUMS.)

THE hardy Lady's Slipper Orchids are a puzzling group to grow, and although much has been written about them in recent years real successes in their cultivation are few in number. So far as one is able to judge neither the plants nor the climate are wholly responsible for the failures—such responsibility is shared by the collector, the vendor and the planter. The collector is none too careful in gathering his plants without serious injury to them, the vendor is not always successful in his methods of storage before sale, and the planter expects too much from his specimens in their first season of growth, without having due regard to the tax on the plant's powers of endurance in its transit from its native home to the planter's garden. "More consideration" appears to be a necessitous plea for the hardy Slipper Orchids, and the time has arrived for it to be put into practice. The supplies are already precarious, the difficulty in collecting such increases year by year in the ease of the better kinds, and there are rumours of restrictive legislation in at least one State wherein these plants abounded but now occur gregariously or in isolated examples in inaccessible places. Propagation by severance of the rhizomes may be practised with old-established plants without disturbance till the severed portions make crowns, and *C. humilis* makes offsets freely where it thrives till ten to twenty crowns are aggregated; such clumps are common in a wild state but rare in cultivation.

Preparation of the crowns and roots should be thorough. Dead particles of root and rhizome are best removed, even if only a few roots and the crown remains. If the stems flower and the plants that result appear weakly at the time, the flowers should be removed immediately or before they develop, the leaves being encouraged, by shading or watering if necessary, to remain on the plant as long as they will, for it is upon the duration of these that the establishment of the plant mainly depends, the new crowns and the wig of roots surrounding each being developed by the leaf action alone—no active roots ever survive collection. With the new crown and the wig of roots developed care practically ceases, for the plants are then able to help themselves, and provided they have the kind of soil and degree of moisture we know each species requires, and some shade for the bog-loving species, there is nothing that should interrupt the steady growth into clumps of which the gardener may be proud.

The group readily divides itself into two races. *C. humile*, *montanum*, *macranthum*, *guttatum*, *Calceolus* and *californicum* prefer loam freely mixed with sand, and they prefer conditions altogether drier than is good for the others. Limestone chippings are of use for *montanum* and *Calceolus*, but they grow just as well without this material if the loam is good. In wet, heavy soils, and particularly in harsh clays, the plants require to be lifted above the general level in order to maintain drier winter conditions.

The second race, comprising *C. arcticum*, *parviflorum*, *pubescens*, *candidum*, *japonicum* and especially *spectabile*, require a root-run of leaf-soil and peat and altogether wetter conditions. One cannot do better than suggest their association with *Trillium*s, *Osmunda*s, *Ranondias*, the moisture-loving *Primulaceae* and grassy *Irises*, for where these plants thrive there should be no

difficulty in growing *Cypripedium*s if they are carefully nurtured in the first season. Some of the slender growers are excellent for growing in crevices between damp boulders, and especially where such boulders act as retaining walls and are continually moist and shaded; indeed, the many ways in which one can grow hardy Slipper Orchids may be described indefinitely. All the kinds are valuable garden plants, hence there is no need for discrimination between worthy and unworthy types. Most of them are easily procurable, but the rarer forms of Lady's Slippers—*C. guttatum*, *C. japonicum* and the Siberian *C. macranthum*—travel so badly and are so rarely collected that intervals of a few years may elapse between good consignments; these plants one would naturally attempt to grow when fully successful with the less difficult sorts. *C. fasciculatum* I have never been able to learn anything about. M.

(To be continued.)

CYPRIPEDIUM FAIRIEANUM BLACK PRINCE.

WHEN *Cypripedium fairieanum* caused such a commotion in the Orchid world a few years ago



CYPRIPEDIUM FAIRIEANUM BLACK PRINCE.

not many would have cared to suggest that it would soon become comparatively common, yet such is the case at present, owing to large importations from its native haunts. The first variety of it, named Black Prince, was shown before the Orchid committee of the Royal Horticultural Society on the 10th ult. by Messrs. Sander and Sons, the well-known Orchid specialists of St. Albans, when it received an award of merit. It is a handsome and distinct variety. The dorsal sepal is broader than in the type and is very heavily streaked with almost black crimson. The petals curve downwards, with the ends charmingly reflexed, the colour being greenish streaks on a white ground. The lip is projected well forward and is of a brownish red colour. Doubtless we shall soon be welcoming other varieties of this famous Orchid. Our illustration is from a sketch of the flower exhibited.

TREES AND SHRUBS.

A BEAUTIFUL LILAC.

(SYRINGA EMODI.)

AT the time of year when there are but a small number of flowering shrubs left us, among which may be counted the various Dogwoods (*Cornus*), one may sometimes come across a tall, handsome shrub which many would be puzzled to name, and which, indeed, would probably be identified by but few. A most ornamental shrub it is, with bold, dark green leaves and large panicles of creamy flowers, in appearance somewhat like a glorified Privet. It is distinct and noticeable, and is in some parts not very uncommon, yet is, nevertheless, not well known, and when the explanation is offered that this is one of the Lilacs, *Syringa Emodi*, the fact always meets with surprise.

Classed with the ordinary Lilacs and compared with these, which come out in late spring, it would never become popular, for it is not fragrant, nor has it the same profuse beauty of these lovely well-known favourites. Still, it is a handsome and very valuable shrub, flowering as it does so late in the season—the end of June and July—long after the time the Persian and common Lilacs are over and forgotten, and when our shrubberies can boast of but few flowering subjects. It retains its dark, glossy leaves, too, until well into November, and in every sense it is such a desirable addition to our gardens that it seems marvellous it should not be better known. For towns it is excellent, as is proved by the way it is flourishing in various parts of London parks, brightening up many a spot there in late summer, and again, in dull November days, showing its cheerful clean greenery. As a shrub for a dusty roadside garden it is also a good thing to plant, for the leaves do not retain the dust on their surface. It seems to be accommodating also, for I know of some excellent specimens which are growing in the semi-shade of the northern side of a shrubbery, where they are partly overshadowed by trees. When soil and aspect suit it attains the proportions of a very large shrub or small tree. We are at last getting more in the habit of referring to these shrubs as *Syringa*, the name so long and, unfortunately, still rather persistently applied in error to the *Philadelphus* (the Mock Orange). There is no danger that its well-known name of Lilac will ever get forgotten in consequence, although the beautiful old pronunciation of it, "Laylock," has passed entirely out of custom. One cannot but feel a certain regret that this old word has become so altered. E. CURGWEN.

FOUR GOOD COTONEASTERS.

C. ROTUNDIFOLIA.—This is one of the best of the Cotoneasters for winter effect, and it is surprising that it is not more often seen, though none of the members of the genus find such favour in the eyes of the planter as they deserve. The above forms a small spreading shrub about 3 feet in height by nearly 6 feet in diameter, bearing bright scarlet berries about the size of a small pea. These are ripe in October, and remain on the shrub until the following March or April, and are rarely, if ever, touched by birds. The leaves are less than half an inch in length, round and of a dark, shining green. They are persistent as a rule, but in a hard winter the majority fall off, turning to a brilliant red before doing so.

C. frigidula.—This is a tall-growing kind, attaining a height of 12 feet or more, with long, woolly leaves, glaucous on the undersides, and clusters of scarlet berries borne after the manner of those of the Mountain Ash. Unlike the latter, however, they are rarely interfered with by birds, and hang on the plants during the greater part of the winter. I have found this

plant flower and fruit freely in partial shade even when hemmed in by Laurels, &c., but its greatest beauty is seen when it is in a moderately dry, sunny spot, which is also best for all the Cotoneasters, as they are sun-loving plants and do not mind a certain dryness at the root.

C. microphylla.—This is a dwarf, creeping plant suitable for the rockery or for training against a low wall. In the latter position it attains a height of 4 feet to 6 feet, with numerous branches clothed with tiny, persistent, dark green, shining leaves and bright crimson-red berries. Its greatest beauty is, perhaps, displayed when it is on a rockery, where its shoots can spread in all directions, clothing the stones with a carpet of glossy green and red.

C. horizontalis.—This resembles the preceding in growth and should be planted in similar positions, but it differs in being deciduous and bearing small, bright scarlet berries, which make up in numbers for their lack of size. The branches grow in a flattened fan-shaped manner and the small leaves turn to a bright orange red before falling off.

Bagshot, Surrey.

J. CLARK.

FLOWERING TREES.

BESIDES the larger deciduous and evergreen trees hardy in this country, there is a considerable number of small trees that are valuable for their flowers, and should be freely planted wherever space permits. None of them attain to any very great size, but all are valuable, both for their free blooming and the ease with which they can be grown. The following list is not at all an exhaustive one, but is merely a notice of the best—those which can on no account be overlooked:

HORSE CHESTNUTS (ÆSCULUS).

The common Horse Chestnut (*Æ. hippocastanum*) is a well-known large tree in this country, but some of the other members of the family are smaller in growth and equally beautiful. *Æ. carnea* (*rubicunda*) is of hybrid origin, and bears bright red spikes of flowers in late May; but *Æ. carnea* var. *Briotii* is much brighter in colour and quite as easily grown, though it is not often seen. *Æ. californica* is a small tree with erect spikes of white, sweet-scented flowers, opening in May, and *Æ. indica* (the Himalayan Horse Chestnut) is a distinct and handsome tree, which will become popular when it is better known. The blooms are white with yellow and red blotches at the base of the petals, and open in July, when all the other Horse Chestnuts are past.

CATALPA.

All the Catalpas are handsome garden trees, and have an additional value from their time of flowering, which is during July and August. The commonest of them is *C. bignonioides* (*syringæfolia*), which grows to a height of about 30 feet, with a spreading, symmetrical head. The leaves are 6 inches or so long by 4 inches wide, and the flowers are borne on erect, branching panicles, each Gloxinia-like flower being over 1 inch across, white, with yellow blotches and purple spots in the throat. *C. cordifolia* somewhat resembles the preceding, but is a larger growing and somewhat hardier tree, with larger panicles of flowers opening rather earlier. Both of these are natives of North America, while from Japan we get *C. Kämpferi*, which is often met with under the name of *C. Bungei*, a native of China, though it is doubtful if the latter is in cultivation. *C. Kämpferi* has yellowish brown flowers with purplish spots, but it is not so handsome a tree as the North American species. A hybrid between *C. cordifolia* and *C. Kämpferi* was raised some years ago by Mr. J. C. Teas in America, which bears white flowers with yellow and purple markings in enormous panicles much larger than any of the species. This hybrid is of strong and vigorous growth, and it is surprising it is not oftener seen.

Bagshot, Surrey.

J. CLARK.

(To be continued.)

THE FLOWER GARDEN.

WATSONIA O'BRIENI.

THE Watsonias are natives of South Africa and are beautiful bulbous plants, somewhat Gladiolus-like in appearance. In the colder districts they must be used for conservatory decoration, or, if they are planted out, must be lifted when the foliage dies down. In the south-west, however, they may be grown permanently in the open, though, when so treated, they rarely flower annually. The first white Watsonia was discovered by a man in the employ of Mr. Upjohn, a nurseryman of Rondebosch, near Cape Town, growing on the slopes of Table Mountain. The produce of this bulb eventually became the property of the Curator of the Botanical Gardens at Port Elizabeth, who passed them on to Mr. O'Brien, by whom they were distributed as Watsonia O'Brieni. After the lapse of a little time, Mr. H. M. Arderne of Cape Town, a most enterprising horticulturist, found a white Watsonia near Worcester, about eighty miles distant from Cape Town.

This bulb was propagated from and the produce sent out under the name of Watsonia Ardernei, but as W. O'Brieni and W. Ardernei are both white varieties of *W. iridifolia*, they are, needless to say, identical. However, they are still catalogued as distinct, and are quoted at different prices. There is no doubt that these white Watsonias should be known as *W. iridifolia alba* and not by their present specific titles. I myself, many years ago, found a white Watsonia in the Knysna district of Cape Colony, far distant from where W. O'Brieni and W. Ardernei were discovered, and intended to secure it on my return, but was, unfortunately, unable to visit the spot again. The flower-spike shown in the accompanying illustration was almost 6 feet in height and bore over fifty blossoms. The largest leaf was 4 feet 6 inches in length and 2½ inches in breadth. One thing against this Watsonia is that it produces its foliage in this country at the same time as it does at the Cape, namely, the autumn, which corresponds to the South African spring, while the flowers are several months later in their appearance. W

rosea, on the other hand, conforms to our seasons, its leaves dying down in the autumn and reappearing in the spring. If Watsonia O'Brieni would follow its example, instead of holding its leaves through the entire winter, it might prove a more consistent bloomer. Some writers affirm that wet is fatal to the corms, but, though the winter rainfall in Devon is heavy, my unprotected plants are perfectly healthy, and Mr. Arderne found his plant growing in "a boggy marsh," while the one that I discovered was in low ground close to the bank of a river.

South Devon.

S. W. FITZHERBERT.

THE AMATEUR'S LAWN.

IN the majority of cases on taking a residence the amateur gardener, who of all things wishes to have a smooth perfect grass lawn, usually finds either one-half weeds or coarse grass and very uneven or, perhaps, one quite worn out, starved and mossy.

To purchase new turves and thus recast the lawn is out of the question—the cost is too great. Still, so far as reasonable cost is concerned it will be willingly met. What, then,



WATSONIA O'BRIENI.

is the best course to take? Patching does little good and too often leads to great irregularities of the surface. It may be well where an old lawn is not too weedy to have every possible weed extracted and very much of the coarser grasses, then to give the whole lawn a top-dressing of fine gritty soil, with which is added soot, basic slag and wood ashes, all screened, then well raked in to fill all holes and level up irregularities. But even in such case it is important the soil used should not be from a weedy surface, as if so it will assuredly contain weed seeds in abundance. If it be found that is so, the only course is to allow all such seeds to germinate in the early spring, and as soon as high enough cut them down or pull them up, thus leaving the dressing clean for the pasture seed sowing, which may be left in such cases till the end of April. Where, however, the whole lawn surface has been forked over several inches deep, all grass weeds and roots removed and a dressing of fresh, fine soil cast over it, with soot, basic slag and wood ashes, as before advised, the whole again forked in, leaving the surface clean, fine and level, also the

an absence of needful grass-producing food, the presence of moss, a common feature in lawns, shows that the soil is sour and needs draining. Generally, however, to keep lawns in good condition, apart from regular and careful mowing, annual dressings with fine soil and some manure should be given. D.

NATURAL CONTRAST IN PLANTING.

THE charming grouping of our wayside and woodland wild plants offers a lesson to any gardener who has herbaceous borders or a wild garden to arrange. In Nature's garden, a pleasing irregularity is the rule, for the planting is done by the wind and the birds, and their irresponsible scattering of seeds results again and again in groups of such great beauty that the object-lesson thus given is not one to be ignored.

Besides this informality, the beautiful contrast of form must be noted, for Nature almost invariably seems to associate those plants which, from difference in habit of growth, form of leaf

THE ROSE GARDEN.

ARRANGEMENT OF ROSE BEDS.

A SCHEME OF COLOUR.

QUITE an important point when planting Roses is arranging and blending different sorts nicely. In case any readers of THE GARDEN have not yet got in their Roses for 1908, here are a few suggestions for beds (particularly small beds) cut out of grass lawns. Several beds cut out of one of my lawns and given up entirely to Roses I planned like this, and they were greatly admired last year. In the case of small round beds, plant one standard in the centre, round this three or four dwarfs, and then edge all round with dwarf Polyanthas. Oblong beds, and, in fact, beds of almost any shape, the same idea can be carried out, employing more standards and dwarfs according to the size and shape of them.

1.—Frau Karl Druschki, 4 feet standard; ditto dwarfs, round same, and edge all round with dwarf Polyantha Katherine Zeitet.

2.—Hugh Diokson, 4 feet standard; Charles J. Grahame, dwarfs, round same, and edge all round with dwarf Polyantha Mme. N. Levasseur.

3.—Dean Hole, 4 feet standard; ditto, dwarfs, round same, edging with Gloire de Polyantha.

4.—Mme. Abel Chatenay, 4 feet standard; ditto, dwarfs, round same, edging with Mignonette.

5.—Countess of Derby, 4 feet standard; ditto, dwarfs, round same, edging with Georges Pernet.

6.—Lady Roberts, 4 feet standard; ditto, dwarfs, round same, edging with Perle d'Or.

7.—Mme. P. Perny, 4 feet standard; ditto, dwarfs, round same, edging with Anna Marie de Montravel.]

8.—White Maman Cochet, 4 feet standard; G. Nabonnard, dwarfs, round same, edging with Schneewitchen.

9.—Mme. Berard, 4 feet standard; Joseph Hill, dwarfs, round same, edging with Eugenie Lamesch.

10.—Countess Pesticies Hamilton, 4 feet standard; Morning Glow, dwarfs, round same, edging with Leonie Lamesch.

11.—Lady Ashtown, 4 feet standard; Gustave Grunerwald, dwarfs, round same, edging all round with dwarf Polyantha Philippine Lambert.

12.—Clio, 4 feet standard; Augustine Guinoisseau, dwarfs, round same, edging with Clothilde Soupert. Q.

HINTS ON PLANTING ROSES.

I HAVE recently received from the National Rose Society "Hints on Planting Roses." I hope I shall not incur the charge of presumption if I venture to offer a few remarks, as the handbook is put forth, "not for experienced rosarians, but for those who wish to grow Roses but do not know how to set about it." I do not pretend to be a "rosarian," but, as I have grown Roses with much success for a few years, experience has taught me something. In planting I dig 2 feet, put a turf at the bottom or any old decayed garden rubbish, then some well-rotted cow manure, and fill up to the required height. When the roots are carefully spread out I work in some well-sifted Oak leaf-mould, over that a little fine soil, over that, again, a sprinkling of basic slag and bone-meal, well mixed, and then some soil trodden firmly. The result in all



A BEAUTIFUL NATURAL ARRANGEMENT OF SWEET CICELY (MYRRHIS ODORATA) AND BUTTER BUR.

whole being well trodden all over, then raked afresh and again levelled, the sowing of grass seed may be made early in April, as it is desirable to secure a grass crop as early as possible.

When so much trouble is taken, and it is wisest to take ample trouble at the first if a good lawn is to be secured in time, the only other chief element to success is that the grass seed be of the best quality for such purpose. A good selection to secure a lawn of fine quality is small-leaved perennial Italian Rye grass (*Lolium perenne*), 12lb.; Red Fescue (*Festuca rubra*), 9lb.; Hard Fescue (*Festuca duriuscula*), 9lb.; Crested Dog's-tail (*Cynosurus cristatus*), 6lb.; Sheep's Fescue (*Festuca ovina*), 6lb.; *Poa pratensis*, 3lb.; and *Poa trivialis* and *P. nemoralis*, 3lb. each. That is held to be a good selection for soil of medium character. These quantities represent what are usually advised for an acre of ground, but it is well to add fully one-third to each quantity, as there may be some failures and birds may claim a share of the seed. While bare, thin and weedy lawns indicate poorness,

or flower, help to show up characteristics in each which, were they growing alone, might easily pass unnoticed.

A familiar example is that of the Primrose, the Wood Hyacinth and the Anemones. The leaves and low growth of the Primrose make an effective foil for the graceful, arching stems of the Hyacinth and the deeply-cut leaves of the Anemones.

Examples such as these can be recalled by most of us; but it is when we come to the taller and stronger growing plants that the contrasts are most striking. The illustration is of a group of the Sweet Cicely (*Myrrhis odorata*) with a foreground of the large handsome leaves of the Butter Bur. This serves to show what a splendid effect is to be obtained from contrasting a simple-leaved, low-growing plant with one possessing Fern-like foliage and a tall, graceful habit of growth.

This lesson of Nature's ought to be applied in every garden, for the contrast of form is quite as important as the happy blending of colours. I. S. TURNBULL.

cases is strongly-grown plants. For winter protection I spread a little cow manure all over the bed, and on that 6 inches of leaves, and, to prevent them blowing about, I put over them strong stakes or branches of trees. Once in the Midlands I had the leaves swept off the lawn on to a bed of fifty-six plants, covering them up 1 foot deep, and when the leaves were removed at the end of March the stems of many of the trees were of a bright green colour, and the growth that summer was immense.

I observe that the handbook does not mention whether standards, half-standards or dwarfs are recommended. Some Roses do better grown one way and some another, e.g., La France and Viscountess Folkestone do much better on standards, but that lovely Rose M. Joseph Hill does best as a dwarf. Messrs. Frank Cant and Co. write in their catalogue:

"Few would grow such varieties as Comtesse de Nadaillac, Souvenir d'Elise, Ethel Brownlow, &c., for the adornment of their garden without courting failure, &c." The handbook advises the inexperienced amateur to grow for exhibition purposes Comtesse de Nadaillac and others. I very much doubt their being pleased with the result. Bessie Brown grows strongly and produces plenty of buds, but most of them ball and rot. Mildred Grant is fine the first year, but not of any account afterwards. Florence Pemberton grows strongly, spreads widely, is full of buds, but produces few good openflowers. The Maman Cochets are grand when they do well, but they hang their heads and often ball and rot. The Bride, Muriel Grahame, Catherine Mermet and Bridesmaid are tender and shy. Souvenir de Pierre Notting burns and shrivels on the outside—out of a multitude of flowers I have rarely had a decent one. Mrs. Edward Mawley will not grow in this neighbourhood. Mme. Jules Gravereaux is grand, but it sprawls all over a bed. It is a climber and should be planted against a high pole. I am surprised that the list does not include Antoine Rivoire and G. Nabonnand, two of the very best garden Roses. A nurseryman in this neighbourhood told me that he sold more of Antoine Rivoire than of any other Rose: Mme. Abel Chatenay next. I venture to recommend strongly Liberty, Papa Gontier, Rainbow, Lady Roberts, Lady Battersea, Beryl and Peace, and suggest that Etoile de France be refused, also George Laing Paul, because it turns to a bad colour, and tender plants like the lovely Duchess of Portland. Indeed, sir, it would be a great kindness if, before the planting season is quite over, you would out of your large experience, give a hint as to the Roses that should be avoided. That which you once wrote me about the behaviour of Mildred Grant proved true, and the list you once sent me I have found admirable. Notwithstanding the great number of new Roses, I think if I were limited to three they would be Fran Karl Druzhcki, Mme. Abel Chatenay and Marquise Litta.

public, and here give my mode of culture. I have tried plants put out in beds, inside a greenhouse and also in outside beds, training the branches under the roof glass from the main stem, which passed through a hole in the wall of the structure.

I know that many prefer to have plants on other stocks. I have tried both these and specimens on their own roots and now I do not hesitate to choose the latter. Ample provision should be made for drainage before any soil is put in the border. For one plant a space 5 feet long, 3 feet wide and 20 inches deep is necessary for the roots, though large plants may be grown in a border half the size if there is not sufficient room to spare. Broken bricks, clinkers and similar material may be put in for drainage. On this place whole turves grass side downwards and fill up with chopped

is harmful; so long as frost be excluded from the structure the plant will be safe. Train the shoots at least 15 inches from the glass to allow of a free circulation of air between them and the roof. Thin out weakly shoots in August, not in winter or spring, and rub out any young growth which may appear after such pruning before they attain a length of 1 inch. The stronger branches should be trained about 9 inches apart and be left their entire length. Grown under glass the wood will ripen well and a bloom will be forthcoming from nearly every bud on each shoot. In summer time as much air as possible should be admitted. From an ordinarily-sized young plant I have gathered 260 beautiful flowers the third year from date of planting. Canker of the main stem does not, as a rule, show before the eighth year, and not even then if every precaution be taken against bruising the bark or allowing it to press firmly against a stage or other part of the structure. AVON.



A PERGOLA CLOTHED WITH ORNAMENTAL GOURDS.

ORNAMENTAL GOURDS.

WE so seldom find the ornamental Gourds used in the pleasure garden that the accompanying illustration will enable readers of THE GARDEN to form an estimate of their merits in this respect. The prominent features of these Gourds is their brightly-coloured and quaintly-formed fruits, which, given a season of ordinary sunshine, ripen readily and become as hard as a stone, so much so that when severed from the plants they remain in perfect condition for seven or eight months, retaining their bright colours throughout the winter.

The cultural requirements are exceedingly simple, and should be readily mastered by those having a limited experience in gardening. Seed is sown singly in 2½-inch pots from the middle to the end of April. Light soil is necessary for seed-sowing, employing a richer compost as the plants are moved into larger pots, and finally planting out in well-manured ground in June. Good garden soil enriched with well-decayed farm manure is excellent, into which the roots readily penetrate and the plants grow away in a fashion proverbial with Gourds. They delight in copious supplies of moisture when in full growth,

so that a plentiful supply of water and liquid manure greatly assist in their rapid development.

Strong supports must be provided when planting, to which the "bine" is trained, and almost daily attention is required to secure the leading shoot. When grown upon single poles it is necessary to "stop" the laterals or side shoots immediately beyond a fruit. The flowers of Gourds represent both sexes. The female flowers are readily recognised by the embryo fruit forming at the base of the coloured petals, and these must be carefully retained at pinching. The pergola illustrated was a prominent feature in these gardens last summer, owing much of its success to the distinct leafage of the Gourds, which in their turn were helped out by Michaelmas Daisies and annual Sunflowers.

THOMAS SMITH.

Walmgate Gardens, Louth.

turf which has been cut from an old pasture and stacked for two months. The turf should be fibrous and neither too light nor too clayey. With the exception of one peck of well-rotted, sweet leaf-soil to two bushels of loam, no other kind of ingredient need be put in. Great care should be taken in selecting the plant; it should have a clean stem with whole bark. Bruised bark on young plants would mean canker development the second year after planting. Equal care must be observed while planting and fastening up the branches, so as to avoid bruising the bark.

The roots should be spread out evenly and covered with soil 3 inches deep, and the whole surface of the border with half-rotted manure to a similar depth. The exposed portion of the stem should be wrapped in hay bands from November to April. A very high temperature

W. J. CHAPMAN.

Eldene, Sawthorpe Road, Tunbridge Wells.

THE MARECHAL NIEL ROSE.

AMATEURS often fail to grow this Rose, but I find it is as popular as ever with the general

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

COLD GREENHOUSE.—Remove bulbs from the quarters in which they were plunged in pots, and place them in the cold greenhouse. Roses on the greenhouse roof should be pruned. Cut out dead, weak and useless shoots, leaving the strong, well-ripened growths to produce blooms. Complete the tying of Roses at the same time. The Chimney Bellflower (*Campanula pyramidalis*) is a charming plant for the cold greenhouse. Pot up a few strong plants in 9-inch or 10-inch pots.

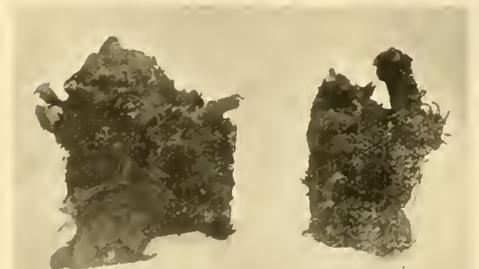
Plants in Rooms.—Do not allow plants to stand in draughty positions. The Fern *Pteris tremula* is excellent for dark corners. Should any plants get frozen, remove them to dark quarters where they may thaw gradually. This is best accomplished when the air is dry and still. Water plants with the greatest caution, using slightly tepid water. Avoid the use of stimulants and manure water at this period.

Heated Greenhouse.—Growth of *Plumbagoes* should be shortened to admit light and air and for the benefit of plants immediately beneath them. *Fuchsias* may be pruned and started into growth where early cuttings are wanted. Soft-wooded plants may now be propagated by cuttings and they are less liable to damp off if a small portion of the old hard growth be detached at the heel. *Geraniums* for an early display should be placed in their flowering pots. Pot up a batch of *Tuberoses* and *Lilies*.

Hardy Flower Garden.—The present is an excellent time to prepare beds and borders for the reception of the plants later. New rockeries may also be formed now. *Carnations* planted in the autumn may be unduly loose around their base, for this reason slightly firm the soil.

The Vegetable Garden.—Hot-beds may now be made, assuming the materials have been properly turned over and sweetened. The hot-bed should be made up firmly and the situation should be a warm and sheltered one, preferably a south aspect. See that the materials stand out at least 1 foot beyond the sides of the frames. Hot-beds may be utilised for raising early supplies of Carrots and for raising various seeds. It is a

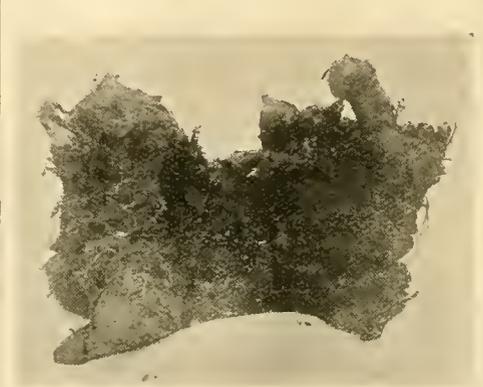
simple and inexpensive method of raising plants. Exhibition Onions are obtained by making a sowing at the present time on a hot-bed; *Ailsa Craig* is an ideal type of Onion for this purpose. Lift Rhubarb for forcing. Wheel on manure to quarters it is intended to dig in the near future.



2.—THE CLUMP DIVIDED.

Fruit Garden.—There must be no further delay in completing the pruning, nailing and

tying of all fruit trees and bushes. Young standard Apples and Pears need to be pruned with considerable care. If possible select about five shoots of equal strength standing out equidistant from each other, shortening back, according to whether they are weak or strong, to a bud



1.—CLUMP READY FOR DIVIDING.

pointing outwards. Strong shoots may be left from 12 inches to 16 inches long.

Chrysanthemums.—Propagate decorative varieties by cuttings. The earliest batch of plants should be given a position in the cool greenhouse on shelves near the glass and free from draughts. Order novelties forthwith.

INCREASING RHUBARB.

RHUBARB is always in demand in the earlier half of the year, and in all good gardens arrangements are invariably made to lift roots for forcing, to maintain the clumps in good health, and for periodically forming fresh beds. To the novice in gardening matters little is known of Rhubarb and how to deal with it successfully. It may surprise some readers to learn that Rhubarb is deep rooting, and for this reason the plot in which it is to be planted should be trenched quite 2 feet to 3 feet deep, incorporating at the time the trenching is done a liberal quantity of good manure. Manure that is well decayed is of little use. For this reason, therefore, fill in the trenches with solid manure; in fact, the best that can be procured. Some of the finest Rhubarb we have seen was grown on ground that had been trenched to a depth of 5 feet.

Dividing the Roots.—The best time to lift Rhubarb for the purpose of division is February, and we prefer to do this early in the month when the weather is free from severe frosts. The huge clumps that some of the old plants are represented by should be first divided up into convenient sizes, so that the crowns may be more easily detached. To divide a few plants is not difficult, as they split very readily, and pieces containing one crown or more may be detached suitable for replanting with little trouble. Frequently, pieces containing a crown or two may be detached from old clumps without the necessity of lifting the latter for the purpose of division. Assuming the new plantation or beds are to be planted in the near future, sufficient time will be allowed in the interval in which the new quarters may be properly prepared. Rhubarb will do well in the same quarters for ten years, but to keep the roots in good order, it is necessary to mulch them periodically with manure. When the clumps appear to be exhausted,

which will be denoted by weak and sickly growths, remove the surface soil round about the roots and apply liquid manure or sewage copiously, following this with a heavy dressing of partially decayed manure. Subsequent growths will prove how beneficial such treatment is

Planting Rhubarb Crowns.—Assuming the new quarters are prepared in the way just suggested, a fine day in February should be selected for replanting the crowns. When the weather is dry and the soil friable the work is much more satisfactorily carried out. Plant the crowns in rows, the latter being 3 feet apart, with the same distance between the crowns. Where a smaller plantation is being made, arrange the crowns 3 feet apart each way. One strong crown will be quite sufficient, but three smaller ones should be requisitioned if strong individual crowns are not forthcoming. Observe special care when adjusting the crowns in position. See that they are just level with the surface soil, and press the soil firmly round each one. To promote growth, mulch the replanted crowns with littery matter, preferably strawy litter from long manure. As the warmer days approach, apply water at intervals, this timely attention ensuring their well-being. By following this simple means of propagation growth in the succeeding year should be strong.

Forcing Rhubarb.—Anyone with a few spare roots of Rhubarb may have an early supply with little trouble. Roots lifted at the present time should be ready for use within a month, more or less. Those who have a Mushroom house may utilise this for forcing Rhubarb, but a more popular method is to place a few roots under the greenhouse staging where the temperature can be maintained at from 55° to 60°, or, where there is little or no glass, the roots may be placed in a tub or box, covering them with any old potting soil and mulching the crown with a quantity of warm manure and leaves. The clumps should be kept in the dark as much as possible. Those who have no glass house will find a warm cellar answer well; in fact, any protection that can be afforded should be taken advantage of, and this means of forcing may be enhanced by a liberal covering with leaves or long stable litter as fermenting material. Good sorts are Royal Albert and Early Red for earlier



3.—GOOD SINGLE CROWNS FOR PLANTING.

supplies, and Myatt's Victoria and Hawke's Champagne for succession.

PREPARING AND PLANTING A HERBACEOUS BORDER.

It is to this border that many amateurs devote their attention during leisure hours. With



AFTER TRENCHING THE BORDER LAY THE PLANTS ON THE SURFACE IN THE POSITION THEY ARE TO OCCUPY.

comparatively little trouble flowers can be obtained from early spring until late autumn.

Position.—The villa garden is usually small. A border 4 feet or 5 feet wide round the boundary fences or walls will make an ideal herbaceous border, provided it is not overhung with trees. This does not mean shelter or slight shade during a portion of the day; these are often beneficial rather than detrimental to some plants. If convenient, a wider border, say, 10 feet or 12 feet, should be made at the bottom of the garden. This will accommodate many of the taller plants, which would look rather out of place in a border of less width. The planting may be done during favourable weather from October to March, preferably not later than January. When making a new border it should be trenched, if possible, to a depth of 3 feet. When once the border has been well made, it is not necessary to dig it so deep again for a number of years. The illustration shows the digging of a border three spits (about 2 feet) deep. The soil in the bottom, marked by the spade on the right hand, is turned over and left at the bottom of the trench, not brought to the surface. Deep cultivation such as this is only necessary or advisable every second or third year. In a herbaceous border there are always a number of plants which are better left undisturbed for several years. Delphiniums (perennial Larkspurs), Japanese Windflowers (Anemone japonica), Torch Lilies (Kniphofias), Liliums and Rose trees are examples of plants which dislike frequent removal. Lifting and replanting of these once in five years is ample.

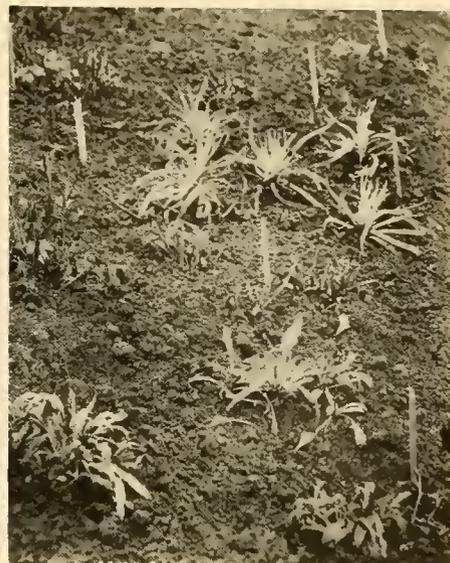
Planting.—The ultimate effect of the border when the plants are in flower must be continually borne in mind when planting. The height the plants grow, the time of blooming, and the colour of the flowers must all be considered. Three to eight or more plants in a long border grouped together are more pleasing, and exhibit the true character of the plants better

than when they are dotted singly. We read in gardening papers and elsewhere of a June border or a July border; these are all filled with plants flowering in those particular months. Another style is to plant a border with subjects, the flowers of which are all of one colour, as the white border, the blue border, &c. Gardens in towns or suburbs where such schemes can be carried out are few and far between. In the mixed border the pride of many amateurs is that the plants which flower in June should be distributed as far as possible equally along the border, treating those which flower in other months in the same way. Plants which flower in September, if placed in close proximity to those which flower early in the summer, will develop and cover some of the space occupied by the latter when in bloom. When planting dig the holes wide enough to permit of the roots being spread out. Avoid burying the crowns too deep, especially in heavy soils.

Dividing the Roots.—As the right and wrong methods of dividing rootstocks were fully dealt with in THE GARDEN of the 7th ult., it is not necessary to discuss that subject again.

Other Methods of Propagation.—Many herbaceous plants are readily increased by cuttings in spring, when the young growths push up. Michaelmas Daisies, autumn-flowering Chrysanthemums and the Japanese Stonecrop are good examples. It is always advisable to thin out the growths of herbaceous plants when too thick, so that by taking cuttings one is improving the prospect of a good display and increasing the stock of plants at the same time. Most of our herbaceous plants can also be increased by seeds sown in April and May.

The Reserve Border.—Whenever possible a few late-flowering plants should be grown, to be



WHEN PLANTING KEEP THE COLLAR OR NECK OF THE PLANTS NEAR THE SURFACE.

lifted and planted in the border when the early-flowering ones are over. The young plants propagated by cuttings mentioned above are admirable for the purpose.

Twelve Tall-growing Herbaceous Plants for the Beginner.—Michaelmas Daisy, Moon Daisy (Chrysanthemum uliginosum), Rudbeckia laciniata, perennial Larkspur (Delphinium), Hollyhock, Everlasting Pea (Lathyrus latifolius), Helianthus Miss Mellish, Goat Rues (Galega officinalis and var. alba), Lupinus (Lupine) polyphyllus, Helenium autumnale and herbaceous Phlox.

Twelve of Medium Height.—Bergamot (Monarda didyma), Peach-leaved Bellflower (Campanula persicifolia), Lychnis chalcidonica, autumn-flowering Chrysanthemums, Chrysanthemum maximum, Columbine (Aquilegia) Crown Imperial, Gypsophila paniculata, Flame Flower (Kniphofia), Lilium candidum, Anemone japonica and Sneezewort (Achillea Ptarmica The Pearl).

Twelve Dwarf-growing.—London Pride, Japanese Stonecrop (Sedum spectabile), double Daisy, Veronica gentianoides, Pink, Carnation, Pyrethrum, double Arabis, Thrift (Armeria), Viola, Musk and perennial Candytuft (Iberis sempervirens).

In addition to the above there are a number of other plants grown in the herbaceous border, although, strictly speaking, they are not herbaceous plants. Others, such as Gaillardia, Coreopsis grandiflora and Sweet Williams, which, although strictly speaking herbaceous plants, are better treated as biennials, *i.e.*, raised from seeds sown in May or June to flower the following year.

Bulbs.—Narcissi, Tulips, &c., are also planted. Dahlias, Rose trees, Lavender bushes and Irises, unless grown in the mixed border, would have to be excluded from many gardens. To take the place of the Tulips and other early-flowering bulbs, annuals, such as Asters and Stocks are dibbled in between the decaying foliage in June. The foliage of the Narcissi can be tied in a knot till sufficiently ripe to cut off.



HOW TO PREPARE THE BORDER FOR PLANTING.

GARDENING OF THE WEEK.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

ALLAMANDAS.—These very useful plants if kept too dry when in moderate-sized pots are often apt to die back far too much. This weakens the plants, and should be avoided.

It is better to keep them moderately moist with a few leaves retained in a fresh state. Even when in large pots it is not well to keep them absolutely dry, or the same thing will sometimes occur. If these plants are not kept in a stove proper, see that they are not subjected to a lower temperature, otherwise the consequences will be serious. Clerodendrons, both climbing and shrubby, are quite as sensitive in this respect. *Bougainvillea glabra* will stand 10° less with tolerable safety.

Calanthes.—These are among the most useful of our Orchids for a midwinter display. Anyone who has the convenience of a warm, moist house may have a fine display with very little trouble. A great mistake is to leave the plants about after flowering in cold or draughty places in the dwelling-house or elsewhere. The pseudo-bulbs so treated never start so well or produce such fine growths as others that have been properly treated by keeping them quite dry in a house kept at a minimum temperature of 50° or thereabouts. They get then the thorough and complete rest that is so necessary to their well-being, yet the eyes are not chilled or checked, and therefore start away vigorously in spring.

HARDY FRUIT.

Pruning.—Push on the pruning of all hardy outdoor trees and bushes in open weather so as to get this work completed before spring.

Fig Trees on walls in exposed positions may now require extra protection. It is an easy matter to tie the branches together, and cover with dry Bracken or straw and with mats securely fastened to the walls; indeed, in some cases I have taken the trees from the walls, laid them at the base and covered them during very hard weather.

KITCHEN GARDEN.

French Beans.—These can now be forced more readily than if sown a month or two back, as Beans sown at that period fail to produce a sturdy growth. I prefer 6-inch or 7-inch pots at this season, allowing only half-a-dozen plants in a pot. I have seen French Beans sown in boxes and transplanted, but do not advise it. For later use it is a good practice, as the longer days and greater warmth soon cause new root action, but early in the year the transplanting gives a check, causing delay and at times total loss.

FLOWER GARDEN.

Mimulus.—I make it a rule to sow seed of *Mimulus* early in January on fine sandy soil in shallow pans, and leave it to germinate in a comparatively cool house. In a few weeks there will be hundreds of strong seedlings to lift. Prick these out into other pans or boxes, and in these they would be ready to pot up singly if desired early in April, or by the middle of the month planted on a cool border outdoors, where they will on good ground produce a most brilliant mass of flowers. A really fine strain of *Mimulus* presents features of beauty such as few other flowers give. If the seedling plants have been well hardened before planting out so early, the foliage simply gets discoloured, but the late frosts do little or no harm to them.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

FOR THE SOUTH AND SOUTH MIDLANDS.

GREENHOUSE.

WINTER CARNATIONS.—The first batch of cuttings should now be put in if not already done. Take strong cuttings and place three or four in a small pot, inserting them near the edge. Use plenty of sand; in fact, they will root readily in all sand. *Enchantress* is very good just now, and this colour finds much favour. Carnations in flower should be kept in a somewhat dry and airy house, with just enough heat to keep the plants moving—55° to 60° suits them very well. *Malmaison* varieties should be kept somewhat cooler, and young plants are best in a cool, dry temperature, with just enough heat to dispel damp.

Cyclamen.—Seed of these charming flowers may yet be sown. Prepare pans of rich soil—which must be well drained—dibble the seed in regularly over the pan about a quarter of an inch deep and place in a temperature of 60°. Seedlings sown in October should now be potted singly. Seeds of *Grevillea robusta* and *Gloxinia* may be sown if very early plants are required.

FORCING HOUSE.

Introduce more Lilacs, Prunuses, Deutzias, Spireas and bulbs. These should be put in now at intervals, so that a break may not occur in the supply. The plants subjected to forcing should, however, be introduced to heat gradually and the same treatment afforded when leaving the forcing house. By so doing the plants last in flower much longer.

KITCHEN GARDEN.

Vacant ground should now be dug or trenched up rough, so that if the weather becomes frosty it will be pulverised. Place some early Potatoes on ends in boxes, and take away all but the strongest eye or shoot. Place the boxes in a warm and light position for either planting in frames or pots. A pinch of Onion seed may now be sown for exhibition bulbs, scattering the seed thinly and placing the boxes in a warm and light position. Put in more roots, such as Seakale, Dandelion, Chieory, &c., to force in order to keep up a daily supply.

HARDY FRUIT.

Continue to prune and train trees as the weather admits of so doing; all old ties should be removed. Trees on walls should be dressed if they have been attacked by any vermin, and if the walls require repairing now is the time to do it. Plant new trees during fine weather so that the soil is not pasty when pressed in about the roots; if trees are planted during wet weather the ground will crack when it becomes dry. When selecting trees the purpose for which they are intended must be borne in mind so as to get a judicious selection for the various seasons.

Strawberries may now be introduced into a warm house. The plants should be cleaned and top-dressed and the pots washed. Strawberries in the open ground should be mulched, treating both old and new plantations. See that no weeds are existing; if any are present they ought to be cleared away before mulching.

LAWNS AND PLEASURE GROUNDS.

These should be kept clean, especially when in view of the mansion. Lawns should be rolled occasionally. Any planting may be carried on during fine weather. Where shrubs have become crowded they may be thinned out or cut hard back. The present is a good time to carry out any improvements or alterations. Azaleas, Camellias, Rhododendrons, &c., can be moved any time now up till the end of March. Any large specimens which need top-dressing should be attended to. Palms, Bamboos and similar plants may also have fresh soil added to them; this should be done by taking out a trench a distance from the roots, gradually working it

away till the roots are reached, when a mixture of leaf-soil, peat and cow manure should be given. Camellias are benefited by a good sprinkling of bone-meal and soot in addition. Roses may be planted, and the tender varieties of Teas should have the protection of a little Bracken or other such material to guard against frost.

ORCHIDS.

Calanthes in flower should be kept dry or the flowers will soon damp. *Cypripediums* should be kept somewhat drier, especially those in flower. Spray the shingle on which they are staged twice daily in order to keep down thrips. *Dendrobiums* that have been resting may now have a little more warmth. *Cymbidiums* that are showing flower-spikes should not have too much heat.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)

Leonardslee, Horsham, Sussex.

WHAT TO DO WITH FROZEN PLANTS.

It is safe to state that there is not a winter passes by without a number of plants being destroyed by frost in the United Kingdom, pot plants in particular, many of which could undoubtedly be saved did their owners know what to do with them when King Frost holds them in his icy embrace. "Pitch them on the rubbish heap" used to be the general verdict when more or less tender plants became frozen, but during the last decade or two science has come to the aid of the practical man, and informed him that it is not the actual freezing that is fatal so much as the after treatment.

In order that we may the better understand the treatment of frozen plants, it will be wise to briefly consider what happens when frost reaches them. The liquid contents of the cells become frozen and expand, the cell walls are ruptured, and the plant's tissues in general are disorganised. It is now a fairly well-known fact that a plant whose cells contain only a comparatively small amount of water will stand, without injury, several degrees more frost than a similar plant whose cells are turgid with liquid, therefore it is excellent practice, as a preventive of injury by frost, to keep plants as dry as possible without injury during the winter months.

But supposing a plant or plants have been badly frozen what are we to do to save their lives? The whole answer is given in three words, viz., thaw them slowly. It has been proved over and over again that if a plant is thawed sufficiently slowly the cells are able to once more absorb their contents that have been displaced by expansion, and the plant is little the worse for the disorganisation that has occurred. If it is a window or room plant that is affected, stand it in a very cool corner where the temperature is only slightly above freezing point, and keep it there until it has thawed.

The occupants of cold frames are often badly frozen, and if a sudden burst of sunshine is allowed to reach them much damage will be done. Keep the mats or other covering over them until a slow or gradual thaw takes place. But it is when the whole of the occupants of the greenhouse, owing to some defect in the heating arrangements, become frozen that the most destruction is likely to occur, and prompt measures must be taken if any of the plants are to be saved. As soon as such a condition is noticed take care that the heating apparatus does not right itself and thus send up the temperature quickly. Then cover the glass with thick mats, straw or other shading material in case the sun comes out and causes a sudden thaw. After these precautions have been taken secure a good supply of very cold water and syringe the plants, pots, staging and glass with it until the whole are drenched. This will cause a very gradual thawing to take place, and many plants will be

saved. Leaves will probably be lost, and the plants will need several weeks to recover from the shock, but better this than a total loss.

Half-hardy plants growing in sheltered positions out of doors are often ruined by the removal of the protecting material as soon as a thaw sets in. Such protection should be left on until all signs of frost have gone from the plant under notice. If such a specimen has had no protection before frost occurred much good might be done by covering it with mats after it is frozen but before it thaws. In concluding, it may be well to emphasise the statement that to safely bring plants through the ordeal of being frozen they must be thawed slowly.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

WINTER FLOWERS FROM SOUTH DEVON.

Mrs. F. L. Carslake sends from Daracombe, Newton Abbot, a most interesting box of flowers gathered in the garden on December 26, all grown outdoors and unprotected. There are no less than seventy-two different specimens, and many other plants are in bud. Some of the rock Roses have quantities of buds on them. Mrs. Carslake writes: "It is not a bad list for Christmas. Can any of your other readers show a longer one?" We hope our correspondent's letter will be answered. The list is as follows: Corydalis, Polyanthus, Ceanothus Indigo, white Marguerite, Sedum, Gazania, Antirrhinum, Coronilla, Iberis sempervirens, Harebell, the large green Hellebore (too large to send), Abelia rupestris in full bud, also in large bud Magnolia grandiflora, in flower and fruit St. Joseph Strawberry, showing colour, but not quite open Pink Oxalis, Mesembryanthemum, Solanum, Abutilons (various), large St. John's Wort, Hellebore (Lenten Rose), Christmas Rose, Pittosporum Tobira, Arabis, alpine Pink, Choisya ternata (Mexican Orange Flower), Pentstemons (various), yellow Alyssum, Geum, Carnations, Jasminum nudiflorum (winter-flowering Jasmine), alpine Wallflower, (E. nothera, Senna, blue and the red Periwinkle, Snowdrop, Violets (single blue, double blue and white), Laurustinus, Sweet Rocket, Diplacus, Auriculas, Escallonia macrantha, Escallonia (white), Anthemis tinctoria, red Salvia, Pansies, Primroses (various, white, blue and coloured), Fuchsia miniata, Hydrangea, Campanula pyramidalis, Shasta Daisy, Schizostylis, Roses (various, Macartney, China, Liberty and another), Chrysanthemum Source d'Or, Mignonette, Cobaea scandens, Cytisus, Heaths (white and red), Gorse, Berberis Darwinii and five varieties of Veronica.

FLOWERS PICKED IN A SMALL GARDEN OVER 500 FEET HIGH, NEAR EWHURST, SURREY, ON CHRISTMAS DAY, 1907.

The following flowers from "C. R. S." were gathered on Christmas Day and kindly sent for our table: Antirrhinum major, Arabis, Aubrietia (the common mauve), Candytuft (Iberis), Ceanothus Gloire de Versailles, C. azureus, Clematis Anderson Henryi, French Daisy, Cyclamen, Carnation, Fuchsia (pink and white—I have not the

name of the variety), Geranium (purple Crane's-bill), Pelargonium Henry Jacoby, P. Souvenir de Charles Turner, Heartsease (various large-flowered), Hypericum calycinum, Jasminum nudiflorum, Laurustinus, Linaria maroccana purpurea, Mignonette, Primula Giant (various colours), P. vulgaris (common Primrose), Poppy (large mauve Oriental), Roses (eighteen varieties)—Dorothy Perkins, Frau Karl Druschki, Fairy Rose (from seed sown in the spring), Lady Macartney, Liberty, Mme. Abel Chatenay, Mme. Jules Grolez, Mme. Ravary, Kaiserin Augusta Victoria, Louise Richard, Penzance Briar, Monthly (both pink and red), Hermosa, Perpetual Thalia, Pride of Waltham, George Nabonnand, Reine Olga de Wurtemberg and Ulrich Brunner—Scabions, Schizostylis, Tobacco, Veronica (common purple), Vinca major, Violet (two varieties, single), Wallflowers and Watsonia alba grandiflora (in full flower).

CHRISTMAS FLOWERS IN THE ISLE OF WIGHT.

Mr. Collister, gardener to Sir John Thorneycroft, Steyne, Bembridge, Isle of Wight, writes: "I enclose a list of plants and shrubs that were in bloom on Christmas Day last in the garden here. I thought it would interest readers of your valuable paper. It is wonderful the number of things that are in flower, showing the mildness of the autumn and congenial climate. Some of the plants mentioned are covered with flowers. Plants—Wallflowers, Stocks, Erysimum Golden Gem, Lychnis coronaria, Marguerite Carnation, Limnanthes Douglasii, Arabis alpina, A. a. fl. pl., Polyanthus, Primroses, Sweet Peas, scarlet Geranium, pink Ivy Geranium, Marguerites, annual Chrysanthemums, Violets, Antirrhinums, Nicotiana, Gazania splendens, Iberis sempervirens, Pansies, Mignonette, Convulvulus minor, Pentstemons, Alyssum saxatile compacta, red Valerians, Hellebores, Chrysanthemums, Roses in great variety and Campanulas in variety. Shrubs—Hydrangea, Coronilla glauca, Genistas, double Gorse, single Gorse, Escallonia macrantha, E. montevidensis, Spartium junceum, Garrya elliptica, Laurustinus in variety, Myrtles, Veronicas, Solanum jasminoides, Fuchsias, Spanish Broom and Jasminum nudiflorum."

PRIZES FOR READERS. JANUARY.

THE BEST POTATOES AND HOW TO GROW THEM.

- A First Prize of FOUR GUINEAS,
 - A Second Prize of TWO GUINEAS,
 - A Third Prize of ONE GUINEA,
 - And a Fourth Prize of HALF-A-GUINEA
- are offered for the best essay on "The Best Potatoes and How to Grow Them."

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Friday, January 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Box border (E. M. L. B.).—If by a Box border a Box edging is meant, then the shrub form would be useless for the purpose, the sort employed for edgings being quite distinct and remaining dwarf, hence its adaptability for the purpose. Box for edgings may be purchased from any of the nurserymen who specialise in hardy trees and shrubs, and may be planted at any time from October to April. An old Box edging may be taken up and divided for the same purpose, the work of "laying," as the replanting is termed, requiring a little intelligence and care to get it into a proper position. The Carnations and other plants should be freely dusted with soot and lime in equal parts without delay. If the slugs are at all numerous you should, in addition, lay some flat boards or slates about to encourage them thither, and when congregated together destroy them. Messrs. Hunter and Gow, 46, Thomas Street, Liverpool, have a special preparation in the form of a powder, which is most effectual in killing slugs, wireworm and other pests of this kind.

Plants for herbaceous border (Velsa).—There are quite a number of plants suitable for the purpose you name, but, unfortunately, you have omitted the size of the border, a somewhat important item in the circumstances. Of brightly-coloured subjects you might at will select from such groups as Pyrethrum, single and double; Pæonies in like manner, Delphiniums, Gaillardias, Trollius, Campanulas, Kniphofias or Torch Lilies, Michaelmas Daises, which would prove invaluable for late summer and autumn, and the whole of the Iris family, more particularly those known as Flag Irises, and those beautiful groups of summer-flowering sorts known as Spanish and English Irises. To these could be added a large number of Iris species, such as aurea, Monnieri, gigantea and others. Other important subjects include the Day Lilies, Perennial Pea in white and rose varieties, Stenactis speciosa, herbaceous Phloxes, Alstromeria, Sunflowers, &c. In addition the more showy Narcissus could be planted in groups, also Lilies, particularly such sorts as croceum, Hansoni, tigrinum, speciosum, colchicum, testaceum, &c. Had we known the width of the border we could have given you a more helpful reply.

Weedy lawn (W. T.).—Of the lawn weeds sent, one with its fine grass-like growth is Spargula pilifera. Others are Hernaria and Veronica repens. Very severe stirring these creeping weeds with a sharp toothed iron rake should help to destroy them easily. Such use of a rake also greatly helps to destroy moss, and in so doing gives the grass a better chance to grow. The wire-like grass sent, though more difficult to recognise now, is probably one of the coarser Poas, but which it is not easy to say. Such a coarse or tall-growing grass it should not be difficult to chop out with a hoe, and thus destroy it in quantity. Evidently the soil is very poor, and badly needs manure dressing. First make every effort to tear out moss and weeds, then dress the lawn with well-decayed manure, if to be had. If not, then use soil well spread about, and on that add soot very liberally and basic slag at the rate of 4lb. per rod, all well worked in with a rake; and in April

next follow with a dressing of sulphate of ammonia, 3lb. per pound and finely crushed.

Meconopsis Walliichi (*M. Denison*).—This plant may be obtained from any of the hardy plant dealers such as Messrs. Barr and Sons, Covent Garden; Wallace and Co., Colchester; Amos Perry, Enfield, and others. The plant delights in deep loamy soil of an open nature, or loam and peat in equal parts, and a position sheltered from cutting winds. A cool rooting medium is of importance. As the plant is of biennial duration only a better flowering is usually secured by raising the plants from seeds sown in January, planting out in May or early June for flowering the following year. In this way large rosettes are produced, and upon these a good flowering depends.

THE GREENHOUSE.

How to propagate Pitcher plants—Nepenthes (*Doubtful*).—The best time of the year to propagate *Nepenthes* from cuttings is during the months of April and May, though in nurseries where rapid increase is essential it is carried on from February to the end of the summer, that is to say, whenever cuttings are available. The best cuttings are formed of the points of the shoots, and if your plants have but one main shoot and the top of that is taken to form a cutting, most probably the old plant will in time push out one or two shoots in the place of that removed. When these are about 4 inches in length and have lost some of their succulent character they form very desirable cuttings. The various sorts of *Nepenthes* are not difficult to root, providing a few simple facts are borne in mind. In the first place, the better way is to insert each cutting singly into a comparatively small pot. This must be effectually drained, and it is very necessary that the soil, which must be pressed down moderately firm, be of an open nature. Peat and sand, with a little sphagnum moss and a few nodules of charcoal, form a very suitable mixture. When each cutting is potted it should be secured to a stake, taking especial care that any young leaves with undeveloped pitchers are not injured in any way. The cuttings should then be plunged in a gentle bottom-heat in a close propagating case in the stove, for in the cultivation of *Nepenthes* a considerable amount of heat and atmospheric moisture is very necessary. The cuttings need not have a heel of old wood attached to them.

When to graft Aralias (*Doubtful*). During April and May is the best time of the year to graft *Aralia Veitchii* and its allies, though in one nursery that we know, where very large numbers are propagated in this way every year, it was last year, owing to pressure of business, not carried out till June. The results were perfectly satisfactory, but the plants are not now quite so large as they have been in former years. The stock employed is *Aralia reticulata* (a species with plain strap-shaped leaves), which will strike very freely from cuttings. Side or veneer grafting is the method generally employed. For this purpose the stock plants, which are young and furnished with leaves nearly to the base, are headed back to about 4 inches or 5 inches from the pot, and the grafting is done as low down as possible. The stocks are all established in small pots, and the tops which are cut off are put in as cuttings to yield stocks for another year. The best scions are formed of the points of the shoots, but, where large quantities are needed, any plants that have grown too tall or are in any way unsuitable for sale are cut up into single eyes, each eye with its attendant leaf and piece of stem below it forming a separate graft. If these are too stout to fit the stock, care must be taken that one side fits exactly. After the scions are tied securely in their place, the grafted plants must be put into a close propagating case in the stove and kept carefully shaded. The lights of the case must only be opened for a short time each morning to inspect the contents. No grafting-wax will be required, hence the process of union may be easily watched. As the grafting is done close to the ground, the young plants

when potted can be sunk somewhat deeper, and the point of union will then be almost, if not quite, covered. When the grafts are quite joined, the remaining portion of the stock can be cut away.

Repotting Plumbago (*A. G.*).—The best time to repot *Plumbago* is from the middle of March to a corresponding period in April, according to the structure the plants are in. If a cool house the last-named date will be the best. At the time of potting any straggling shoots may be shortened back. *Plumbago capensis* will not thrive in an unheated greenhouse, for to keep it through the winter the thermometer should never fall below 40°.

Begonia Gloire de Lorraine (*Lancashire*).—This most valuable *Begonia* was, reputedly, raised by M. Lemoine of Nancy, France, and was put into commerce about 1890. Its parents were the bulbous-rooted species *Begonia socotrana* and the fibrous-rooted species *B. Dregeii*. It was at first doubted whether this parentage could have produced the now famous hybrid, but later experiments with the same species were found to give similar results. *B. socotrana*, in conjunction with tuberous-rooted varieties, is the prime parent of the singularly beautiful race of winter-blooming *Begonias* put into commerce by Messrs. James Veitch and Sons, who are the raisers.

Germination of Palm seeds (*H. G. W.*).—It is possible the *Keutia* seeds you have found so difficult to germinate were old, and had been for some time kept in a dry place, the shells thus becoming very hard, and with a consequent loss of vitality in the germinative organs. The best thing to do where such hardness exists is to soak the seeds for twenty-four hours in at first quite warm water, as such soaking helps the softening of the seed shells, although it can do little to create germinative power. Generally Palm raisers find their seed to germinate fairly well, but no doubt they obtain fresh supplies. Even when soaked it may be wise to treat the seeds as you suggest, laying them on decayed leaves 3 inches in thickness, covered with mats until sprouting is seen, then to lift each one singly and get them into small pots.

Information about a warm fernery (*J.H.*). In determining the proper temperature for a greenhouse fernery much depends on whether the Ferns are tender kinds or whether they be of greenhouse or comparatively hardy nature. For quite tender Ferns the temperature should range from 60° to 70°. For greenhouse Ferns, such as most of the *Adiantums*, *Pteris* and similar forms, a temperature ranging from 50° to 60° in the winter does very well, but, necessarily, would be higher in the winter. Why your potted Ferns in the greenhouse fernery do so indifferently it is not easy to say, because nothing is said as to kinds or conditions. Most likely the soil in which they are potted is not suitable, and may be deficient of peat which is an essential element. The atmosphere may be kept too dry, or your water contain too much lime or iron, hence be unsuitable for the Ferns. If your gardener is as you say a good man, he should certainly be able to give some reason why the Ferns do so badly. Have the hot-water pipes been coated with some offensive compound.

Drying off Hæmanthus albiflos (*Doubtful*). It is not necessary to dry off *Hæmanthus albiflos* so thoroughly as to cause the roots to perish; still, during its restful period the soil should be kept almost dry. *Hæmanthus albiflos* as a rule flowers during the autumn, and after that makes its growth. Such being the case it needs, throughout the winter, to be given a good light position in the warmest part of the greenhouse, or even in a structure kept at an intermediate temperature. It will at that time need to be watered whenever the soil is dry. If such treatment is continued till spring is well advanced, or even till the summer, the plant should have made good growth, and will probably show signs of going to rest. During the summer a sunny spot in a garden frame and a very limited amount of water will suit it well. By the end of August or thereabouts signs of growth should be seen, when more water may be given and the plant or plants removed into the greenhouse. The flower-spike will then very probably soon make its appearance.

ROSE GARDEN.

Soot as a preventive of mildew on Roses (*E. M. D.*).—The soot should be mainly applied to the ground round about the plants, but it would be advisable to give the branches a good dusting also. At those seasons of the year, namely, November and March, there would be no tender foliage to injure, so that it may be applied without any fear of injury. We have syringed indoor Roses with a weak solution of soot water with very beneficial results. Some years ago we had a large quantity of budded stocks dressed with soot in May, and there was no sign of mildew that year. We were careful only to apply it to the land, as at that time the young foliage was in a very tender condition. Besides acting as a preventive of mildew, soot itself is a general fertiliser, and may be applied with much benefit to the plants.

Soot as a preventive of mildew (*H. R. M.*). Sprinkle the soot on the surface of the soil round each

Rose tree, not too much, just a light dusting, say on November 1 and again on March 1. Be sure and use old soot.

FRUIT GARDEN.

Trees cankered (*H. S.*).—No doubt this is due to your cold soil. Under the circumstances we are afraid that a complete cure is hopeless. We have known trees badly cankered to go on bearing well for many years by going over them carefully every year and cutting the cankered part out. We have seldom known any of the variety you mention to canker, and we hope they will remain free from it. To kill all kinds of fungoid or other parasitic growth on fruit trees, spray in winter with the caustic alkali wash.

Protection of bush fruit trees (*Rubrum*).—To be effective the mesh must not be larger than 1 inch and the size or gauge most convenient to handle in forming the enclosure is that of 3 feet wide. We have seen many failures in the growth of bush fruit trees inside such enclosures, the failure being attributed to the absence of birds in spring and summer in ridding the trees of aphid and other destructive tree pests. We would suggest that the sides only be formed of galvanised netting, and that for covering the roof herring netting be substituted. This could be applied in winter as a protection from bullfinches and taken off in spring and summer until wanted again for protecting the ripening and ripe fruit.

Fungus on fruit trees (*H. B.*).—For the destruction of fungus or other growth on the stems and branches of fruit trees, we know of nothing more effective than spraying the trees in winter with caustic alkali wash, the composition of which is as follows: 1lb. of commercial caustic soda and 1lb. of crude potash. Dissolve both in water, afterwards mixing the two well together, then add three-quarters of a pound of common agricultural treacle, stir well and add as much rain water as will make up 10 gallons. The wash has a burning effect on hands and clothes, and care must therefore be exercised when spraying the trees at the end of January or the beginning of February. This wash will also rid the trees of all blight it may come in contact with.

Fruit room not satisfactory (*Bucksshaw*).—From the particulars given we can find no fault with the construction of the fruit room, excepting that the tiled roof is a mistake. There is nothing so damaging to the preservation of fruit as the frequent alternating of temperatures, which the tiled roof favours. Therefore we would advise the roof to be thatched outside and the sides and ends also with straw or long Heather 10 inches thick. The temperature will then be uniform and slightly warmer, which will suit the Pears better, and evaporation will also be stopped, which is important, as it tends to destroy the juices of the fruit. The room will then require no artificial heating even in the coldest weather. Thatched portable shutters should also be made to fit the skylight and windows for protection in very cold weather.

Apples for cooking (*H. B.*).—1. The Grenadier.—One of the very best of the Codlins; ripe in September. 2. Lord Grosvenor.—Excellent for early use and very hardy; ripe in August. 3. Lord Derby.—Fine cooking sort, heavy cropper, and especially suitable for growing in cold districts. 4. Royal Late Cooking.—The tree is very hardy and free bearing, the fruit large and handsome; ripe in February. 5. A well-known free-fruited and reliable late cooking sort. 6. Newton Wonder.—This is probably the finest late cooking Apple of the present day. It is a cross between Wellington and Blenheim Orange, and partakes of the good qualities of both. The tree is robust, hardy and prolific, the fruit large, of brilliant colouring, and will keep in good condition until May. It is profitable to grow for market.

THE GARDEN.

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JANUARY 18, 1908.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

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SWEET PEAS IN POTS.

A CORRESPONDENT sends the following interesting and practical note upon Sweet Peas in pots. The Sweet Pea has gained the affections of all who love their gardens, and a description of any way of growing it successfully is welcome.

"Sweet Peas are much more amenable to pot culture than might generally be supposed, and give very little trouble, while they keep up a bright display for a considerable period, and may be grown in pots by those who have little or no convenience for growing them in the garden. Varieties are now so numerous that it is difficult in making a selection to include all that are worthy of recommendation, but for those who would like to confine themselves to a dozen varieties the following will be found to be a good selection, viz.: Dorothy Eckford, white; Lovely, pale flesh pink; Lord Nelson, blue; Miss Willmott, orange pink; Gladys Unwin, pink; Hon. Mrs. Kenyon, almost a true yellow; Lady Grisel Hamilton, pale blue or mauve; Gorgeous, scarlet with a salmon shade; Horace Wright, violet-blue; Countess Spencer, pink; Evelyn Byatt, orange salmon; and Phyllis Unwin, rose-carmine. The seeds may be sown any time till the end of February, about seven or eight in a 5-inch pot. Good loam with a liberal addition of manure may be used, and it should be pressed moderately firm. The seeds should be covered with the soil. After sowing the pots may be placed in any light open position in a frame or cool greenhouse; care must be taken that there are no mice about. After the seeds begin to germinate, light and air, with a moderate supply of water, is all that is needed until the seedlings require some support. A few short twigs may be used at first, and these will hold them up until they begin to make tendrils, and as they advance a few tall sticks and twine placed around will hold them up well. If they are inclined to become too tall they may be stopped, and this will not delay flowering more than a few days. After they are well advanced they may be potted on into 8-inch pots, and after they begin to show flowers manure may be used freely.

"The above is the most simple method of growing Sweet Peas in pots, but they may also be grown singly. Sow early and pot off the seedlings as soon as ready, and stop from time to time until they have formed bushy plants. They may be tied up to a single stick. Six-inch pots are large enough for single plants.

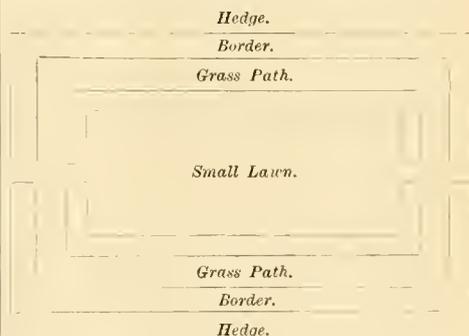
A GARDEN OF SWEET-SCENTED FLOWERS.

(Second Prize Essay.)

WHAT visions the title brings back to us of old-fashioned gardens, the air drowsy and warm, and every breeze bringing some new scent to our notice. A garden of sweet scents must be, I think, essentially a summer garden, a garden of

blue skies and lazy days, quiet, sheltered from all outside influences—a dream garden, yet one we can realise if we will.

Let us imagine our dream garden in the making. An oblong piece of ground with sheltering hedges and grass inside shall be the start, as large or as small as our fancy permits. An entrance at each end through the hedge and a broad border inside, let us say, 10 feet wide. Then a grass path all round, then a bed about 8 feet wide following the line of the border, with a small lawn in the middle. The following rough sketch will make my meaning clearer.



In the centre must be a sundial, as our dream garden will be warm and sunny. Our sheltering hedge must be of sweet-scented shrubs—Lilacs, white and blue; Syringas, both dwarf and tall; white and crimson May, and plenty of Penzance Briars; these last grown at first on a rough fence or trained to poles. We will thoroughly trench both borders and beds, deepening them, adding good soil and manure and seeing that the drainage is right. In such a garden there ought to be a summer-house, not a varnished or painted one, but one made of plain Oak, which we can cover up with two plants of Rose Aimée Vibert or, perhaps, Honeysuckle. Then, for choice, I would plant the centre beds entirely with dwarf Roses, for this is to be chiefly a summer garden, and no flower equals the Rose.

Plant the Roses 2 feet apart, prune them hard the first spring, then allow them to grow into large bushes. I would plant the ends of the beds with Hybrid Perpetuals and the sides with Teas and Hybrid Teas, growing each sort together. Hybrid Perpetuals: General Jacqueminot, Hugh Dickson, Mrs. J. Laing, Dupuy Jamain, Ulrich Brunner and Charles Lefebvre. Hybrid Teas and Teas: La France, Marie van Houtte, Mme. A. Chatenay, Mme. Hoste, Pharisier, Prince de Bulgarie, Liberty, Killarney, Viscountess Folkestone, Betty, Countess Annesley, Caroline Testout, Mme. Ravary and Gustave Grunerwald.

I think the best way is to grow the perennial plants in the border to form the basis, as it were, in irregular groups or bays, avoiding formality, and filling up the spaces between with annuals, our choice of perennials that are sweet scented being somewhat limited. In one place we will add some peat to the soil and plant some Azaleas, and among these try some Liliun auratum, but we must take care that neither lime nor any rank

manure is present. At the back of the border, in front of and among the shrubs, we will plant plenty of white Narcissus, both double and single varieties, carpeting the ground above with Sweet Woodruff, and on these and plenty of Wallflowers we will rely for our earliest flowers.

Two dwarf shrubs that can be confidently recommended for their fragrance, should the soil be fairly light and peaty, are *Daphne Cneorum* and *D. Mezereum*. Then we must have a generous planting of the Madonna Lily (*Lilium candidum*), associating them for choice with pink China Roses. *Lilium croceum*, *umbellatum*, *testaceum*, *elegans* and the hardier *speciosum* are all fairly easy to grow, and will add considerably to the beauty as well as to the fragrance of our garden. For an edging to the border nothing can be better than white Pinks, such as Mrs. Sinkins. Sturdy plants put in about 9 inches apart will develop into a continuous border, producing masses of flowers. They will only need dividing and replanting every third year, and are very fond of a little road grit mixed with the soil. *Hemerocallis flava*, the sweet-scented Day Lily, is one of the easiest of all plants to grow.

Carnations, too, we cannot do without, especially the old-fashioned Cloves, and for a border such as I am describing I would recommend groups of seedling plants instead of named varieties. Seedling plants are cheap, flower so abundantly and we can easily retain, by layering, any we specially like. We must have some Bergamot, a very easily-grown scarlet perennial, and Lavender, Rosemary and Southernwood must find a place in our garden. We must find room somewhere for a plant or two of white Jasmine. If there is any shady corner, mix some leaf-mould with the soil and plant some Lilies of the Valley, and, except for replanting every four years, an annual mulching of decayed manure will be all they require.

For bold groups clumps of Sweet Peas should be arranged in early March, each clump containing about a dozen seeds 3 inches apart, and each clump of one colour and variety. If we have room, a few herbaceous Pæonies may be added, some of which are very fragrant, though the flowers are not very lasting. Pillars or large bushes of Roses *Gustave Regis* and *Griess* an *Teplitz* will be an acquisition, grouping round them some dwarf Moss Roses. The Tree Poppy (*Romneya Coulteri*) and the yellow Tree Lupin might be tried if our garden is exceptionally warm and the soil light and well drained. The old-fashioned Sweet Rocket, both double and single, should be planted, also Sweet Sultans, and we have a large choice of varieties among the Evening Primroses. The white Musk Mallow, too, will grow almost everywhere, and Violets may be planted under the hedge, as they succeed best in shady places. The spaces between the perennial plants may be filled, when all danger of frost is past, by Verbenas, Stocks, Oak-leaf Geraniums and Heliotropes, and we must have a plentiful supply of Mignonette.

Do not forget the white Tobacco Plants. These, especially if planted in good soil and given plenty of room, will fill the whole garden in the evening with their fragrance, and wherever there is room put in a few seeds of the Night-scented Stock (*Matthiola bicornis*). This shuts up during the day and looks altogether insignificant, but as the evening comes on the little mauve flowers open and the whole air is laden with perfume.

There is a certain limitation in a garden of sweet-scented flowers, but it is far better to grow a few varieties and grow them well than any amount of flowers that do not realise their full beauty. But, in conclusion, such a garden by reason of its very limitation can be made more interesting, and certainly more delightful, than the usual mixed one, far too often planted without regard to either the general effect or the beauty of the individual flowers. A. W. PODGER.

1, Forest View Avenue, Whipps Cross, Leyton

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

January 18.—French Horticultural Society's Annual Dinner, Mr. H. J. Veitch in the chair.

January 21.—National Amateur Gardeners' Association.

January 23.—Gardeners' Royal Benevolent Institution Annual Meeting and Supper, Simpson's, Strand, 2.45 p.m. and 6 p.m.

The Gardeners' Royal Benevolent Institution.—The annual general meeting of members of the above society for the election of pensioners will be held at Simpson's, 101, Strand, London, W.C., on Thursday, the 23rd inst. At 6 p.m., at the same place, the annual friendly supper of friends of this institution will be held, under the presidency of Mr. Martin H. F. Sutton. Full particulars can be obtained from the secretary, Mr. George J. Ingram, 175, Victoria Street, London, S.W.

East Anglian Horticultural Club. The annual report of this up-to-date provincial horticultural club for 1907 and the schedule for 1908 is now being issued to members, and provides interesting reading for those who are interested in the various branches of horticulture. The net increase in the membership for 1907 is three, forty-four new members having been enrolled and forty-one lapsed. The finances are in a sound and satisfactory condition, although there is a small deficit on the year's working, due to rather heavy demands on the benevolent fund. The exhibitions have been of a very high and satisfactory character, although the entries in the flower and vegetable sections have been rather less than those of 1906, but the fruit entries show an increase of twenty-seven. The exhibitions in connexion with the special classes have been particularly good, much interest being taken in all the classes. The non-competitive exhibits and the essay competitions have all been of a very satisfactory order, while the high standard of the addresses and non-competitive papers has been well maintained. The annual outing was, by the kind invitation of the late Lord Battersea, to The Pleasaunce, Overstrand. Particulars of the interesting competitions to be held during 1908 are given. The secretary is Mr. W. L. Wallis, 12, Royal Arcade, Norwich.

Adelaide Botanic Gardens.—An interesting official souvenir of the Jubilee celebrations of the Adelaide Botanic Gardens, held on October 19 last, has been published by the Board of Governors of the gardens, and we have derived much pleasure from a perusal of its pages. The main features of the gardens are admirably portrayed by pen and camera, these being followed by a historical sketch. It was on October 18, 1854, that the Government voted the sum of £3,000 for the year 1855 as a first instalment for the creation of the Botanic Gardens. On March 8, 1855, Mr. George Francis was appointed secretary *pro tem.*, and on June 8 in the same year he was appointed superintendent. On October 26, 1860, it was decided that Mr. Francis's title of office be altered to director and secretary. On August 9, 1865, Mr. Francis, the first director, died, and on September 14 following Dr. Schomburgk assumed office in his stead, a post that he held until his death, which occurred on March 25, 1891. An interesting account is given of the first Victoria Regia grown in Australia. This was planted in the gardens on July 22, 1867. In the course of six months it produced no less than fifty-four leaves, the largest of which was 6 feet 4 inches in diameter, and forty-one flowers, averaging nearly 13 inches in diameter, were also produced. During 1871 much damage was done to plants belonging to cool countries by the hot winds that prevailed, the thermometer rising to 115° in the shade. Dr. M. W. Holtze, Ph.D., F.L.S., the present director, was appointed in 1891. The Jubilee

celebrations were held in the gardens by moonlight, the conservatories and plant houses being illuminated for the purpose.

Resignation of Mr. P. Murray Thomson.—Deep regret will be felt by all in any way connected with the Royal Caledonian Horticultural Society or its shows at the resignation of Mr. P. Murray Thomson, S.S.C., who has for a number of years been the secretary and treasurer. Mr. Murray Thomson has received an important estate appointment in England, which is the cause of his resignation. While his improved position is cause for congratulation to Mr. Thomson, it is a source of regret to the many who have come in contact with him in his duties in connexion with the Royal Caledonian Horticultural Society. He is ever courteous and obliging, and many have reason to remember his willingness to give any information and assistance in his power. A testimonial to Mr. Thomson is being promoted, and subscriptions are being received by Mr. J. W. M'Hattie, secretary and treasurer to the committee, at his office, City Chambers, Edinburgh.

Windsor, Eton and District Rose and Horticultural Society.—At a committee meeting held on the 11th inst. the date of the annual exhibition was fixed for June 27. The report for the past year was considered satisfactory, the number of subscribers having increased, while the number of exhibitors' entries was greatly in excess of all previous years. The hon. secretary (Mr. C. H. Burt, 3, Clarence Gardens, Windsor) announced with much satisfaction that two additional silver challenge cups would be offered for competition in the coming schedule, one given by Mrs. Fortescue, Dropmore, the other to be known as "The Islet Challenge Cup." An important alteration was made at the general meeting, when Mr. Romaine proposed that, considering the progress the society had continuously made, the time had arrived when its radius might advantageously be extended and Rule 7 be amended so that in future it should be: "That the district comprises the County of Berks and all within a radius of ten miles from Windsor."

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Flowers from the open on Christmas Day.—One sometimes reads in THE GARDEN of flowers out of season being used for indoor decoration. I think it may be interesting to note that on both Christmas and New Year's Day our breakfast table was liberally decked with Primroses, Wallflower Cloth of Gold and Violet Marie Louise, all from the open garden.—G. JOHNSON, *Bishop's Waltham, Hants.*

The unheated greenhouse.—In reading an article on the relative hardness of certain plants, the locality in which the writer is situated must be taken into marked consideration, as this is always of great importance. An illustration of it occurs in the essay on "The Small Unheated Greenhouse," in THE GARDEN of the 21st ult. The writer, situated on the South Coast of England, gives a list of different flowering subjects that may be had during the winter in such a structure, yet I venture to say that over three parts of this country any attempt to reproduce this winter display would end in absolute failure. The average individual situated in Lancashire or Yorkshire, or even in the London district, would look upon it as a joke to read of Cinerarias, Acacias, Genistas, Indian Azaleas, Chinese Primulas, Cyclamen, &c., flowering during the winter in a greenhouse without any artificial heat. The fact that many plants will thrive out of doors in Cornwall, Devon and Dorsetshire that need greenhouse protection elsewhere, will, to a great extent, explain the apparent discrepancy. For a cold

greenhouse the plants require to be hardy, as they may be often frozen. Even then there is a considerable choice of subjects, including Hyacinths, Croci, Tulips, Muscari, Narcissi, Lily of the Valley, Lilioms of sorts, Spiræas, Wallflowers, Clematis, Roses, Dielytra spectabilis, several Saxifrages, Christmas Roses, hardy Cyclamen, early-flowering bulbous Iris and many other hardy plants that are benefited by a certain amount of protection. The smaller hardy shrubs, too, such as Deutzias, Azalea mollis, Staphylea colchica, Lilacs, Andromeda floribunda and Rhododendrons are also well suited for such a purpose.—H. P.

“New” Apples.—In THE GARDEN for December 14 last a selection of new Apples for amateurs was given, in which occurs a rather amusing but yet perhaps natural mistake; still, a mistake which should not have been made. That old Apple Ross Nonpareil is credited to Mr. Charles Ross as one of that raiser’s seedlings. Really it was put into commerce many years ago, and was raised in Ireland, having been sent to the Royal Horticultural Society by a Mr. Robertson of Kilkenny. The word “Ross” is doubtless intended to indicate the Apple’s birthplace. In the list of Apples given as new is included St. Edmund’s Russet. If by this title is meant St. Edmund’s Pippin, and I know of no other variety bearing the saint’s name, then it is rather old, as it received a first-class certificate so long since as 1875. This is a Russet fruit, but not a great cropper. The list does not include Charles Ross, Mr. Ross’s best-known seedling variety, neither does it include Lord Hindlip, one of the very best of the late-keeping dessert Apples we have, yet new.—POMONA.

How to treat frozen plants.—I quite agree with the writer of the article on this subject that appears on page 22 of THE GARDEN, and would like to emphasise the remarks made there. With window and room plants it is a good plan to place as many as possible in a corner of the house on the floor and cover them with many sheets of paper and also some scrim or tiffany and leave them so covered until the frost has gone. If the foliage of such plants as Zonal Geraniums is dry the frost will not seriously damage them if they are not exposed to the sunshine while in a frozen condition. I find that many amateurs expose their frozen plants to the sunshine with the idea of thawing them, but this is a grave mistake. It is the same with regard to vegetables in the open border. Those covered with snow while severe frosts are prevalent do not seriously suffer. Others that are exposed to both frost and sunshine do suffer very much, so that the best thing to do is to put on Bracken or dry straw in the absence of snow. During a severe frost late in spring one year recently I had a frameful of Castor Oil plants (Ricinus Gibsoni) badly frozen. A young man in attending to his work uncovered and opened the frame, and so I found all the plants drooping down like mops. I immediately broke the ice in a cistern near by and thoroughly syringed the frozen plants with the icy water, then closed the frame and covered the glass with heavy mats. All remained in this condition for three days, until the frost had quite gone. When I examined the plants I found one leaf only with a brown patch on it, all the others were quite healthy, but if the plants had been left exposed to the air and sunshine while they were frozen all would have perished. These timely hints may prove of service to many inexperienced readers.—AVON.

THE GREENHOUSE.

TUBEROUS BEGONIAS FROM SEED.

VARIETIES of tuberous Begonias are now so well established in popular favour as bedding and greenhouse subjects that a few hints as to the means of obtaining a good stock of vigorous plants at a quite nominal cost may not, at this season, be out of place.

The plan usually adopted for increasing the plants is either by taking cuttings during the season of active growth or by means of seeds. It is only with the latter method that it is now proposed to deal, this being by far the most satisfactory way of raising a batch of sturdy vigorous plants which will give a gorgeous display of bloom for several years, whereas the

passed through a half-inch sieve. The loam used should not be of a too heavy or clayey nature.

A flower-pot should next be scrubbed scrupulously clean, a crock with the concave side downwards placed over the drainage hole, and the pot then filled with broken crocks or coal cinders (not coke) to within about 3 inches of the top, the smaller pieces being placed on the surface. On this put some rough fibrous material or moss to prevent the soil washing down into the crocks and thus choking the drainage, and place on this a good inch of compost with the finer particles on top, making sure that the surface is carefully levelled. Next take some pure leaf-mould which has been well baked until quite dry to destroy insects and fungus spores, and pass it through a fine sieve—such as is used by cooks for straining gravy—or rub it up in the hands.

The pot containing the soil should then be placed in a vessel of water, the level of which should reach to within half an inch of the top of the soil, and when the whole is thoroughly moistened it should be covered with a bare quarter of an inch of the prepared leaf-mould and then taken out to drain. In a short time the moisture will soak up into the dry top layer, when, making sure that the surface is quite level, the seed may be carefully and thinly scattered thereon. Begonia seed being exceedingly minute, it is as well to mix it with an equal bulk of fine silver sand, as it is otherwise somewhat difficult to scatter it at all evenly. It is not necessary to cover the seed, but the merest dusting of fine leaf-mould may be given. The pots should now be plunged in some moist Cocoanut fibre refuse, with, if possible, a bottom-heat of 70° to 80° Fahr. (10° lower will do), but germination will then be slower) and covered with a pane of glass, over which a piece of brown paper has been placed.

The glass must be removed for half-an-hour morning and evening, as if the soil be kept too close a minute fungus is apt to develop on its surface, which, if unchecked, will soon destroy seeds and seedlings. Probably after the first thorough soaking, if the surroundings be fairly moist, no further watering will be required until the seeds begin to germinate; but either then or at any other time the best way to apply it is by placing the pot in a pan of lukewarm water reaching to within about half an inch of the surface of the soil. If it be roughly applied to the surface the seedlings will “lie down,” and many never get up again. It should be borne in mind that the water used should never be cold, but as near as possible of the same temperature as the soil in which the plants are growing.

TREATMENT OF THE SEEDLINGS.

As soon as possible the seedlings should be pricked out about 1 inch apart into pans or boxes, using a compost as described above, the best time to do this being while the first pair of rough or true leaves are in process of formation, as the tiny rootlets have then not had time to run far, and a severe check is thus avoided. The handling of these tiny seedlings requires some patience and care, and this can best be done by cutting a V-shaped notch in a thin, narrow strip of wood, such as a plant label, using this to lift them with, while they are carefully levered out by means of a small-pointed stick, which may also be used for making small holes in the earth to plant them in, carefully prodding the soil round them afterwards. When this operation is finished, the whole should be again stood in a vessel of water as described above until well



A BEAUTIFUL DOUBLE WHITE TUBEROUS BEGONIA FROM SEED (SECOND YEAR).

plants procured from cuttings very soon begin to deteriorate.

SOWING THE SEED.

The months usually chosen for seed-sowing are January and February; later sowings may be made, but the resulting plants can hardly be expected to flower the same year, and with generous treatment plants raised from sowings made during these months will usually begin flowering in late June and July, and make a fine display, either out of doors or under glass during the rest of the growing season. In order to meet with a fair measure of success the amateur must be able to command a growing temperature of from 65° to 75° Fahr., and if this is not available in the greenhouse recourse must be had to one of the various forms of propagator on the market. The seed being obtained, the next proceeding is to prepare a soil suitable for its reception. This should consist of well-decayed Oak leaf-mould three parts, coarse sand half a part, and good fibrous loam two parts, the whole being well mixed and

moistened, and then kept rather close for a week or so to enable the roots to get well hold of the new soil. As soon as the seedlings have four or five leaves apiece and are beginning to touch one another, they should be again transplanted, this time singly into 2½-inch pots, using the same compost as before, but slightly coarser.

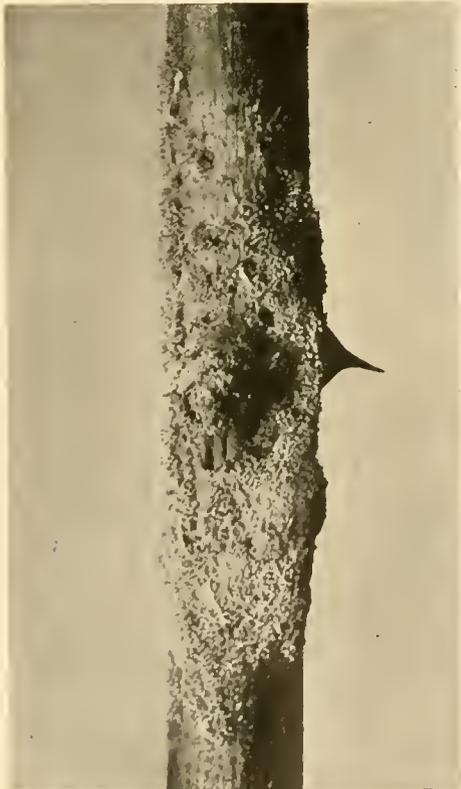
WHAT TO DO WITH THE PLANTS.

As the plants increase in size, the next shift should be given, this time into 4-inch pots, the old drainage being carefully picked from among the roots which have run down into it, so as to damage them as little as possible. The plants may now be gradually hardened off, which, supposing the seed to have been sown in the latter part of January, should be about May, and about the middle of June those intended for bedding out may be placed in their permanent quarters, provided the weather is suitable. Those plants intended for growing on in the house should be shifted into 5-inch or 5½-inch pots as soon as the roots begin to work well round the sides of the smaller ones.

Any additional food required may be supplied in the form of liquid manure as the plants come into bloom and the pots become crammed with roots. A suitable soil for the final potting consists of good mellow loam with plenty of fibre in it, two parts; Oak leaf-mould, one part; coarse potting sand, half a part, with a few nodules of charcoal to keep the soil more open and sweet, while a sprinkling of Clay's, Thomson's, or some other well-tried fertiliser may be added with advantage, the whole being thoroughly mixed several days before it is required for use. In conclusion, a word as to the selecting of seed. Always buy from good and reliable houses. It takes six months at least to produce a flowering plant from a seed, and it is just as easy to raise a plant fit for exhibition in the early stages as a worthless one, and the little extra one pays for reliable seed is money well spent.

RODIER HEATH.

Brutonia, Westham, Weymouth.



A ROSE STEM BADLY AFFECTED BY GREY MOULD (BOTRYTIS CINEREA).

ROSE GARDEN.

GREY MOULD ON ROSE TREE STEMS.

WITH the ordinary mildew found on the leaves of Roses most cultivators are familiar, and to the casual observer this does not greatly differ from that shown in the illustration; but this latter is quite different in its effects and much more deadly, so that it behoves every Rose grower to keep a sharp look out for it. It generally attacks the older portions of the plants, such as the main stem or the larger branches, and by this trait is easily distinguished from the common Rose mildew, as that confines its attentions to the leaves and the young shoots.

This grey mould, or *Botrytis cinerea* as the mycologist calls it, is generally associated with decay, being, apparently, powerless to harm a healthy, vigorous shoot. If a wound is made in the bark of a Rose or any other tree and nothing is done to exclude parasitic fungi, the grey mould will probably be one of the first visitors.

In the illustration is shown the patch of grey mould magnified, and the wound round which it is clustered may also be plainly seen. This is in the main stem of the Rose, and its effect is to cut off all supplies of sap from the roots. The best way to prevent this trouble is to avoid making wounds on the stem, either with the sécateurs at pruning time or with the garden fork at digging, mulehing and other times. Should the fungus put in an appearance, its progress can generally be arrested by rubbing a mixture of two parts of flowers of sulphur and one part of unslaked lime into the affected area; but this should be done in the early stages of attack to be effectual.

ROSES GATHERED ON CHRISTMAS DAY.

ROSES, we know, will often keep flowering until the end of October, and a stray bloom or two may occasionally be gathered during the dull days of November, but it is not many of us that have the pleasure of gathering even a single bloom out of doors on Christmas Day. The charming bouquet illustrated was gathered from plants in the open on December 25 by Mrs. G. E. Scaramanga, Rushetts, Crawley Down, Sussex, to whom we are indebted for the photograph from which our illustration has been made. Doubtless the mild weather that has been until quite recently experienced in that locality was responsible for this pleasing departure from the normal.

CLIMBING ROSES UNDER GLASS.

[In reply to "R. G. B."]

YOUR question is a very timely one, and we have pleasure in replying to it. Many Rose growers have discarded the old *Maréchal Niel* as an indoor Rose, owing mainly to its tendency to canker, but also to its unfitness for providing a fairly continuous supply of flowers. Without a doubt it is still the king of golden Roses, and when grown upon a half-standard Briar and the entire structure devoted to the Rose nothing can equal it in beauty. We know of some old vineries where *Maréchal Niel* on short standards has been planted to supersede the Vines, and these houses yield their owner a handsome profit. Although there is an inherent tendency to canker,



A BOWL OF ROSES GATHERED FROM THE OPEN ON CHRISTMAS DAY.

it cannot be denied that the Rose is often so much overcropped that disease of some kind is sure to follow. We have been very successful with this grand old Rose under glass by budding it upon a free-flowering sort already established in the structure, and, although some advocate severe pruning after flowering, we have had most success when the Rose has been very sparingly pruned. The tendency of the free-growing sorts when grown under glass is to make wood so luxuriantly as to prevent them giving a continuous supply of bloom, but there are a few varieties that would provide you with the summer shade desired, from which you could expect more flowers than from *Maréchal Niel*. The following, we think, would answer your purpose, and we have placed them in the order of merit: Mme. Hector Leuilliot, Bouquet d'Or, Billiard et Barré, Mme. Jules Gravereaux, Climbing Belle Siebrecht, M. Desir, François Crousse, Mme. Moreau, Crepuscule, Mme. Boursin and W. A. Richardson. The best Roses to plant under glass to provide a long season of flowers are the Tea-scented and Hybrid Teas, groups of what are known as the non-climbing section. If one can exercise a little patience and wait a year or two, while the plants are developing, they would soon cover the roof of any ordinary greenhouse. We should recommend a trial of such Roses. If the house is a lean-to and there is staging in front, you could have a large pot or tub placed in one corner, into which an extra-sized pot plant could be planted. Such plants are usually from 2 feet to 3 feet in height from the top of the pot. Provide the pot or tub with plenty of drainage, and fill up with good loam (three parts) and well-decayed manure (one part) thoroughly mixed together. Two or three handfuls of bone-meal added would also prove helpful. Transfer the pot plant, and before planting just rub off the edges of the ball of earth and slightly prod the sides to release the little roots, when they will be the better able to lay hold of the new soil. Little or no pruning will be required the first year or two, for these plants are usually well ripened when received, and the growth under glass facilitates the ripening each year. You could have several of such plants placed about 4 feet apart, removing every other one as space becomes filled out. We have seen plants of such a Rose as Mme. Lambard entirely covering the roof, and rarely was the owner without beautiful buds and blooms. If it is not practicable to have the plants on a front staging, standard plants could be planted in a well-prepared border beneath; but we would advise pot-grown specimens in preference to those from the open ground. A top-dressing about twice a year, using bone-meal liberally when the

plants are established and watering freely during the growing period, will ensure a strong and vigorous growth quite sufficient for ordinary requirements. We are certain that if such Roses were planted they would give far more satisfaction than the orthodox climbers. A few varieties we can recommend are Mme. Abel Chatenay, Lady Roberts, Joseph Hill, Pharisæer, Mrs. Aaron Ward, Mme. Constant Soupert, Perle des Jardins, Mme. Hoste, Richmond, Lady Battersea, Sunset, Sunrise, Souvenir de Pierre Notting, Mme. Lambard, Liberty, Niphetos, Souvenir de S. A. Prince, Kaiserin Augusta Victoria, Mme. Ravary, Mrs. David McKee, Prince de Bulgarie, Mme. J. W. Budde, Marquise de Sinety and Gustave Grunerwald.

HARDY LADY'S SLIPPERS.

(CYPRIPEDIUMS.)

(Continued from page 16.)

CYPRIPEDIUM ARIETINUM (the Ram's Head Lady's Slipper) is a dainty, slender plant, too delicate for general treatment out of doors, and better grown in a sheltered nook amid rare Ferns or in pans in a cool house. It generally grows in tufts a few inches high, bearing small flowers scarcely an inch across, with ruddy brown sepals and petals more or less freely marbled with yellowish green. The pouch is a dainty slipper-like process coloured white, closely veined pink and horizontally poised. It is too small to be considered showy and the colouring varies with different specimens.

C. Calceolus (the common Lady's Slipper) is a well-known plant, easily grown and at one time a native of our limestone pastures. Its root-growth is gnarled and distinct from the long, straight roots of the bog-loving types. The stems reach a height of 2 feet when fully established, and they bear on an average two fragrant flowers, the sepals and petals of which are brownish red, slightly twisted and often chequered with yellow. The yellow lip is in the form of a distended pouch less than 1 inch across. The whole flower spans 2 inches to 3 inches, and they last well in good condition if water is prevented—by a sheltering light—from entering the pouch. This is quite an easy plant to grow, and one should endeavour to re-establish this pretty species in damp pastures overlying chalk, either by roots or by seeds.

C. californicum (the many-flowered Lady's Slipper) is a rare plant and one of the best of its group. The leaves are like those of *C. Calceolus*, and the stems support spikes of five to ten flowers, with yellow segments and a white pouch veined or sometimes flushed with rose. The plant is vigorous and showy, but very susceptible to decay at the collar in cold and wet winters. Collectors in its native country report it as a bog plant, but the soil exported with the plants is pure loam, and the probability is that a marshy place submerged in the growing season for a few inches is intended. Under cultivation it resents too much wet, preferring the drier loams in winter and to be well watered in its growing season. Its roots agree with the species from loamy soils, and they are quite different from the spectabile-pubescescens group.

C. candidum (the white Lady's Slipper) is a dainty species of slender tufted growth that one could associate with Sundews, Sarracenias, Disas and kindred plants in cool structures. It appears far too delicate to grow in the open. The plant's long slender white roots indicate a root-run of sphagnum or mossy peat rather than soil, and it suffers from extremes of heat and cold. The stems are half a foot high, and they bear one to three flowers each, the segments of which are brown, shading paler near the bases. The slipper is pure white, and the whole flower averages less than 1 inch in diameter.

C. guttatum (the spotted Lady's Slipper) is a rarity from Siberia, white flowered, the lip being splashed with crimson.

C. humile [See Fig., THE GARDEN, Vol. LXIV., page 41].—A plant gardeners will more readily recognise as *C. aculea* (the stemless Lady's Slipper), one of the curiosities of the vegetable world. It is a pretty, and in some respects showy, plant, very interesting in its singular formation, and it will be familiar to many who attend the Royal Horticultural Society's fortnightly meetings. The roots are stout, fasciated, not fleshy, the stems, *i.e.*, flower-stalks, are 9 inches high, bearing one (rarely two) flowers on each, 3 inches across the "wing" segments, which are lance-shaped, rigidly flat and the upper petal is hooded. The pouch is a loose bag-like process of rosy purple colouring, veined on the inside, quite 2 inches long and much contracted at the base. A slit from top to bottom of the lip reveals the coloured interior and the edges are turned back to render this colouring more attractive. As a garden plant *C. humile* finds its greatest use in damp rockeries associated with creeping Bellflowers (*Campanulas*) and Arenarias between stones. It grows well in the cool house treated like a *Disa*, and one can grow the plant well in pots in Belgian leaf-soil or in Jadoo fibre.

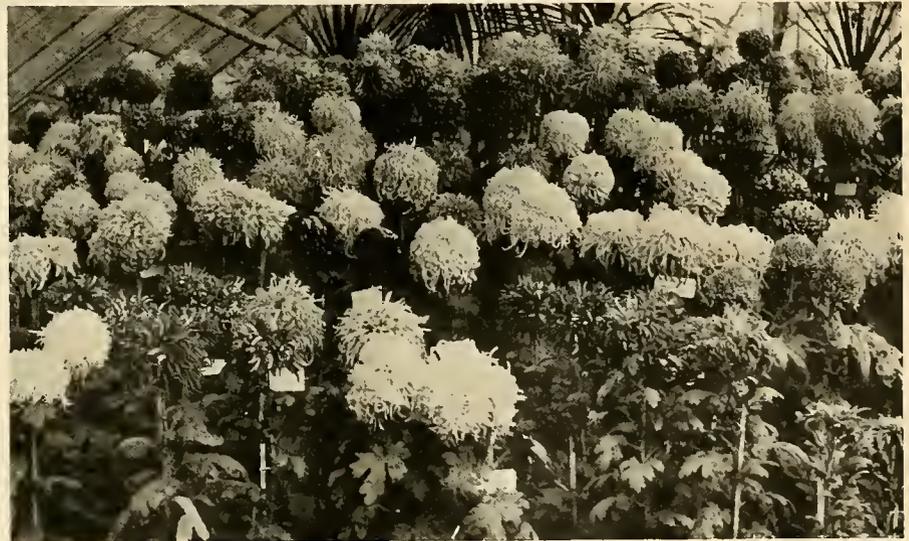
C. japonicum rarely finds its way to this country in good condition, and its flowers are

THE FRUIT GARDEN.

PEARS AND APPLES FOR THE NEW YEAR.

THERE are many new varieties of Apples and Pears in these days of novelties. Some are old but introduced with new names, others are the results of hybridising, the cross of which sometimes is not so good as existing varieties, and in the New Year some of the old Apples and Pears are very difficult to beat. I should like to know what is better than a good well-ripened Blenheim Orange or a Ribston or Cox's Orange. There is not a new Apple that can beat them, and if these fruits are well ripened, that is, allowed to hang on the tree till they part readily from the spur, their condition at Christmas is superb.

Many of the new Apples are in season at the time of the autumn shows; they get admired and are bought and planted largely, and in a year or two it is found that the old ones were really better than the new. Most of these inbred or crossbred sorts produce weak-growing trees, as the plants have been pushed rapidly to get a supply



THE FINEST GROUP OF CHRYSANTHEMUMS SHOWN IN SCOTLAND LAST YEAR.

rarely seen. Newly-imported specimens may flower once, but rarely develop a second leafy growth. The leaves, there are but two, are arranged in a shuttle-cock-like vertical, neatly plicated, and the flower has wide converging segments and a curious warty lip in the way of *C. humile*, but with a rounded aperture at the centre and a few parallel raised processes at the tip. The whole plant is hispidulous. THE GARDEN published a coloured plate of this curious species several years ago. M.

(To be continued.)

THE FINEST GROUP OF CHRYSANTHEMUMS IN SCOTLAND LAST YEAR.

MR. WILLIAMSON, Glasgow, sends a photograph, which we reproduce, of the finest exhibit of Chrysanthemums in Scotland last year. This record display was to be seen at the Glasgow Corporation Camphill Gardens. Forty-one varieties are represented, and, as our correspondent says: "It stands unequalled in Scotland, perhaps in Britain, and reflects great credit on Glasgow's Parks Department."

of scions for multiplying the stock for commercial purposes. For instance, that good variety Allington Pippin is not wanted when one has Cox's Orange Pippin, as it is inferior; it is softer in texture and does not keep so well. Edward VII. is a new variety from which much was expected, but I cannot see any improvement. We have several trees in bearing, so that I am not speaking from hearsay, but from actual experience.

Pears in season at this time are few in number; the same mistake often occurs. People plant varieties they see at the autumn shows. Easter Benrre can be had in fine condition now by introducing the fruits into a warm room about twenty-four hours before they are wanted for consumption. If a smaller Pear be in demand, then by all means grow Winter Nelis and bring it on in the same manner. In some catalogues they tell you Thompson's is a good December Pear, but I have found it is gone long before Christmas; nevertheless, it is well worth growing.

Doyenné du Comice.—This is the best Pear in November and the first and second week in December, but cannot be said to be a Christmas Pear, as it does not keep after the second week, or very rarely. Our last fruits of this variety are

rarely gathered before November, and even then they fail to go on till Christmas.

Fondante de Thirriot is a good Pear for December; it has a green skin, and here and there is covered with patches of russet, but it is most delicious and is a good grower.

Glou Morceau or Beurré d'Handenpont is always a good Pear at this time; it is buttery, rich and delicious, and finishes its fruit best on a wall or some sheltered situation.

Charles Ernest, a large handsome fruit, is another reliable variety now in season. It grows well as a cordon or as a fan-trained tree on a wall.

Beurré de Jonghe is another Pear always ready for the New Year, and can be kept five weeks later. There are many others which I will enumerate on another occasion by permission of the Editor. It must be borne in mind that all Pears at this season are the better for dessert when placed in a warm temperature for a little while.

Of course, only by much experience can the precise time be dictated in each case. A few hours only are enough for those that are mature, and, as a rule, they are useless afterwards, so that only as many as are required should be served up under this process.

W. A. COOK.

Leonardslee, Horsham.

WELL - GROWN VINES.

THE illustration represents two vineries, early and late, with six Vines in each. Each Vine contains from four to six rods. There are nine varieties, as follows: Two Black Hamburgh, two Muscat of Alexandria, two Frontignans, with one each of Foster's Seedling, Golden Champion Alicante, Gros Colman, Mrs. Pince and Lady Down's Seedling. As near as I can find out they have been planted about forty years and at times have been badly neglected and heavily cropped, so when I took charge of them three years ago I found a



WELL-GROWN VINES AT STANLEY HOUSE.

and distinct forms of it varying in size, colour, shape, quality, season, &c.

Like most of the Gages, the old Green Gage is a very strong grower, and when grown as a wall tree or dwarf tree of any form it requires vigorous root pruning to get it into bearing condition. I know some bush trees twenty years old 8 feet high and as many in diameter which have never borne a crop of fruit, and never will as at present managed, being cut in close every year; in fact, clipped into shape. A chalky soil on high ground is perhaps best suited for it, and in such positions it is well grown in some parts of Kent.

The flower is more than ordinarily susceptible to damage by frost, such a long time elapsing before the embryo fruit begins to swell, and that is why it is best on high ground. In some places it does better as a standard in grass than anywhere else. The fruit is smaller from a standard than from a wall, but often of richer flavour, while somewhat different in appearance, the fruit from a wall being brownish green and orange, with a beautiful bloom upon it, while that from a standard is often destitute of bloom, but is marked with russet patches and reddish dots, the latter, however, sometimes appearing on wall trees as well.

On those rare occasions when a tree is thickly set with fruit it pays to thin it in June, for if left to ripen too heavy a crop, not only will the fruit be small, but deficient in flavour. It is useless planting this tree in the open near woods or where bullfinches are very troublesome, as they take all the best fruit-buds in winter. I know of standard trees near woods where the blossom-buds are almost entirely removed every year.

It is said that wall trees often bear much worse than they would do through want of water, and winter watering is recommended. I have practised this, and have had better results since. I am inclined to think it is a case of cause and effect. It must be borne in mind that not only does the wall keep off a deal of rain when the wind is behind it, but that it absorbs a great deal when the rain is blown directly on the face of it, this being lost by evaporation during the first few dry hours afterwards. ALGER PETTS.

STRAWBERRY FORCING.

ASSUMING that the plants are thoroughly ripened and developed, the difficulties attending successful

Strawberry forcing are very few, providing proper convenience is at command. Comparatively few gardens can boast of a Strawberry house, or any house that can be devoted to Strawberry culture alone. Where space is very limited we would advise deferring Strawberry forcing to a more favourable season, when the chances of failure will be considerably less. At this early date it no easy matter to get a good percentage of plants to flower; but this difficulty may be lessened if a heated pit is available and the plants can be plunged in a bed of leaves of moderate warmth. In so doing, the roots are encouraged into action correspondingly with the leafage. To restrict leaf growth until the flower spikes are visible a little air should be admitted on the top and

bottom of the pit on all favourable occasions. It is the undue hastening of the plants into luxuriant growth that causes so many to become blind.

COLOURED PLATE.

PLATE 1341.

TUBEROUS BEGONIA WILLIAM MARSHALL.

THIS Begonia is, perhaps, the most handsome scarlet tuberous Begonia in existence. As may be seen in the coloured plate it is a very full double variety of exquisite shape with handsome, robust foliage. It was raised by Mr. Pope at Messrs. T. S. Ware's Bexley Heath Nurseries in 1903, and is named after Mr. William Marshall, V.M.H., chairman of the floral committee of the Royal Horticultural Society. The habit of the plant is very erect, yet robust, and it will undoubtedly become a very popular variety. Messrs. Ware, Limited, make a speciality of tuberous Begonias, and have introduced many sterling varieties during recent years.

THE OLD GREEN GAGE PLUM.

AMATEURS will doubtless continue to plant the real old Green Gage, or what is sold to them as such, and become resigned to its failure to fruit, even when it flowers freely nearly every year. Market growers also will continue to plant it, as it still remains unsurpassed, and perhaps unequalled, by any of the more recent introductions, even of the Gage type, and where the soil and situation does just suit it the lucky possessor has a fortune. Perhaps its greatest merit, from a market point of view, is that the man in the street knows it and will buy it, or what looks like it if labelled Green Gage, whenever and wherever he can get it. There are other Plums, e.g., Early

THE FLOWER GARDEN.

HUTCHINSIA ALPINA.

MOST of us are familiar with the accommodating way in which *Aubrietia* and *Arabis* increase in our gardens, and though not so large in its parts as either of these *Hutchinsia alpina* is equally willing to make itself at home. It belongs to the great group of Crucifers or Cress family, and its dainty beauty is accentuated by growing a large patch. *Hutchinsia alpina* is remarkably free in flowering; it makes sheets of snow white flowers in May and June, though it is rarely without flowers the greater part of the summer. One of its greatest charms is the soft green colour of the foliage throughout the winter, which refreshes the eye and reminds one of spring. One can imagine no more pleasing edging to a spring garden than a broad ribbon of this plant, for it is easily propagated by small tufts placed in sandy soil in a cold frame, so that the idea is easily practicable in small gardens. The height of the plant is about 3 inches, attaining to a height of 6 inches when in flower. It also makes a delightful carpet when studded with the flowers of *Chionodoxa* (Glory of the Snow) or some of the smaller *Narcissus*, like *N. triandrus*. The group illustrated is grown upon the steep slope of a rockery in light, chalky soil, facing south, and is two years old from cuttings.

THOMAS SMITH.

Walmsgate Gardens, Louth, Lincs.

A FINE YUCCA.

THE illustration shows a very fine flowering specimen of the Mound Lily or Adam's Needle (*Yucca gloriosa*). This plant is a native of the United States of America, but specimens are met with in many of our gardens, especially in the South of England, where they prove quite hardy. They are but little trouble to grow if a well-drained and open soil is provided. Planted in a bed on a lawn they assume a majestic appearance and always prove attractive. Inflorescences are not produced very freely, but when they do appear they are decidedly attractive, the hundreds of good-sized, whitish flowers lasting for many weeks. Propagation may often be effected by means of suckers that are produced naturally, or old pieces of stems may be placed in a warm propagating case during early summer, when side-shoots will be formed.

These may be taken off with a slight heel and inserted in well-drained pots of sandy soil, keeping these plunged in a temperature of 65° until the cuttings have rooted.

HARDY FUCHSIAS.

Who will give us a race of hardy Fuchsias that shall include all the beautiful colours and variations of those which now grace our green-houses? Fuchsias equal in size and hardiness to *F. Riccartonii*, which in most English counties soon makes a fine shrub. What a boon they would be in late summer, when shrub borders are always rather sparse of flower and colour, and how charming their graceful and brightly-coloured flowers among the changing foliage in the more sombre days of the waning year.



YUCCA GLORIOSA IN FLOWER.

Unlike many other flowers the Fuchsia seems but little affected by the heaviest downpour. Its flowers move with the wind and so escape, while the umbrella-like corolla prevents any moisture trickling to the centre. True the branches of some varieties are rather brittle, but others, such as *F. macrostemma gracilis* are fairly tough and might be used by the hybridist to add suppleness where it is now lacking. Nor is it impossible to intermarry hardy and tender species and still retain the hardiness of the former, with the addition of the bright colours of the latter. What has been done by M. Marliac for the *Nymphaeas* can surely be accomplished with the Fuchsias.

There are already several species quite or almost hardy. From one of these (*F. globosa*) a seedling, viz., *F. Riccartonii*, was raised in 1830.

One would have thought the increased hardiness, size and brightness in the flowers of this variety would have proved sufficient incentive for further effort; seventy-seven years have, however, passed since then and very little has been done. Of the species before-mentioned many are well worth the small amount of protection they need in the more northern parts of the country. The seaside, even in the exposed Eastern Counties, seems to suit them admirably. In colder districts a sheltered situation, such as the side of a house, shed or wall should be chosen in which to plant. Not that they ought to be shaded in any way; provided the soil is fairly moist below, they cannot have too much sun. In winter a covering of cinders, Heather or evergreen branches may be placed over the roots, though in many places this is not necessary. Young plants should, however, be carefully protected; they are far more liable to be frozen the first winter after planting than when they have become established.

Propagation is easily carried out by means of cuttings, which root readily, preference being given to those shoots without flower-buds in the axils of the leaves. All Fuchsias prefer a light, well-drained soil, but heavy land, if not too wet, can easily be made suitable by adding leaf-mould or old potting soil. Plant in April; if the plants have been kept very cool and rather dry they will be dormant, and as the weather becomes warmer will soon make rapid growth, but if they have been kept in a greenhouse their tender foliage must be carefully inured to outside conditions before planting out towards the end of the month. With the exception of *F. Riccartonii*, they are best treated as perennials, pruning them to the ground level early in March, giving at the same time a top-dressing of manure.

THE BEST SORTS.

Among the hardiest species and varieties may be named *F. macrostemma gracilis*, hardy, good habit, flowers red and purple, produced freely; *F. m. coccinea*, late-flowering, tubes and sepals long, scarlet, corolla purple; *F. m. globosa*, dwarf, flowers red and purple, rather dull, free-flowering; *F. m. pumila*, 12 inches to 15 inches in height, neat and compact; *F. corallina*, a robust, large-leaved, free-growing sort; *F. Riccartonii*, a hardy shrub of highly decorative character. Another fine variety, one which passed through last winter in the open border quite unharmed, is *Mme. Corneillon*; the flowers are of good size and shape, scarlet sepals, tinted on the under side with pink, veins of the same colour beautifying the white corolla. Its habit is good, it grows freely and flowers profusely; a small plant put out here in April, 1906, was on October 12 a mass of flower, 3 feet 6 inches in height and nearly as much through. Others might be mentioned, but my purpose is to awaken an interest which will not be satisfied with those already in cultivation.

If this is achieved we may see beautiful flowering plants adorning our shrub borders during the late summer with flowers almost as large as some of those we now grow under glass. I think everyone will agree that there is room for improvement.

J. COMBER.

Handcross, Crawley.



ONE OF THE CRESS FAMILY (HUTCHINSIA ALPINA).

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

FLOWER GARDEN.—In open weather plant German Irises. When the weather is frosty prepare new beds and borders for hardy plants and deeply dig or trench new ground intended for shrubberies. Deciduous plants and climbers may be pruned now, rearranging growths of the latter, and carefully nailing them to the walls and fences as the work progresses.

Vegetable Garden.—Prepare hot-beds for forcing early crops of Carrots, Asparagus and Radishes. Where stable manure is plentiful, this way of raising early crops and seedlings has much to commend it. A sheltered situation should be selected for the hot-bed, where protection from cold winds can be provided. Early Peas may now be sown on warm, protected borders, but in other positions such work must be deferred for a few weeks. Quarters intended for Carrots and other root crops should be trenched or deeply dug as soon as possible, using well-rotted manure, which should be placed as a layer at considerable depth below the surface.

Frozen Window Plants.—Should any plants get frozen, place them in a cool cellar or room and sprinkle them with cold water. On no account attempt to thaw them with warm or tepid water or place them near to a fire to thaw. The earliest bulbous flowers should now be making the window gay.

Greenhouse and Conservatory.—Keep the fire going steadily to dispel damp and prevent injury from frost. Give water carefully to all plants. Repot Lilies. The golden-rayed Lily (*Lilium auratum*) and *L. speciosum*, if potted up in a soil made up of loam, leaf-mould, peat, well-rotted manure and sand in equal parts, will do well. Cuttings of such plants as Geraniums, Lobelias,

for many plants that are fast developing their blossoms. Keep the frames carefully and securely matted up at night and throughout the day when frosts prevail. Freesias and other bulbous-rooted subjects in cold frames should be staked and tied, as they require support. On bright, warm days the frame-lights covering bulbs and Violets should be thrown off for an hour or two, and any plants suffering from damp should have the affected leaves or petals removed. Violets require plenty of air, and this should be afforded them when the weather is not too severe.

Chrysanthemums.—Early-flowering decorative and Pompon sorts may be propagated freely. Insert cuttings of these sorts in shallow boxes and 3-inch and 5-inch pots, using a compost of loam and leaf-mould in equal parts, with the free addition of coarse silver sand or clean road-grit. Sift these soils. The cool greenhouse is an excellent place in which to root the cuttings now.

TWO GOOD FERNS FOR ROOMS.

THE AUSTRALIAN BRACKEN.—This, the Quivering or Trembling Fern, *Pteris tremula*, is closely related to our native Bracken, *P. aquilina*, and constitutes one of the very best and handsomest Ferns for growing in rooms. Immense quantities of it are raised in nurseries annually from spores, a very easy means of propagation in this instance. Young plants in 2½-inch pots can be easily and cheaply purchased, the middle of April being a good time of the year to secure a supply. As these will in most cases have been grown on rapidly under comparatively hot and moist conditions, some special care is needed for a week or two after they are bought, giving them the warmest position in the room and sheltering them from drying draughts. A mistake that amateurs almost invariably make with these newly-bought young Ferns, and one that often proves fatal, is to repot them into a larger pot as soon as they are received from the vendor. No doubt the purchaser is tempted to do this by the pot-bound condition of the roots that usually prevails, but it is much wiser to keep them in their small pots until they are thoroughly accustomed to their new surroundings. They may then be given larger-sized pots with advantage, providing perfect drainage and using the same soil as advised below for the Maidenhair Fern.

Maidenhair Fern.—This is too well known to need description. The illustration shows a good specimen that has evidently been well treated. The best time to repot established plants is about the middle of March, using soil composed of three parts very fibrous loam, one part peat, and one part coarse sand. Keep rather close for a fortnight afterwards and be very careful with the watering until the plants are established in their new quarters.

WINTER-FLOWERING CARNATIONS.

THESE plants have become so very popular of late that all gardens worthy of the name appear to be incomplete without at least a small collection of the better varieties. English raisers are now

viewing with their American rivals in the introduction of new and beautiful flowers, and as a consequence of this praiseworthy effort we are now in possession of quite an interesting list of named varieties. The Tree or Perpetual-flowering Carnations, by which description the winter-flowering sorts are more generally known, are flowers partaking of a great diversity of colouring, and their form is pleasingly varied. They are



THE AUSTRALIAN BRACKEN (*PTERIS TREMULA*).

not difficult to cultivate if the grower is quite prepared to give them the conditions in which they invariably do well. Some of the newer sorts are, of course, expensive, but the older varieties, which are almost as good as many of the novelties, may be raised in large numbers when one is in possession of a plant or two with which to make stock.

How to Make Carnation Cuttings.—Much depends upon the character of the individual plant that is dealt with. The proper length of a cutting is about 3 inches, though half an inch less is quite long enough. These may be detached quite freely in the late winter as the plants go out of flower, the frequent cutting back of the plants having the effect of inducing them to evolve fresh young shoots from time to time. Always use a sharp knife and make a clean cut through. Remove the lower leaves by simply pulling them down, and cut through the joint, just leaving the eye, immediately below which the roots are emitted. A joint is that part of the stem where the leaf-stalk forms a junction with the cutting.

Propagating Winter-flowering Carnations.—Propagation of the winter-flowering Carnations may be done in January and in subsequent months as cuttings are available. There are several ways of rooting the cuttings, but the simplest method is that of inserting them in pots filled with sandy soil, and placing them in a propagating frame where genial bottom-heat can be provided. The cutting may be rooted exclusively in sand or in very sandy soil. In sand of a reddish or sandstone character the cuttings root with great freedom, and we prefer to use this to any other. Where this is not available, make up a mixture of sandy loam, leaf-mould and clean road-grit or sharp sand of some sort, using half a part of each of the two first-mentioned soils and one part of the road-grit. Mix these ingredients thoroughly



A GOOD SPECIMEN OF MAIDENHAIR FERN (*ADIANTUM CUNEATUM*).

Ageratums, Heliotropes and Petunias should be inserted now. Lily of the Valley, *Deutzia gracilis*, *Azalea mollis*, Solomon's Seal and *Spiraea japonica* should now be placed in a light position and watered moderately.

Cold Frames.—Cyclamen and other somewhat tender plants should be placed in the cold frames as they go out of flower. This will make room



CARNATION CUTTING WITH LOWER LEAVES REMOVED READY FOR INSERTION.

before using the material. Pots of a size to suit the requirements of each individual grower should be used, and, where possible, the cuttings should be inserted singly in 2½-inch pots. However, we prefer to avail ourselves of a propagating frame in a warm greenhouse where the bottom-heat is about 70° to 75° and the temperature of the glass structure some 10° to 15° less. If the propagating frame is filled in 6 inches or 7 inches deep with reddish sand, the cuttings may be dibbled in freely and will root within about three weeks. No frame-lights should be placed over the cuttings, as this predisposes them to fail. When inserting the cuttings, always see they rest on the sand in the bottom of the hole and press the soil firmly at their base; 2 inches between the cuttings will suffice. Water in with a fine-rosed can, using tepid water.

Potting Up the Rooted Cuttings.—As soon as the cuttings are rooted they should be potted up into small pots. On no account must they be allowed to remain long in the propagating case after they are rooted. Evidence of rooting will be given by fresh growth of a pale green kind. Two and a-half inch pots are quite large enough for the first potting, and these should be clean and crooked with potsherds. Place a small quantity of soil over the crocks; then proceed to lift each rooted cutting, disturbing the roots as little as possible, and subsequently arranging them carefully before filling in the compost. Make the soil fairly firm from bottom to top, as the non-observance of this rule is a frequent source of failure. When the young plants are finished they should be stood together in the same glass house where a moist bottom and a free circulation of air can be provided. When established they should be transferred to a glass house where less close conditions prevail. The soil for this first potting should consist of good sandy loam, leaf-mould and clean road grit.

Subsequent Repottings.—As soon as the young plants are nicely established in the ordinary greenhouse they will need another shift in a little while, and this time into pots measuring 3½ inches to 4 inches in diameter. Subsequently it will be found advantageous to give them another shift into 6-inch pots, or those a trifle less in diameter. A good soil for these later repottings should consist of good fibrous loam, to which should be added some well-decomposed horse manure and a free sprinkling of bone-meal. Should sandy loam be used, little road grit will be needed; on the other hand, heavy loam should have mixed with it plenty of coarse sand

or road grit. Plants should be overlooked before repotting, and those that are dry should be well watered. During the summer months, say, from June onwards, the plants may be stood in cold frames or pits, but be removed to the greenhouse in August.

Later Treatment.—After housing the plants always give plenty of top air. It is a great mistake to excite the plants into growth by keeping them unduly warm or close. The temperature of the glass structure should be maintained at about 50° to 55° at night and 60° to 65° during the day. Watering must be done with care, using common-sense. Apply water to



A ROOTED CARNATION CUTTING, SHOWING HAIR-LIKE ROOTS.

the plants when the soil is nearly or moderately dry, and err on the side of caution in wet, cold and foggy weather. Manure water may be given to the plants when they are well rooted and buds are formed, but always err on the weak side.

A Few Good Winter-flowering Carnations.—Robert Craig, bright scarlet, large; Mrs. Burnett, lovely salmon pink; Mrs. S. J. Brooks, pure white; Britannia, scarlet; Duchess of Portland, soft pink of medium size and lovely form; Fair Maid, large, light pink; Enchantress, beautiful flesh pink, large; Harlowarden, deep crimson; Nelson Fisher, intense cerise, large; Mrs. T. W. Lawson, a beautiful pink, sweet scented; Mrs. Robert Norman, a grand pure white sort; Mrs.

William Cutbush, bright rose-pink; Windsor, beautiful pink; and Mikado, white with distinct crimson blotches.

SEASONABLE HINTS ON THE CARE OF ROOM PLANTS.

THE winter is a very trying time for these occupants of our homes. The extra firing and burning of gas that has to be resorted to tends to render the atmosphere of the rooms dry and dusty, and this is far from being beneficial to healthy plant life. Some people who are aware of this evil try to avoid it, and do what is equally detrimental, namely, allow the plants to remain in seldom-used rooms; and, of course, these get too cold for them. Of the two drawbacks the former is the lesser, so long as the plants are kept from being directly under the gas or in front of the fire. The dryness of the room and dirty appearance of the plants must be counter-balanced by more frequent spongings. These remarks apply to Palms, Aspidistras, India-rubber Plants, Castor Oil Plants and others of a similar character.

Geraniums and Fuchsias can be kept through the winter even without the aid of greenhouses, though with them much easier, providing a spare room or its equivalent space, from which the frost can be kept, is available. Practically all foliage will come off the Geraniums and Fuchsias at this season; but this need not alarm anyone, as they quickly make new leaves in the spring if we can preserve the roots and stems alive. To do this it will be necessary in very severe weather to burn a lamp or small oil stove in the room so as to keep the temperature from falling below freezing point. Another very important point for the safe wintering of such plants is to keep them well on the dry side during the cold, frosty weather, as by so doing they are much less likely to take any ill effects. When watering must be done, choose a mild day. Water thoroughly, and do it in the morning, so that the plants may be well drained before night time. The Fuchsias will not need more than a couple of waterings through the winter, and, being hardier than the Geraniums, may be stood under a table or in a corner. The Geraniums need all possible light, and therefore should be placed where that will be obtainable. C. TURNER.



ROOTED CARNATION CUTTING ESTABLISHED IN A "THUMBE" POT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FORCING DEPARTMENT.

SOW a few Cucumber and Melon seeds of approved varieties to give an early supply, and to do this effectively now care should be taken in preparing the soil, which should be of the best quality and free from worms, grubs and other vermin. Take sufficient into a warm house for the purpose, sow in small pots and when the seedlings are well rooted transplant or pot on into a larger size, disturbing the roots as little as possible. Some good fibrous loam, with a portion of leaf-soil and decayed manure, will be the right material. Keep up a supply of bulbs and plants for the conservatory and house decoration by introducing plants each week.

Vines.—The earliest Vines may now be kept 5° warmer by day and night, and on bright days syringe them twice or thrice daily. If the rods show signs of breaking too freely bend the top down to induce growth at the bottom. A second house may now be started by shutting it up. All Vines should be pruned by this time or they may bleed, which is very weakening.

Peach House.—This house may now have a little more heat, but proceed with caution, and as soon as the blooms begin to open allow a little circulation of air, and on bright days the trees should be sprayed with a very fine jet. This I have found the best way of procuring the most satisfactory set of fruit. A second house may now be closed. Each fruit house should be scrupulously cleaned before being started, cleanliness in Peach growing being one of the principal elements of success.

FLOWER GARDEN.

Sweet Peas in Pots.—Sow a batch in pots and place in a cool house or frame. Only the best varieties should be grown. As soon as the seedlings are up keep them very close to the glass to prevent a drawn growth.

FERN HOUSE.

Keep Ferns a little drier, except those that are in active growth. The new types of Nephrolepis are excellent for decoration and are readily increased. They must not, however, be grown in too much heat, as they are apt to run back to their old-fashioned parent.

THE GREENHOUSE.

Primulas and Cinerarias.—Give these supplies of manure water and a pinch of artificial manure occasionally. Cyclamen should be now looking very fine, and when a house can be devoted to them they are very effective. A batch of

Amaryllis should now be started. Shake out the soil and pot in fresh material. Give very little water till active growth begins.

Roses.—Get a batch of these in now and force steadily. Top-dress and clean the pots, and write fresh labels and prune fairly hard, except the Teas, which should have all puny weak growths entirely removed.

KITCHEN GARDEN.

Carter's Eight-week Pea.—This is an extremely early variety and crops well. Choose fine days for sowing, and if the ground is very pasty get on it by the aid of long planks.

Seakale.—Take up all that is required for forcing inside. Dig the ground deeply, so that all the roots are collected, and prepare strong thongs for next season's supply. Lay them in bundles of fifty in ashes, which, however, should be protected from frost.

Mustard and Cress should be sown as often as required. Plant

Potatoes in pots and frames that were stood on end, as recommended in my first calendar.

Carter's First Crop is a perfect type of Potato for this purpose, as the crop matures in a short time. Sow

Broad Beans.—Extra Early Long Pod is a grand variety for early sowing. Sow also on a warm border

Autumn-sown Peas should have some ashes put around them to keep worms and slugs away. If **Broccoli** are turning in seasonably they should be lifted and placed in sheds or frames, as a frost soon spoils the head; if lifted they last a long time.

HARDY FRUIT GARDEN.

Pruning and Cleaning of Trees.—This work should now be pushed forward. Apricots may be tied or nailed in position. Nail in some nice young branches to take the place of old ones. Reduce old spurs that have become long and at a distance from the wall. Cherries, Plums and Pears should be treated similarly or they do not get that protection intended. Give bush trees a good spraying of Alkali Wash to kill lichen and vermin, and one of soluble petroleum will assist in protecting the buds from the birds. Mulch Gooseberry, Currant and Raspberry quarters with manure. This should not be neglected if fine fruit is expected; it should be wheeled on the ground in frosty weather. See that all stakes are made good, such as will last through a season. Wooden stakes should be dipped or boiled in creosote. This puts five to ten years on the life of the stake. The best system of training Raspberry canes is stout posts, either iron or wood, with strong galvanised wire and tie with fine tar string.

Autumn-fruiting Raspberry.—A few stools of that famous autumn-fruiting sort Belle de Fontenay should find a place in every garden. The fruits are very pleasant for dessert or flavouring in the autumn months and are very much appreciated.

FRUIT ROOM.

Keep a sharp look-out for decayed fruits, as these soon spoil the sound ones, especially Pears. Ne Plus Meuris is just now in fine condition. Apples and Pears are keeping pretty well.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

DRACÆNAS FOR PROPAGATING.—Any stools that can be spared, such as leggy plants which are going shabby, should now be cut up for propagation. Remember that the most vigorous wood, and the healthiest also, make the best material for starting afresh. When the wood is cut into short pieces, a joint is sufficient for a young plant. It should be soaked in tepid water and then plunged in Cocoanut fibre refuse upon bottom-heat. Growth will soon begin. Injury from cockroaches must be guarded against, as where these exist they seem fond of young shoots, and will soon eat them off under the surface. Plenty of moisture is, however, a good deterrent.

FRUIT UNDER GLASS.

The Earliest Peaches will now, in most cases, be on the point of unfolding their flowers, and from the time this begins overhead syringing should cease and the atmosphere kept fairly dry and buoyant. It has been claimed for the syringe that its use on Peaches and Nectarines in flower is the best way of securing a good set, but with this I cannot agree, and feel sure that any trees which set their fruit under such conditions at this time of the year could do as well, or better, without it. Some advance the plea that showers do good to trees grown outside, for these flower at a time when there is an ample amount of daylight and some power in the sun, while at this time of the year short days and dull skies are the rule. A humid atmosphere only accentuates

the difficulties with which the trees have to contend.

HARDY FRUIT.

Planting.—Very little if any of this ought to remain unfinished, but where, through some unavoidable cause, there is any still on hand, it should be brought to a close as soon as possible. Fruit trees of all kinds are far better planted as soon as the leaves have fallen, and those who are unable to get such work done before the buds begin to swell had far better leave it alone until another autumn than do it in the spring. The old adage in this respect still holds good, that "trees planted in the old year will look after themselves, while those planted in the new require to be taken care of." However, it is a good policy to get all such work done now as soon as possible. After planting, mulch the ground with short manure to prevent the frost penetrating the soil, as by so doing the ground will be kept much warmer, and root action will be more active in spring.

FLOWER GARDEN.

Christmas Rose.—The later varieties of the Christmas Rose are still freely blooming in sheltered spots, and where, as is often the case, they are protected by a frame, which in severe weather may be covered over and the plants thus protected from the effects of frost. During heavy gales and rains some covering is advisable for the clumps, or the white flowers get sadly soiled by earth stains. Where a span-light is not available a sheet of glass large enough to extend well beyond the radius of the plants may be fixed over each clump by driving four strong wooden pegs securely into the ground at the four sides and slipping the edges of the glass into deep notches cut for the purpose on the insides of the pegs.

KITCHEN GARDEN.

Potatoes.—Where room can be found for Potatoes grown in pots, the present is a good time to see about potting them up for the purpose of a supply to come in before the earliest lot grown in frames under the hot-bed system. They are most acceptable for this purpose, as the postponement of planting in frames for another week or two will have a beneficial effect on the crop, which will not only be larger, but of better quality, through the delay. Potatoes will not bear hard forcing, and a position in a Peach house or vinery just started, where a sufficient temperature is kept up to enable the tubers to start gently into growth, will be the best that can be found for them at present. Later on, when these houses are kept hotter, the pots may be moved into successional houses. Eight-inch pots are sometimes used for the earliest lot, but I prefer 10-inch or even 12-inch ones, as the runners have more room to spread in these larger sizes and the crop is heavier.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

THE EDITOR'S TABLE.

NEW POTATOES DUG ON CHRISTMAS EVE.

Mr. E. Gray of Ventnor, Isle of Wight, writes as follows: "I am sending you a few Potatoes which were dug here by a market gardener, Mr. I. Plumbly, on Christmas Eve. He had about a gallon off five roots of British Queen, all of them self-comers, and although there were other varieties besides this one, viz., Supreme, Hebron and International, this was the only one to crop. In the gardens at Woolverton Manor, Mrs. Morgan's, I have Vihurnum macrophyllum in bloom for the second time during 1907. It is only a small one in a pot, but it has now three blooms on it, and I only took it into the cool house a week ago, when the cold winds first made their appearance." [The Potatoes were a splendid sample.—ED.]

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Ivy not clinging to walls (W. M.).

Your question is a most difficult one to give advice upon, as it is well known that Ivy and other self-clinging plants have a particular dislike to clinging to surfaces composed of various materials. Cement is one of these, either in the form of "harling" or otherwise. Your house is, however, probably harled with lime, which is, as a rule, not so obnoxious to creeping plants as cement harling. It is quite probable that it is the fresh whitewash which the Ivy objects to, and you might try the effect of leaving the part upon which the Ivy is to be grown free from whitewash for a year or two. The writer had great difficulty in a somewhat similar case, but duresco was employed instead of whitewash. By leaving this unrenewed for a couple of years or so the Ivy was induced to grow, and it clung all the more freely in after years when a greenish moss had begun to grow also. It was necessary, however, to fasten the Ivy up with shreds and nails for some time until it had secured a hold. This is more easily done in a damp district than in a dry one, and the writer has seen what you speak of, not only in Ireland but in Scotland. The fresh whitewash being in layers, scales off freely, and the rootlets of the Ivy have no solid material to which to attach themselves. You could have a portion of the wall scrubbed with a hard brush and water to remove any whitewash from the place you try first, and you would then be able to observe the effect. Your desire is to be commended, and your success would well repay the trouble this would involve.

Making a pond for Water Lilies

(Colonel B.).—If you are satisfied that the bottom of the pond is water-tight, the sides could be rendered secure by puddling with clay or by using concrete and cement. In any case it is hardly likely that a satisfactory or lasting job will be made of it with the water coming in as you describe. Have you no means either of diverting the course of the water or of effectually damming it back or preventing its entering the old pipes to which you refer? With the water entering into the excavation so rapidly it is highly probable that the present water level is maintained to a large extent by the saturated condition of the soil, and it rarely happens that a soil that "will not puddle" can be depended upon. But if your experience on the spot is to the contrary, then we suggest that you either divert the course of the incoming water or, if this is not possible, to make the pond in sections, beginning with the end farthest removed from the intake or supply. But if by means of a trench at the upper end you can keep the water from coming in upon the work as it proceeds, things may be more easily arranged. According to your sketch the sides of the pond shelve off at A, and if this is so the concrete could be placed thereon easily enough. Concrete made of clean ballast and cement—three parts ballast to one of cement—would be suitable if laid on in a 6-inch

thick layer. A 4-inch layer of two parts ballast and one cement would do; this could be reduced both in strength and thickness as the top is reached. If you cannot get the water away from the bottom, you had better, as a precautionary measure, fix a plank at an angle of 40° or 50° to the bank and at a few inches below the point marked A for receiving a band of strong concrete. We suggest this because we are strongly of opinion that a seam or substratum of sand, sandy clay or gravel exists between point A and the present water level, and is really responsible for the fact that it does not apparently vary. In these circumstances a perpendicularly-cut trench beside the pond for testing purposes should afford a good guide. If you bring the cement and concrete to the surface, let it be hidden by turfing down to and over it, and further by grouping Reeds and other things to produce a natural margin.

Information about Gladioli (E. F.).—Your best plan will be to write to Messrs. Kelway and Sons, Langport, Somerset, and describe the varieties as near as you can, when in all probability they will be able to supply others like them. If you cannot obtain them in this way, send the firm a flower or part of a spike when the varieties in question flower. We cannot answer your question concerning the kaint, as you do not say for what crop or purpose you require it. If you send us these particulars we may be able to help you.

THE GREENHOUSE.

Roman Hyacinth bulbs unsatisfactory (H. S.).

—We have carefully dissected and examined the bulbs of Roman Hyacinths sent, and cannot find any traces of flowers ever having been formed in them. As far as size is concerned, they are, of course, sufficiently large to flower well, and we can only conclude that the cold, wet summer of last year, which we believe was not confined to England, caused a deal of soft growth and was answerable for the non-production of blooms. We should not hesitate to say that the failure of the Lily of the Valley crowns was caused by some decided check, but as there are many probable ways in which this might occur, it is, of course, impossible for us to put our finger on the particular one. They may have been kept out of the ground too long before potting or allowed to become too dry after this was carried out, while an escape of sulphur into the house in which they were placed would also cause the injury. At all events, the crowns sent are very fine ones, and the spike which has grown a little has a considerable number of blossoms in embryo.

Maidenhair Fern fronds gone wrong (A. E. L.).

—The fronds that you send are in a very bad condition indeed. They are infested with brown scale insects and also with thrips, the latter being small, long, dark objects not very easily seen. The best thing to do with plants in this condition is to cut off all the fronds at once close to the surface of the soil and burn them. Then keep the plants in a cool but frost-proof structure until the first week in March, when they may be taken into a warmer house to start new growth. Water will probably only be required three or four times during the period when the plants are resting, but this will depend upon the surrounding temperature. Only give them water when there is a danger of the soil becoming dust-dry. There is little doubt that the moss growing on the surface is due to over-watering in the past. This would cause the plants to become unhealthy, and thus allow the insect pests named above to gain a strong foothold. When young fronds are about 2 inches high, as they should be by the middle or end of March, it will probably be advisable to turn the plants out of their pots, remove nearly all the old soil, and repot them into clean, well-drained pots, using a mixture of very fibrous loam (three parts), peat or partly-decayed leaves (one part) and coarse sand (one part). If this is done, the plants ought to go into pots the same size as those they now occupy. The atmosphere of the

house should be kept very humid for several weeks after such drastic but necessary treatment.

Heating a small greenhouse (Mrs. S., County Cork).

—The most successful, and in the end the cheapest, way to heat a greenhouse of the dimensions given will be to have one 4-inch flow and return hot-water pipe fixed against the front wall under the stage, with a small boiler fixed in the wall at the point where the pipes enter. A useful boiler for the purpose is a small cheap one sent out some years ago by Messrs. Messenger and Co. of Loughborough. Another way of heating such a greenhouse would be by using a good-sized paraffin stove, the same as is used for heating dwelling-houses. This would be the cheapest in the first instance and also easier to manage, but the heat would not be so well diffused throughout the house neither would the health and progress of the plants be so well assured. Referring to Strawberries—it depends on the strength and the healthy condition of the plants and also on the time of the year when you wish to have the fruit ripe. If the plants are strong and well grown and ripe fruit is desired by the middle or end of April the plants should be introduced into heat from the middle to the end of this month. The temperature to start with should be 45° at night, rising to 55° by day; a month later to 55° at night and 65° by day. For a later supply successional plants should be introduced into heat every fortnight. As the season advances the temperature should be increased to 60° and 65° at night and to 70° and 75° by day. The plants should be left out of doors until wanted for forcing, protecting them from frost by plunging the pots in ashes or leaves.

Plant for a cold house (L. F.).—The Lapageria would in all probability do quite well in the house, as the plant succeeds in conservatories and other places but little heated, and occasionally in the open air in favoured localities. The white form is the more hardy, we think; but the red, of which there are several superior varieties, is not far behind it in this respect. Do not hamper the plant in a pot or tub; plant it in a well-prepared border of loam, peat, brick rubble and sand, and in a perfectly drained position.

Lycaste Skinneri going soft and brown

(J. M. H.).—Your Lycaste has undoubtedly received a check of some kind, but what that is it is, of course, quite impossible for us to say. An intermediate structure is very suitable for it, but the temperature may have fallen too low or the atmosphere of the house been allowed to get too dry, while dryness at the roots would be equally injurious. There yet remains another probable cause, and that is perhaps the correct one. Within the London district the fogs so often experienced during the winter contain a considerable amount of sulphur, and they affect Lycaste blooms exactly as you have described. We do not know how you are situated in this respect, but should imagine that in the neighbourhood of Oldham the fogs would contain a considerable amount of impurities.

Information about a small conservatory

(Broadgates).—We are not certain that we rightly grasp your ideas, but if the structure is to be a combination of billiard-room and conservatory the plants selected must be such as require but little atmospheric moisture for their well doing. Foliage plants alone must be principally depended upon, and of these the better class of Palms, a judicious selection of Ferns, and such subjects as Aralia Sieboldii, Cyperus alternifolius, Araucaria excelsa, Aspidistras, &c., would be effective at all seasons, and the comparatively dry atmosphere necessary for the billiard table and its appliances would not hurt them. You cannot expect to grow flowering plants in such a structure, as plenty of light and air, when the weather is favourable, is very necessary for them. Still, if you have anywhere else to bring them on, they might serve a turn in the conservatory and be returned to their quarters before they had suffered any permanent injury. Such a structure as you suggest should be built for the sum named. One great point to bear in mind is that as much light as possible is necessary for successful plant growing, on which account your conservatory must not be too dark or shaded. Even where plants need artificial shading in summer they are all the better for as much sunshine as possible in the winter. If there is a suitable position for it, a large Wardian case might be made an object of interest and beauty throughout the entire year. If small, the better way will be to furnish it with Ferns grown in pots; but a large case or frame may be made doubly interesting by arranging some rockwork therein and planting Ferns of different sorts, including some creeping ones, a selection of Selaginellas and a few of the Rex Begonias to yield some lighter tints. If the body of this case is made of zinc with a tap in the lowest part to drain off any superabundant water, it may be stood anywhere without injuring the floor in any way. A good light position is the best place for it, but at the same time it must not be exposed to direct sunshine.

How to grow *Cypripedium insigne* successfully (*Mrs. S.*).—*Cypripedium insigne* needs to be treated in a more liberal manner than many Orchids in order to obtain the best results. With regard to temperature it succeeds best where a minimum of 50° is maintained throughout the winter months. If repotting is needed it may be carried out in February or March, the most suitable soil being one third good fibrous loam, one third peat or Belgian leaf-mould (now much used in the cultivation of Orchids) and the remaining part made up of charcoal, sphagnum moss and silver sand. This material must in preparation be pulled to pieces with the hands and not sifted in any way, for it is very essential that the compost be as open as possible. In potting, rounding up the soil, as is done in the case of many Orchids, need not be followed with this *Cypripedium*, for it is far better potted below the rim of the pot as plants in general are. It is by no means necessary to repot annually; indeed, some successful cultivators repot only about once in three years. In this case, however, the plants are assisted with liquid manure during the growing season. If, however, they are allowed to remain longer without repotting, the plants are apt to get starved, and their flowering consequently suffers. Throughout the summer the plants will do well without fire-heat, but, of course, a little will be needed as autumn advances. As above stated, a minimum temperature of 50° will suit them well. *Cypripedium insigne* is sometimes treated as a stove plant, in which case the repotting may be done earlier than the time above recommended. One great point to bear in mind is that it must be watered regularly all the year round and not subjected to a period of drought as many Orchids are.

ROSE GARDEN.

Removing Rose plants next June (*E. B. L.*).—We have seen Roses dug up and transported from one part of the garden to another during June and even July, but there is considerable risk in this. When the plants have to be taken to another garden we certainly would not recommend this practice. The best plan is to dig up the standards and bushes at once and pot them into 8-inch and 9-inch pots, the standards in the latter size and the bushes in the former. You should put a fair amount of crocks in the pots, or, failing crocks, some broken clinkers would do. The soil may be that in which the Roses are now growing, but as this is most likely in a very wet condition it would be better to obtain some loam or garden soil that is not wet. If a little well-decayed manure is available mix about one part with two parts of soil. You can prune back the growths a little and remove all foliage before digging up the plants, then finally prune at the end of March. When they are dug up, remove any suckers and cut back the roots a little. No roots need be more than 6 inches long. Preserve all the fibrous roots possible. Pot very firmly and give stakes to support the standards. After potting you might plunge the pots into the ground, first placing some ashes or stones for the pots to rest upon. Cover the pots right over with soil and about 2 inches above the rims. Here the plants can remain until ready for removal. When arrived at their new quarters it would be best to plunge the plants again into the soil until October or November. They may then be transferred from their pots to the new position, preserving as far as possible the ball of earth surrounding the roots. Should the summer prove a dry one water must be applied occasionally to the plants, but being well plunged they will require but very little. When transferring the plants by rail or otherwise great care must be taken that the roots are not disturbed in any way.

Information about Rose *Imperatrice Alexandra Feodorowna* (*F. L. B.*).—Your correspondent asks for some information as to this Rose and whether it is synonymous with *Empress Alexandra of Russia*. I have never grown the Rose in question and am afraid, therefore, that I can give but little information with regard to its habit and growth. It has passed out of cultivation to a very large extent and is not now to be found in the catalogue of any English grower, and only in two of the numerous Continental catalogues that I have filed. I find that it was raised by M. Nabonnand in 1853, that its colour is described as clear pale yellow, with the outer edge of the petals sometimes tinged carmine, centre of the Rose deepening to peach, of good shape, but not very large and its growth is described as medium—all of which, being freely translated, means, I am afraid, that *Imperatrice Alexandra Feodorowna* is no longer worth growing. It certainly is not synonymous with *Empress Alexandra of Russia*; in fact, it has nothing in common with it, except a resemblance in the name.

The latter Rose was sent out by Messrs. Paul and Son of Cheshnut in 1897, and would be a good Rose if it was free flowering and did not hang its head so badly, as its colour is still unique among Roses, being of a terra-cotta reddish lake, and it has a large globular flower that I have often seen exhibited.—H. E. M.

About mulching Roses that are planted in sandy loam (*Ignoramus*).—Certainly mulch your Roses early in April, using thoroughly-decayed farmyard or stable manure for the purpose. This will prevent the evaporation of moisture from the soil during the hot summer months, and the plants will be much benefited. You ought to have protected them from severe frosts with dry Bracken or other light material. Mildew might possibly be caused by mulching where the soil is of a very heavy nature, but in your case there is no danger.

FRUIT GARDEN.

Treatment of newly-planted pyramid Apple trees (*Holroyd*).—The side shoots on the main branches of your trees must be cut back now to within two or three buds of their bases; then next summer the shoots that grow from them will need pinching back to within 1 inch or 2 inches of their bases. This treatment will tend to produce spurs. The main branches should be cut back so as to leave only a third of the growth that was made last summer. When pruning side shoots or laterals for the production of spurs, cut to a bloom-bud if one is situated near the point where you wish to cut, but the main branches and leader must be pruned to wood-buds, choosing those that are pointing in the direction that the shoots are intended to take.

Mealy bug on Vines (*A. H.*).—The destruction of this pest on Vines is a most difficult and tedious process, and evidently our correspondent has found it so by the number of remedies he has tried and found wanting. The difficulty lies not so much in killing the fully grown and visible pests, but in finding out and destroying the embryo insect concealed in crevices of the bark and other places during winter, and which emerges into life with surprising activity with the return of spring. We have no hesitation in saying (and that statement is based on a long life's experience in the growth of the Vine, as well as considerable experience of the difficulty in getting rid of this curse, for it is nothing else), that there is no known remedy that will rid a vinery of this pest by winter dressing alone. We have seen the floors of badly affected vineries thickly strewn over with dead bugs after a strong application of sulphur fumes in winter while the Vines are dormant, but even then some will escape and reappear in spring. After cleansing and washing the Vines in the usual way in winter, perhaps one of the most effectual ways of getting rid of it is by painting every particle of the Vine (eyes and all) with clay puddle reduced to the consistency of thick paint, adding half a pint of strong tobacco water to half a gallon of the stuff. This sealing or casing of the whole surface of the Vine is supposed to asphyxiate the insect and so get rid of it in that way. Whatever remedy is applied in winter must be supplemented by vigilant and constant search for their reappearance in spring, and also through the summer, touching every little one seen with a drop of paraffin from the point of a small soft brush. By persevering in this way throughout a whole season, mostly by the light of a bull lantern at night when they are the most active, we once succeeded in clearing three good sized vineries that had been badly affected.

Information about Mulberry trees (*Mrs. D. G.*).—With regard to the tree thirty years old, planted on a lawn and bearing very small fruit which never ripens, this tree, the Black Mulberry (*Morus nigra*), ought to do well in your county; it always thrives best though in sheltered gardens in deep soils. It is a beautiful lawn tree; but, where possible, give it a free, deep and rather moist soil. Evidently your tree has got its roots into poor soil. Give at once a heavy mulch, *i.e.*, top-dress with well-rotted farmyard or stable manure 6 inches to 9 inches deep, and when applying the same it is advisable to leave a circle a few inches wide round the trunk, as injury might be caused by heaping up any material round the base of the tree. Respecting the small tree which has never

fruited, on a wall, it is only advisable to grow the Black Mulberry against a wall in cold localities. You might root-prune this specimen, and, if it is in heavy soil, improve the same by the admixture of road scrapings, wood ashes or leaf-mould.

Nectarine roots diseased (*W. P.*).—The roots are suffering badly from canker, usually the result of growing in cold and ungenial soil. The white spots, we think, are indications of decay in those parts on which they rest. It is a fungus which is generally found on dead or decaying wood, and is not a root pest. We presume the tree is old by the appearance of its roots. It may improve in health by the treatment you have adopted, which is quite correct, excepting that we should not have used any of the old soil with the new. No fruit tree derives greater benefit by occasional replanting in new soil than does the Peach and the Nectarine. Should your tree prove disappointing again, we should root it up and throw it away, replacing by a healthy young tree in the autumn.

The caustic soda solution (*A. P. W.*).—What you term American potash is probably the same thing as is purchasable as pearl ash or common potash. We have not previously heard of any potash so named. The term "caustic" is applied to the soda, and that is the ingredient in the solution which it is useful to guard against when being used, as it burns the skin. With 1 lb. of each of these ingredients use 20 gallons of water, so as not to err on the wrong side. In spraying trees wear old or worthless clothes and boots, also leather gloves to protect the hands, and even a veil tied under the chin to protect the face from the spray. It is advised in spraying to stand on the windward side of the trees, but that cannot be always done if the trees are to be properly sprayed all round.

MISCELLANEOUS.

Kerosene flares as counteracting frost (*Cardiff*).—Your question as to the use of kerosene oil to create heat to ward off frost from football grounds is to us very novel, and one, with the limited experience of to-day, practically incapable of getting a satisfactory reply. No doubt the safest, and probably cheapest, course in the end, to preserve football grounds from being frozen is to put over them a thick coating of straw litter, much of which if removed just prior to play could be replaced so soon as play was over. The practice referred to of creating kerosene fires or flames to ward off frost from fruit tree bloom in the spring is more common in Canada than with us, but we have no record as to the actual amount of success resulting. The creation on the windward sides of an orchard of smouldering smoke fires with the object of enshrouding the trees in smoke at night and thus ward off frost has been tried in a limited way in this country, and with but partial success. Two or three late spring frosts might thus be counteracted, provided there was ample material at disposal to create for a few nights dense smoke, but a week's succession of frosts may be very difficult to deal with. But any such efforts have been limited to the flowering season of fruit trees, when the frosts do not perhaps cause the temperature to fall lower than some 5° to 6°. That amount of frost it may be possible in the way described to combat, but in the winter, when we often have frosts of the severity of 20°, it is obvious that smoke clouds would not suffice to protect a football ground. Burning kerosene oil in many utensils would create an intolerably offensive smell. We are assured that what is termed kerosene is but a good quality of paraffin. Possibly this reply may lead to some further reference to the very interesting point your question has raised, especially in relation to protecting fruit orchards in bloom by smoke clouds.

Laying out a villa garden (*W. B.*).—The garden plan sent is one of exceeding stiffness and formality, all straight and formal lines. Is there any need for a path on the north-east side? Why not let the grass lawn run up to the flower border, and make the border somewhat serpentine rather than straight? On the south side, where a path well may be, as the warmest side in the winter, let the flower border project by a rounded bend some 3 feet just where the lawn ends and the kitchen garden begins. That will break up the long formal straight path from the house to the bottom of the garden. A division between the two gardens on a slightly-raised bank should be made of *Cupressus lawsoniana* or of Holly, the latter, of course, kept well pruned in. The north kitchen garden paths and flower border should be dispensed with to enable you to utilise every foot of what is after all a very limited space for vegetables. The south flower border and path could remain. The site fixed for the greenhouse is very well, but we should have preferred one nearer the house on the same side. If you dispense with the north side paths you will not require any cross path. So many paths are a waste of useful ground. Both flower borders and paths should have an average width of at least 4 feet. A greenhouse 9 feet by 6 feet is a very small one. If a span, a centre alley takes out of it 2 feet width, so also will a path on a lean-to. A house 10 feet by 6 feet, if a lean-to, with the path at the back, or if a span house, then 12 feet by 3 feet gives stages 3 feet wide on each side and a 2-foot path down the centre. As to whether any such house is large enough for the garden, while generally amply large all depends on what you expect from it. A couple of single light frames 6 feet by 4 feet, or a double one same size as both, should suffice for your purpose. They should be stood in a sunny position close to the greenhouse. Do not expect too much from so small a garden, especially as so much depends on knowledge and management.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

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HARDY WINTER FLOWERS.

IT cannot be generally known that several shrubs and small trees bloom during the winter months, for they are so seldom seen. This is to be regretted, as they are not only beautiful—flowering, too, with a freedom one associates with the high summer days—but, in several cases, exceptionally fragrant. A walk round an interesting garden recently, in which winter-flowering shrubs are planted with no niggardly hand, brought to mind the importance of these kinds in the garden at this season. There, in a sunny corner, was the

TREE WITCH HAZEL (*Hamamelis arborea*), which is the most beautiful of its family. It may be regarded as a small tree, seldom growing more than 8 feet high, though in its native land of China it attains larger dimensions in every way. The flowers are golden yellow in colour, and consist of several curling petals with crimson calyces, which seem to shine in the winter sun. These crowd on the leafless shoots and give a fresh beauty and interest to the garden in January. The way to obtain the full value of the shrub is to plant it in a group, say, of six plants, with the little Partridge Berry (*Gaultheria procumbens*) as a groundwork, the latter a little evergreen shrub, crimson almost with fruits for many weeks. There are other Witch Hazels, but *H. arborea* should be chosen before the others. *H. japonica zuccariniana* flowers quite as freely, but does not produce so rich an effect; this also blooms in winter, and the pale yellow colouring is charming. The Witch Hazels are easily grown, needing no special soil, but shelter and sunshine are necessary, not from any want of hardiness, but to give the flowers as much chance as possible at this uncertain season of the year.

THE WINTER HEATH (*Erica carnea*).—Why this exquisite Heath is not as common in gardens as the Christmas Rose itself is a mystery. It is thick with crimson flowers for many weeks in winter, and gives a warm glow to the garden when planted in groups. A group of fifty plants—and they are not expensive—produces an effect that is in pleasant harmony with the greys and browns of the surrounding woodland. The writer planted a group consisting of this number of tufts in rough meadow land, and no feature of the garden—not even the Roses rippling over Oak fences and pergola—gave greater delight. It is mentioned in "Trees and Shrubs for English Gardens" that of all the dwarf Heaths more can be said in favour of *E. carnea* than of any other kind. "It is not only absolutely hardy, but it flowers with astonishing freedom at a time of year when flowers are particularly cherished. Its flowering, of course, somewhat depends upon the weather, but frequently one may see its bright rosy bells almost as soon as January comes in. By the end of February the entire plant is a mass of beautiful colour, and for

two or three months longer they retain their freshness, no matter what weather may occur. So free-flowering is this Heath that its flowers literally cover it. However freely it might be planted it would never become wearisome or out of place, for its tints, though bright and warm, are not harsh." The

WINTER-FLOWERING HONEYSUCKLES (*Lonicera Standishi* and *L. fragrantissima*) have not the rambling growth of the Honeysuckle of the hedgerow, but are usually grown against a wall. We well remember wandering in a garden one bright winter day and wondering where the rich Honeysuckle-like fragrance came from. The plant was then unknown to us, but *Lonicera fragrantissima* was breathing forth this sweet incense. From that moment it became one of our most cherished flower friends. The plant was growing in a sunny recess near the dining-room, so that the perfume when the window was open could float into the house.

WINTER SWEET (*Chimonanthus fragrans*) is very welcome at this season. In the variety *grandiflorus* the flowers are larger and of a clearer shade of citron yellow than the type, and though the plant is bare of leaf the blossoms make a brave show; they may be desecrated against a well-toned brick wall for some little distance. It is just as well to bear in mind that this is one of the shrubs which bloom on the young wood, and any pruning or cutting out of useless branches that may be necessary should be done in early spring when the flowers are over, for if it is delayed there will be no flowers next year.

GARRYA ELLIPTICA we treasure for its beautiful catkins, which are in bloom in winter. Few wall shrubs are so leafy and luxuriant, and placed against a sheltered sunny aspect it bears a profusion of catkins at this season. They possess a fresh, wholesome fragrance and upon the plant have a strangely picturesque beauty. Occasionally the *Garrya* will cover a house front, but only in favourable situations. It is evergreen, the leaves dark in colour, oval in shape, and about 3 inches long. Male and female flowers are borne on separate plants, and the most beautiful of the two is the male or pollen-bearing form.

A CLEMATIS flowers in winter, a fact not generally known, and *C. calycina* is the kind. The interesting features about this Clematis are its evergreen leaves and early flowering period. Among other Clematides it is easily recognised in winter, for it is the only hardy kind to retain its leaves, and it is rarely between December and February that a plant can be found out of bloom. It was first brought to this country in 1596. In its home in the Balearic Islands it is said to grow to the tops of tall trees, and, in fact, smother them, but in this country it is seldom more than 12 feet or so in height. The leaves are deep green and glossy, the flowers drooping, greenish white, with purple marks on the inside of the sepals, and borne from the leaf-axils. They differ in size to some considerable extent, some being only 1½ inches across, others upwards of 2 inches. Like many other early-flowering shrubs, it looks more at home in some cosy corner or against a wall than it does in the open ground. About London it grows well, but is more at home in such counties as

Devon and Cornwall. In some gardens it is known as *C. balearica*.

Soon the Mezezon will be opening its purple fragrant flowers and a few early blooms appear on the Rhododendrons. Laurustinus is already in bloom.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

January 28.—Royal Horticultural Society's Meeting and Exhibition, and Lecture.

February 11.—Royal Horticultural Society, Committees meet, 12 noon; Annual Meeting, 3 p.m., Horticultural Hall, Vincent Square. Horticultural Club, Annual Meeting, 5 p.m.; to be followed by Annual Dinner, 6 p.m., Hotel Windsor, Victoria Street, London.

March 3.—Royal Horticultural Society, Committees meet, 12 noon.

Royal Horticultural Society's Guild.

—With the promised support of a number of past and present students and employés in the gardens of the Royal Horticultural Society it has been decided to form a guild, with the view of keeping members in touch with one another and with the work of the society. It is proposed to issue a half-yearly magazine, comprising articles and letters contributed by members, notes on the work of the society, a list of members with their addresses and a correspondence page. Mr. Wright, the superintendent, and Mr. Chittenden, the director of the laboratory, have promised to do their best in any difficulties that may be encountered by members. It is hoped to arrange an annual dinner for the first day of Holland Park show. The fee for membership will be fixed provisionally at 5s. a year, though it is hoped that this can be reduced as soon as the guild is in full swing. Old employés or students are asked to join in making the guild a success by becoming a member, by making any suggestions that may occur as to the construction of the guild or as to its aims or their furtherance and by contributing notes, letters or articles on your work, travel, studies, &c.—**MR. R. J. WALLIS**, Hon. Secretary *pro tem.*, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey.

Sending plants to the Transvaal.

It may not be generally known in this country that severe restrictions are in force regarding the introduction of certain plants to the Transvaal Colony, as we are informed that many on reaching that country have to be destroyed. Thus no person is allowed to introduce to the Transvaal from any place beyond South Africa any Eucalyptus, Acacia or coniferous plant, with the exception of seeds, any Coffee plant or portions thereof, with the exception of seed free from pulp, nor any Peach stones and Peach stocks. Plants or portions thereof of the following may be introduced under such precautionary measures as the Commissioner of Lands may deem necessary: Grape Vines or other plants of the family Vitaceæ, Sugar Cane and plants cultivated for the production of rubber. No plant other than those mentioned above may be introduced, unless a special permit authorising any such introduction has been obtained from the Minister of Agriculture. Full particulars may be obtained by anyone interested from the Agent General for the Transvaal, 72, Victoria Street, Westminster, London, S.W.

Agricultural statistics for 1907.

The acreage and livestock returns of Great Britain for 1907 contain much information of interest to the horticulturist. The extent of the land under cultivation, including woods, is 47,754,469 acres, or about 85 per cent. of the whole area. To this, however, must be added the various gardens, plots and allotments

that do not exceed one acre in extent. Potatoes occupied 548,920 acres, this being 17,001 acres less than in 1906, and the lowest returned since 1899. Peas, on the other hand, show an increase of 12,157 acres, bringing the total acreage up to 166,136 acres. The greater part of this increase occurred in the Eastern Counties, Suffolk recording an increase of 3,000 acres and Lincoln one of over 2,000. The area devoted to Cabbages continues to steadily increase, the total amount during 1907 being 74,896 acres. It is interesting to note that the acreage of this crop has been more than doubled during the past 25 years. Onions show an increase of 359 acres. The enormous strides that have been made during the past 10 years in the cultivation of fruit may be gathered from the fact that the returns during that period show an increase of 12,000 acres of small fruits and 25,000 acres of orchards. Thus in 1907, 82,175 acres were occupied by small fruits and 250,176 acres by orchards. The acreage of Strawberries in England was 23,623; Wales, 780; Scotland, 3,424. Raspberries: England, 6,480; Wales, 20; Scotland, 2,378. Currants and Gooseberries: England, 24,179; Wales, 177; Scotland, 1,234. Apples: England, 168,576; Wales, 3,115; Scotland, 952. Pears: England, 8,635; Wales, 93; Scotland, 183. Cherries: England, 11,952; Wales, 40; Scotland, 35. Plums: England, 14,571; Wales, 60; Scotland, 270. Of course there are other kinds of fruits included in the total acreage that are not included in the above figures. Compared with 1906, there is an increase of 1,949 acres under small fruit and of 2,489 acres under orchards.

Beautiful new Holland plants.

—The *Revue Horticole* for January contains a splendid coloured plate of three hard-wooded plants from New Holland, namely, *Leschenaultia biloba major*, *Pimelea decussata* and *Boronia heterophylla*.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Watsonia O'Brieni.—Referring to Mr. Fitzherbert's remarks on *Watsonia O'Brieni* in THE GARDEN of the 11th inst., I should like to say that I have proved by experiment that this plant likes plenty of moisture while in full growth and developing its flower-spikes. For two or three seasons past I have had several pots of this beautiful plant flowering profusely outside an office window in the heart of London. Bulbs arriving from the Cape in spring have been potted up in April, each one developing a robust branching flower-spike over 3 feet high. By cutting off the top spike when the flowers were fading, the buds on the lower side spikes have rapidly developed, so that the plants have been decorative for fully two months. From June onwards the pots were standing perpetually in saucers of water. The window faces south-east. Planted out of doors the same remarks apply as to moisture. Bulbs imported in spring should be potted up and started into growth in a cold frame, and afterwards carefully planted out in a sunny but damp situation. Before frost sets in the plants should be lifted and the corms allowed to go to rest, except, of course, in favoured localities, where they may be left to establish themselves. In this case, however, a covering of heather or some light material should be given during winter, so as to keep the roots fairly dry.—**P. RUDOLPH BARR.**

—Mr. Fitzherbert's interesting note on these plants in THE GARDEN of the 11th inst. has brought to my mind many facts in connexion with the history of the variety (*Watsonia Ardernei*) named after that enthusiastic horticulturist Mr. H. M. Arderne of Cape Town. I cannot agree with Mr. Fitzherbert that the two varieties *Ardernei* and *O'Brieni* are one and the same,

there being to my mind well-marked differences between the two plants, at least such was the case when *W. Ardernei* was first introduced. It was in the spring of 1896, in response to a request, that Mr. H. M. Arderne kindly sent me some few dozen bulbs of his *White Watsonia*, the first, I believe, to reach this country. The plants grew most freely and came into flower the beginning of August, and I exhibited them at the Chester Horticultural Show in that month. This was a new show, well organised, that came into being that year, and was visited by a deputation from the Royal Horticultural Society, who awarded the plant a first-class certificate, the popular president of the Royal Horticultural Society remarking that "it resembled a gigantic white *Freesia*." I had previously grown *W. O'Brieni*, but found this new form was far stronger and more vigorous, with branching flower spikes and flowers of greater substance and altogether a superior plant. What finally made me quite certain that Mr. Arderne's form was distinct was that shortly afterwards I was in communication with an old-established horticultural firm at the Cape, who grew a large quantity of *Watsonia O'Brieni* and did not think it was in any way different to Mr. Arderne's variety. In the course of time I received an importation from them. I might mention here that bulbs of *Ardernei* are large and deep and very uneven in shape and with deeply corrugated skins; those of *O'Brieni* are smaller, more rounded and shallow and have smoother skins. The bulbs received were of the latter type and were duly grown on. There was not the vigour about them nor were they so upright in growth and there was a decided difference in the flower; it was set more loosely on the spike, whereas in *Ardernei* the flower is held firmly and at right angles to the stem. In *O'Brieni* the flowers were more scattered and the tube was larger, giving the flower a more drooping appearance than in *Ardernei*. Two more facts in this matter I well remember: First, that had the stock been true, I could have purchased from this source *W. Ardernei* at one quarter the price I had to pay elsewhere; and, secondly, the Cape firm eventually gave up growing *O'Brieni* and took on in its place *Ardernei*, being satisfied that it was distinct and superior. Mr. Fitzherbert mentions the fact that the plant with him produces its leaves in the autumn, which fact accounts for the following. A batch of plants we had flowered in pots in the summer one season were not dried off, but kept in the house and watered. Shortly afterwards fresh leaves appeared and the plants grew on all through the winter and spring, and were finally shown in flower at the Temple Show in May, having flowered twice within less than a year. This *Watsonia* is now largely cultivated at the Cape, and owing to its rapid increase its price is much reduced, and it will be possible to obtain this spring one dozen bulbs for the price that used to be paid for one bulb. I expect for many years to come this plant will be held in esteem by all lovers of bulbous plants and will gradually establish itself all over the gardens of the South Western counties, which your able correspondent so frequently describes. In conclusion, I trust he will pardon me for not agreeing with him as to the two varieties being one and the same plant.—**ROBERT W. WALLACE, Colchester.**

Roses to avoid.—It seems very remarkable that a Rose placed at the top of the list in the Rose election as the best Hybrid Perpetual or Hybrid Tea for exhibition should incur such a storm of abuse as is meted out to the variety, but so it is with *Bessie Brown*, and one cannot deny its total unfitness for general garden cultivation. I grant it is a superb flower when shaded and brought to that perfection which the clever exhibitor is capable of doing. There are so many grand Roses now in cultivation that there is absolutely no need for anyone to cumber their gardens with worthless sorts or sorts only suitable for exhibitors to cultivate. I think the National Rose Society would do well to warn

amateurs against growing the difficult sorts. Probably it is not so well known as it should be that those superb blooms of Mildred Grant, Bessie Brown, Mrs. E. Mawley and others which take our breath away at a Rose show are mainly cut from yearling or maiden plants, and thousands of plants are destroyed or given away annually by exhibitors in order that they may be enabled to keep up their stock of maiden plants. Your correspondent W. J. Chapman asks for information as to the Roses that should be avoided by the novice. Those varieties that I would advise him to avoid are Cleopatra, Ma Capucine, Souvenir d'Elise Vardon, Bridesmaid, Mme. de Watteville, Golden Gate, Princess of Wales, Georges Schwartz, Devoniensis, Mme. Margottin, Perle des Jardins, Etoile de Lyon, Sunset, Sunrise, Luciole and E. Veyrat Hermanos. This latter, if wall space is unlimited, may profitably be grown. Robert Scott, J. B. Clark (unless prepared to treat it as a climber or pillar Rose), Alice Lindsell, David Harum, Marguerite D'ombrain, Kaiserin Augusta Victoria and its relations, Perle Von Godesberg, Duchess of Portland, Goldelse and Goldquelle are to be avoided unless one possesses a nice warm soil, and the Lady Mary Fitzwilliam group, such as Tennyson, White Lady and Corona, should not be planted where vigour of growth is desired, although for small isolated groups or beds placed well to the front they are admirable. Of Hybrid Perpetuals to be avoided I would name Gustave Piganeau, Ulster, Marchioness of Downshire, Marchioness of Londonderry, Earl of Dufferin, Horace Vernet, Salamander, Xavier Olibo, Marchioness of Dufferin and Her Majesty. It should be clearly understood I am advising the novice. Those who have grown Roses a few years and have become accustomed to their habits will be able to grow some of those I now condemn.—P.

Dividing Daffodil bulbs.—I was glad to see Mr. Jenkins's letter in THE GARDEN of the 11th inst., and I hope others will give us the benefit of their observations on this subject. My little sketch in THE GARDEN of the 28th ult. was made from a bulb lifted about July 20, and represents a root which wanted dividing. A certain amount of care was required in the process, since it contained the embryo rootlets referred to. The little roots shown in the sketch are the remains of the old roots of last season after being dried. I cut these as close as I can with a pair of shears when they are quite shrivelled and dry; the bulbs are then easier to handle and can more readily put out their new roots when planted. Mr. Jenkins suggests that I performed the operation too late (presumably thus accounting for the existence of the internal embryo roots), but in my observations, mostly made in the latter part of August and the beginning of September, while separating bulbs lifted in July, and again late in November, with bulbs lifted at the same time, I did not notice any difference in the state of these internal rootlets in the bulbs divided late in the season to those divided earlier. I cannot but think that they can make much growth while the bulbs are out of the ground and undivided. However, Mr. Jenkins raises the question whether it is better to divide at lifting time or to delay the operation until the bulbs have been dried. The better course to pursue with all roots which are not quite easily separated is to dry them and divide just before planting, because any internal embryo roots are laid bare by the process of division and must be injured if exposed for any length of time. If Mr. Jenkins refers to such bulbs, he is correct when he says bulbs may be injured if divided too early, but I do not follow him when he says such work "may be done too late to the detriment, i.e., the subsequent progress of the offset itself." When bulbs are easily separated without severing any of the fleshy parts of the bulbs, but by merely dividing the hard root base, I think it is immaterial at what time they are divided, for the new circle of roots is formed outside the old root base.—W. A. WATTS.

THE FRUIT GARDEN.

MANURING FRUIT TREES.

WHEN the pruning and training of fruit trees has been finished and the resultant rubbish cleared away, attention may be directed to the manuring of trees standing in need of assistance. The indiscriminate manuring of all the trees, whether in need of it or not, is an injurious as well as a wasteful practice; the individual requirements of each tree ought to be considered. An Apple tree in good bearing condition with a well-balanced growth may be given a little of the three substances for which there is the greatest demand, viz., a potash salt, phosphoric acid and a nitrate. For the tree in question a 3-inch layer of fermented farmyard manure, placed on the surface as far as the roots extend, is the most suitable mulch, this containing the above-mentioned subjects in well-balanced proportions.

If the crop of Apples is usually so large as to be detrimental to free growth, the potash and phosphoric acid must be decreased and the supply of nitrogen increased. A good manure in this case would be a dressing of basic slag at the rate of 6oz. to the square yard, and stable instead of farmyard manure. On the other hand, if growth is produced at the expense of fruit, the potash and phosphates must be increased and the nitrogenous part left out. If the tree is on a wall, root-pruning may be resorted to with advantage, but if a standard, try a dressing of 3oz. of kaint and 6oz. of superphosphate of lime to the square yard, and prune only as much as is absolutely essential. Lime is also important as a food for fruit trees, and no form is more suitable for application than lime rubble or old mortar. It will be seen that the chief point in the manuring of fruit trees is in the variation of nitrogen. I find that a dressing of nitrate of soda, 2oz. to the square yard and wood ashes (potash) 4oz. at setting time is very helpful. Pear trees require much the same treatment as Apples.

Plums and stone fruits in general object to superphosphate of lime unless on soils well supplied with lime; basic slag applied in autumn is more to their liking. They require a considerable amount of lime, and this they obtain from the basic slag. Gooseberries and Currants do well with identical treatment, farmyard manure is always acceptable, but this cannot always be given them. A good substitute can be found in the decayed vegetable matter from the rubbish-heap, from which stones and wood have been removed. A coating of this material 3 inches thick, followed for the next two or three years by artificial manure, is conducive to health and fruitfulness.

A good artificial manure for Gooseberries and Currants is 3oz. of superphosphate of lime, 2oz. of kaint and 1oz. of nitrate of soda per bushel. Apply the superphosphate and kaint in February and the nitrate at fruit-setting time. On heavy land use basic slag instead of superphosphate of lime, and sulphate of ammonia instead of nitrate of soda.

Raspberries well repay liberal treatment. Digging may be practised with advantage with the previously-mentioned fruits, but with Raspberries never. Although they are deep rooters and love a deep, cool soil, most of the fruit-producing roots are found near the surface; besides, if a root gets broken it is apt to send up a bunch of useless suckers where they are not wanted. Nothing suits Raspberries better than an annual mulch of well-rotted stable manure or leaf-mould, and in conjunction with these a good artificial manure may be composed as follows: Basic slag, 8lb.; superphosphate of lime, 6lb.; kaint, 3lb.; and sulphate of ammonia, 1½lb. Well mix and apply at the rate of 6oz. to the square yard in spring. While indicating the general method of manuring fruit trees, I would advise every grower to experiment and find out what is

most suitable to his own particular locality, as it is well known that the same manures have different effects on different soils. H. M. E.

THE GOOSEBERRY.

This is one of the most useful and also one of the most easily grown of our hardy fruits. Although not the first to ripen its fruit, it is the first to produce fruit which can be used for cooking. Many growers begin gathering the green fruit at Whitsuntide; but in warm localities where the effects of late spring frosts are not felt it is customary to do so at an earlier date. A large quantity of fruit may be gathered from bushes which occupy little space; it is, therefore, one of the best fruits the owner of a small garden can grow with the reasonable expectation of a quick return. The Gooseberry is not fastidious as to soil, but it is not grown successfully in stiff clays.

The intending planter should prepare the land by deep digging or trenching, burying a liberal quantity of rotten manure. Bushes may be planted at a distance of 5 feet apart. Dig out a hole large enough for the roots to be spread out evenly, fill in the soil carefully and tread firmly. Do not bury the plants too deep, or numerous suckers will grow from the base of the plants.

The pruning of the Gooseberry is an important matter if high-class fruit is to be secured. Young bushes at the time of planting should have the shoots cut back to one-third of their length. Any weak or crowded shoots should be cut back to 1 inch of their base. Summer pinching, which is often neglected, is a material aid in the production of an abundance of fruit of good quality. The lateral or side shoots should be pinched back to five leaves, but the main shoots or leaders must not be pinched in the summer. These leaders should have the unripened tips cut off at the winter pruning, and the laterals are then cut back to 1 inch of their base. When the bushes are several years old, some of the best-placed and strongest shoots may be left their full length and a portion of the old worn-out branches cut away. A supply of young vigorous shoots is thus secured, which, with attention to the necessary thinning, will produce an abundance of fine fruit. The Gooseberry is surface-rooting, and deep digging must not be practised between the bushes. The soil may, however, be lightly pricked over with a fork after the winter pruning and a mulch of manure applied.

THE CORDON SYSTEM

of training the Gooseberry is to be highly recommended. Grown thus the plants may be trained to walls, fences, or on a trellis. Fruit for dessert is excellent from cordon Gooseberries, and another advantage is that they are easily protected from the depredations of birds. Gooseberries grown as cordons should have the laterals pinched to five leaves during the summer. The winter pruning consists of spurring the laterals back to 1 inch of their base and cutting off the weak, unripened tips of the leading shoots. The best method of

PROPAGATING THE GOOSEBERRY

is by cuttings. Select for this purpose vigorous, firm shoots from 1 foot to 15 inches in length. Make a clean cut through just below a joint, remove the top bud from the shoot, and rub off all the others except the four upper ones. Insert the cuttings 4 inches deep and 4 inches apart in rows 18 inches apart. Make them quite firm by treading the soil around them. There are numerous varieties of Gooseberries. The following are excellent, producing large crops of good fruit: Crown Bob, red; Early Greengage, green; Langley Gage, yellow; Eagle, white; Warrington, red; and Thumper, green, very late. The following have highly-flavoured berries, good for dessert: Champagne Red; Champagne Yellow; Ironmonger, dark red; Whitesmith, white; Leader, yellow; and Keen's Seedling, red.

Munden Gardens, Watford.

C. RUSE.

THE GREENHOUSE.

A BEAUTIFUL PRIMROSE.

(PRIMULA KEWENSIS.)

THAT this is a welcome addition to the greenhouse at this time of the year there can be no doubt. It originated at Kew about 1900, is rapidly becoming well known, and as it is freely produced from seed everyone can easily grow it. It is a good plant for the amateur, being easily grown and very free blooming. The flowers have a strong Cowslip scent. It has scapes of bloom from 10 inches to 21 inches in length.

From a packet of seed last spring I grew about forty plants, and just now they are in full bloom. With the exception of half-a-dozen plants that resemble one of its parents, *P. floribunda*, all are vigorous and of the true *kewensis* type. Two of these also show the influence of its other parent, *P. verticillata*, having some of the foliage covered with farina. Arranged with *Coleus thrysoideus* they are very pretty, also with the white Roman Hyacinths, and when used in a cut state the flowers continue to open after they are placed in water. The seed should be sown in March in well-drained pans of light soil consisting of loam and leaf-soil in equal parts, with a quarter-part of coarse sand. They should be placed in a temperature of 55° to 60° and kept moist and shady.

Seedlings appear in about two or three weeks, and should be pricked off about an inch apart as soon as they are fit to move into pans, afterwards potting them in 2½-inch pots, and shifting on as required. They should flower in 4½-inch pots or 6-inch pots, but small plants in 3-inch pots are useful for decorations. The soil should be, for pots, half loam, leaf-mould and Mushroom-bed manure, the other half with a good dash of coarse sand. They should be grown for the first six weeks in a house about 60°, afterwards removing them to a cold frame or pit during summer. In September remove them to a light and cool greenhouse. Take away the ovaries as the flowers go over to prolong the flowering season. I have a great love for this fragrant brightly-coloured Primrose, which brings such sweetness to the greenhouse in the winter months. It is very easily grown, and I do not think it is generally known; the flowers last a long time in winter.

W. L. LAVENDER.

Waltham Manor Gardens, Twyford, Berks.

A LADY'S SLIPPER.

(CYPRIPEDIUM INSIGNE.)

A COLLECTION of this species is very serviceable at this season of the year. Grown by amateur as well as by the professional gardener, *C. insigne* is found to be one of the most useful Orchids, whether shown as specimen plants or for cut flowers in house decoration. Coming from Northern India, a cool house is naturally most suited for its cultivation.

The photograph, taken in the gardens at King's Walden Bury, illustrates what can be done by careful attention. At the end of the flowering period the plants may be repotted, giving just sufficient water to keep the foliage in good condition until growth begins. To obtain good sized plants every attention should be paid to ventilation, light, arrangement and cleanliness.

A very useful wire support has been put on the market, to raise various sized pots, which ensures a free circulation of air. When in vigorous growth, weak cow manure or soot-water may be

given. Frequent sprayings of soot-water between the pots and on the stages will impart a healthy colour to the foliage.

During the summer the day temperature should not exceed 70°, and the thermometer at night should be kept at or below 55°. As a greatly reduced temperature at night is beneficial, the sun-heat should be husbanded, the time to do this being guided by outside temperature and other conditions. If grown in a heated frame, the plants should be as near the glass as possible, and placed on a bed of coal ashes. If possible, the plants should be rearranged frequently, and the pots washed if necessary. Cleanliness in plant growing, especially Orchids, is very essential.

When the flowers begin to develop, each spike should be neatly staked out with wire supports. Those which have twisted ends with just room enough for the stem to fit in are the best. When cut the flowers last a considerable time, and are, therefore, invaluable to florists.

Highgate.

A. J. H.

EARLY CHRYSANTHEMUM WHITEPOINT.

I HAVE been pleased with *Chrysanthemum Whitepoint* this season, and its distinctness in a



THE LADY'S SLIPPER (CYPRIPEDIUM INSIGNE).

large collection struck one as noticeable. The name is evidently derived from the white points to the florets, which are of a reddish lilac with a golden centre. The contrast between the red lilac of the greater part of the petal and the white tips is pleasing, and those who do not wish an entirely self-coloured *Chrysanthemum* may well take a note of *Whitepoint*. A consideration in its favour is that it blooms in early September. It grows about 2½ feet high.

A. M.

ASTER GRANDIFLORUS AS A POT PLANT.

This is one of the oldest Michaelmas Daisies, but it still has few rivals with its large deep purple flowers and dwarf, compact growth. Its one defect is that in the open air it flowers too late for most districts. It is, however, an ideal conservatory plant, standing only 2 feet high, and should be potted up in rather small pieces in 6-inch pots either in autumn or early spring, using a soil similar to that for *Chrysanthemums*. The treatment subsequent to potting—stopping and disbudding excepted—should be the same as for *Chrysanthemums*. A few plants of this fine *Aster* will give a variety of colour in the conservatory during winter that can hardly be obtained otherwise.

C. C.

TREES AND SHRUBS.

THE BEST HEDGE PLANTS FOR VARIOUS SOILS AND SITES.

OFTEN the question crops up as to what are suitable subjects for forming hedges, especially when something a little out of the ordinary is required. For long, really good protective hedges the number of subjects is somewhat limited, and the planter has to fall back on one or another of the well-tried things. These are White Thorn, Holly, Yew, Oval-leaved Privet, Beech or Hornbeam, and one or another of these will be found to thrive in almost any kind of soil or position, providing the ground is not waterlogged and is properly prepared in the first instance before any planting is done.

PREPARING THE GROUND.

Wherever a hedge is to be formed the site should be well prepared by trenching 2 feet deep and digging up the bottom. If wet and it is impossible to plant the hedge above the natural level of the ground, advantage should be taken of the opportunity while trenching of laying a drain. If, however, it is possible to form a low bank on which the hedge can be planted, so much the better; this, of course, applies to wet ground. Should the natural soil be poor, well-decayed manure may be added during the trenching, for, although many hedge plants grow satisfactorily in poor soil, they always obtain a better start if planted in well-worked and fairly good material.

PLANTS FOR VARIOUS PURPOSES.

For the rougher kinds of work—field hedges and the like—it is doubtful whether there is anything to equal the White Thorn, for if planted thickly and proper attention is given to clipping it forms a hedge that is impenetrable by man and beast. When used as a garden hedge, some people prefer a mixture of Thorn and Holly in the proportion of eight to ten of the former to one of the latter. Such a mixture has some recommendation, as it makes an exceptionally strong fence, and during winter it is less naked-looking than an ordinary Thorn hedge. For positions where a high but not very dense hedge is desired, the Beech and Hornbeam form good subjects, the former being specially suited for chalky ground. Such hedges are often used for shelter in nurseries. The Holly and the Yew are both well-known and popular hedge plants, and good hedges of either always invoke enthusiasm from garden-lovers. They are plants, too, that may be grown either as high or low hedges, and they may either be kept comparatively narrow or allowed to develop to a width of from 4 feet to 8 feet.

A plant that might be used much more largely than is done at present in the southern and western counties is the common Evergreen Oak (*Quercus ilex*). It is met with in a few places, forming a high, dense hedge that is excellent for protection and shelter. It has also the advantage of being able to withstand the effect of sea air. A few years ago a fine hedge of Evergreen Oak was to be seen in the gardens at Mount Edgecumbe. It is a plant that succeeds remarkably well in sandy soil, but it should not be planted in ground of a wet, cold character. As regards clipping it stands that excellently; as well as the common Holly, in fact. Unfortunately, it is of rather slow growth during the first few years of its existence, so it would not do to use where an immediate effect is required.

If a hedge is to be formed in the shortest possible period, there is no better subject to use



A WINDING PATH IN THE ROCK GARDEN.

than the Oval-leaved Privet. This will grow almost anywhere, stands the shears well and is of rapid growth. Though it occasionally loses its leaves in winter, it is usually evergreen. The golden, variegated-leaved form of this plant is an excellent subject for a prominent position where a touch of colour is required; it is not of such rapid growth as the green-leaved Privet, so will do for a position where the other would grow too strongly. For positions where something out of the common is required, the Golden Yew might be used with advantage, while Gold and Silver Hollies, Hodgkin's Holly and *Euonymus japonicus* all form excellent subjects.

In the warmer parts of the country *Escallonia macrantha* is an effective evergreen for hedges, and it has the advantage of flowering freely; very good hedges of it existed a few years ago at Tresco Abbey. For informal hedges there are many things that can be used; the Lavender, Rosemary, Sweet Briar, Provence Roses, double-flowered Gorse, various *Cistus*es and *Berberis wallichiana* are subjects that suggest themselves, while there are many more that will doubtless occur to intending planters.

SELECTING THE PLANTS.

When selecting plants for hedges, it is usually advisable to choose small rather than large plants, for, as a rule, they establish themselves quicker, and it is often easier to get a well-furnished bottom from small plants than from larger specimens. When planting it is a bad plan to be sparing with the plants; it is far better to obtain a few extra than to attempt to make a small number do. By using too few plants weak places occur in hedges, and it is always difficult to get such places to thicken up. Care must be taken with the clipping for the first few years, and hedges should not be allowed to increase too rapidly in height; if too rapid growth in this direction is allowed, it will only result in weakening of the bottom, which can only be strengthened again with great difficulty. If a good bottom is obtained in the first place, height will follow. The proper distance apart to place

the sets is a question that cannot very well be answered, and must be left to the judgment of the planter. If, however, he allows the side growth of each plant to touch that of its neighbour, he will not be far wrong. With the exception of Yews, Hollies and Evergreen Oaks, the planting may be done any time from early October to March; April, May and September are the most suitable times for the other things.

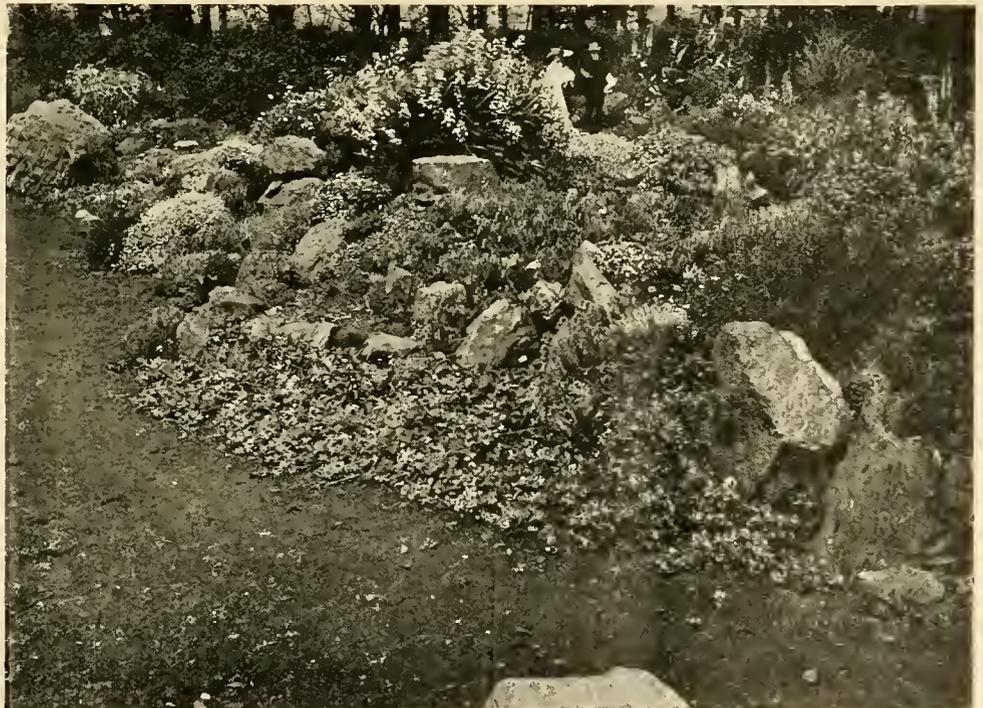
W. DALLIMORE.

THE FLOWER' GARDEN.

ROCK GARDENING.

THOSE who have fairly spacious rock gardens and wish them to be beautiful places, and not merely the receptacles of a quantity of different plants, can only secure such a result by putting upon themselves severe restraint as to the number of kinds to be used at a time. In gardening, as in painting, no picture can be beautiful whose composition is crowded and confused. There are various considerations that influence the choice of the plants that the rock planter will put together, but we think that the following suggestions would be worthy of consideration. First, to determine which are the plants that give us the truest pleasure. Then to consider which of these will group best together and flower at the same time; for, supposing four or five favourite kinds of plants to be grouped or partly intergrouped, it is a great advantage to let them be those that will bloom together and make one complete picture, and to have the intermediate sets of groups to bloom later in their turn. This is a much more pictorial arrangement than to have the plants flowering in scattered irrelevant patches quite unrelated to each other.

Suppose, therefore, that a spur of rock garden is crowned with bushes of *Andromeda floribunda*, and that steep rocks below it are clothed with *Aubrietia* and *Arabis*, and that at their foot in cool peaty ground there is a generous planting of *Primula denticulata*. Here are four capital things of early April, all in full flower together, making one complete picture, and these four are quite enough. The colouring is of the simplest possible and delightfully harmonious, and the whole thing is so good a picture that one dwells upon it, and comes back and back to it to enjoy its beauty in a way that one never does to a more mixed planting of individual objects.



A SMALL ROCK GARDEN NEAR THE EDGE OF A WOOD.

It is, of course, more easy to do in large spaces, but even in small ones the same thing may be done in square inches instead of square feet by choosing plants of smaller dimensions.

Such an arrangement for the pictorial part of a garden by no means precludes the enjoyment of individual plants, but we think it is wiser to have these in a separate place in a series of rectangular raised beds, where each plant may occupy its own pocket, and be as easily visible and accessible as a book on a shelf or a specimen in an economic museum. Such raised beds as are in Messrs. Fröbels' delightful nursery at Zurich could hardly be improved upon. They are perhaps 6 feet wide at the bottom and 15 feet long. They are steeply rock built, and accommodate a large quantity of plants. If the beds are placed east and west as to their length it will give each a shady and sunny side; a ridge of small shrubs at the top would give more shade on the north side. Such beds also afford the best opportunity of suiting plants with special soils, for one may be built of limestone, another of granite, another of sandstone, and so

most desirable of the Helianthus family, but at present is not planted so largely as its merits deserve. The common name of the Willow Sunflower is appropriate, as the deep green foliage is long and narrow, resembling in some respects that of certain Sallows. As it clothes the slender stems from the base almost to the top, it is well worth growing for its ornamental leafage alone. The flowers are comparatively small, and produced in a cluster at the apex of the stem; but, being so bright in colour, they form a strong contrast to the rich green leaves. This Helianthus is a particularly good perennial for planting singly or in masses by the water's edge, where it grows fully 6 feet high, and at the present time makes quite a noteworthy feature in the bog or water garden. Not less valuable is it in a broad herbaceous border, where good late-flowering plants are always appreciated. A. E. THATCHER.

THE BEAUTIFUL ORANGE LILY.

The stately Orange Lily of cottage gardens (*Lilium croceum*) is at once the commonest

THE ROSE GARDEN.

NOTES ON THE WILD ROSES (SPECIES).

ROSA ECÆ.—This is a Rose that has never flowered with me, though I am not without hopes that one day it will do so. It flowers fairly freely in South Devon and Cornwall, and I have seen small plants of it in bloom in Mr. Prichard's nursery at Chistchurch. It is very tender and the flowers are insignificant; it is only a curiosity and certainly not recommended. It comes from North Africa and Abyssinia.

R. glutinosa.—Another curious rather than a beautiful Rose, flowers pale pink; the flower-stalks are often quite viscid.

R. gymnocarpa.—A pretty and interesting Rose from North America, with small red flowers, followed by red fruit. I think this is worth growing, although my plant of it is small.

R. humilis.—A very pretty, free-flowering pink Rose, with a not unpleasant suggestion of magenta. These are succeeded by round red hips in autumn, that would remain all the winter if the birds would let them. Their shape is distinct and not unlike Cherries. I believe there is a white-flowered form, but I have never been able to come across it. If anyone reading these notes can inform me where it can be obtained, I shall be indebted to them. A very handsome plant first seen by me at Kew is the natural hybrid *humilis* × *rugosa*. It is well worth growing. The flowers are larger, with a long bud, and it is, I think, freer than *humilis*, the type and blooms much later; in fact, it is almost perpetual, and would, I should say, make an excellent hedge.

R. indica, of which there appears to be many forms. One is the parent of most of the old Monthly or China Roses; another, a large single pink that I have only seen at Messrs. Paul's Cheshunt nursery, but which might well be the parent of some of the Teas. Then a beautiful variety is the crimson sometimes known as Miss Lowe's variety or *sanguinea*; this I think is a type, and not a garden variety like the one known as Miss Willmott, which is single and of a distinct copper colour. These are all known as *Rosa indica*, and I have no doubt there are more.

Looking at the small flowers and plants, one wonders more and more that their glorious descendants of to-day can ever have had any kinship with them.

R. levigata.—A native of China, but also known as the Cherokee Rose. I remember a very fine plant of it in South Devon, but, except in warm, sheltered spots, it does not flower much; a climbing Rose that has large white flowers. I believe *R. gigantea* is allied to this species.

R. lucida.—Best known, perhaps, by its double form (which pretty little Rose is worthy of more extended culture, quite moderate in growth), but I would also put in a word for the species which is not so frequently met with; its flowers are larger, freely produced, the foliage glossy and changes colour in the autumn to all shades of purple. The flowers though flat are clear rosy pink in colour, and borne in clusters, but only opening one at a time; they are also sweetly-scented, the fruit is brilliantly coloured (deep orange-red), as large as nuts, and last well on the plant which



A SMALL ROCK GARDEN. NOTE THE WISDOM OF MASSES OF FLOWERS AT ONE TIME.

on, so that plants from all kinds of geological formations would find themselves at home. The plants in these rock beds would be grown distinctly as samples and labelled, then those that were the best liked and that showed the most aptitude for making good combinations for the rock garden could be increased and brought into the better use.

Labels should never be seen in the beautiful rock garden; they are destructive of all pictorial effect and damping to the sentiment of the truest enjoyment of plant beauty. You want your rock plant to say to you in cheerful sympathy: "I am one of the loveliest of the plants that God has given you for purest pleasure and for your bettering in gladness and thankfulness."

THE WILLOW SUNFLOWER.

(*HELIANTHUS ORGYALIS*.)

For giving a pleasing display of golden yellow blossoms throughout October this is one of the

and hardiest of our garden Lilies, and if planted in a suitable situation and given some small attention in the way of staking, few plants are of more striking appearance or of higher decorative value in the border. Any ordinary garden soil suits this Lily, but it has a distinct preference for deeply dug ground well enriched with decayed manure, and under these circumstances will soon form flourishing clumps, reaching from 5 feet to 7 feet in height.

The illustration shows a fine group planted behind a formal border and immediately in front of a shrubbery, and in such a position this Lily is seen at its very best, for the dark, quiet background of shrubs forms a splendid foil for its deep orange beauty. Some support is necessary for the flower-stems, as even a slight wind is likely to damage them; but whatever aid is given ought to be unobtrusive, and allow the plants their natural habit as much as possible. Too often this Lily is seen tied in an ungainly bundle to a stake. I. S. TURNBULL.

is ornamental right through the year, as after the leaves have fallen the year-old wood itself changes and becomes red. It is not a rampant grower, so can easily be kept within bounds, and own-root plants can easily be raised by the suckers which well-established plants freely produce. There are other forms of the type—*alba* with white flowers, *sorbifolia*, &c., but I have only grown the type *lucida* and its double form, *lucida fl.-pl.*, both of which I can strongly recommend. It is a native of North America.

R. macrantha.—This, although generally known as a species, is, I believe, more correctly described as a natural hybrid of European origin. It is undoubtedly one of the most beautiful of all single Roses. It is half a climber, and a well-grown plant makes a fine pillar, with its large nearly pure white flower and glorious centre of yellow stamens. *Canina* × *Gallica* are, I believe, the parents.

R. macrophylla.—A single pink free-flowering Rose with good foliage, introduced, I believe, from Thibet. It is of semi-climbing habit, and is recommended, but it must not be confused with

R. microphylla, which has white flowers, and is also of Chinese origin, but is quite distinct in every other respect. Its wood is dark yellow or buff colour, the leaves small, and the fruit prickly.

R. moschata (the Musk Rose), sometimes appearing in catalogues under its synonym *Brunonis*. This and its varieties are among the most vigorous of all Roses, and its various uses are many, for pergolas where there is plenty of head room, at its best climbing up trees; some forms, notably *floribunda*, makes an excellent "lawn" plant. Introduced from the Himalayas, a good plant makes a beautiful picture. It is difficult to say which are the best form. I have *moschata alba*, *moschata nivea*, *floribunda* and *grandiflora* (the latter, perhaps, the most rampant): *nivea* I am discarding, as the stamens turn black in an unpleasant fashion before the petals fall. A large cluster of this Rose will last over a week in water and the buds will nearly all open. The fruit is very small, not much larger than dried Peas. Recommended.

R. nipponensis.—A free-growing climbing Rose that so far has not proved very free-flowering, but its flowers come late after most of the other species.

R. nitida.—I believe this to be a North American species, and it is one of my favourites. It is by no means well known and I was a long time before getting a plant of it true. It is most distinct. I came across it by accident eventually in the nursery of Mr. T. Smith of Newry. It is quite dwarf, rarely exceeding 3 feet in height, the wood closely covered with small spines that on the growth of the year are crimson in colour, with leaves a deep glossy green in spring and summer, but which in autumn take on tints that rival any *Ampelopsis*. The flowers are rosy crimson, freely produced, and are followed by bright red hips almost spherical in shape. My original plant I put on a piece of rockwork, but I have now planted an edging of it, and I think it will be an excellent Rose for the purpose. Strongly recommended and not difficult to produce from suckers.

R. nutkana.—A Rose calling for no special comment; flowers deep pink, followed by

small fruit. The same, however, need not be said of

R. nuttalliana, which I consider one of the best of the species. It forms a good bush, making long, slender shoots, on which the flowers are produced the whole length, and they are of a pleasing shade of pale rose pink, followed by coral red hips. Its native home is, I believe, North America, from which Continent we have received so many of these species.

R. omissa.—I doubt this being a species, although so called in most catalogues, and I think it is very closely allied to *Scabrata*. It is unquestionably, however, a very beautiful Rose of large size, deep pink in colour, of strong-growing habit and would make a good bush.

R. pomifera (the Apple-fruited Rose).—This has pink flowers and large fruits.



GROUP OF THE ORANGE LILY (LILIUM CROCEUM).

R. pimpinellifolia, another name for *spinossissima*.

R. polyantha, too well known to call for comment; a free-flowering, sweet-scented, summer climbing Rose.

R. rubiginosa (the native Sweet Briar), which is, I hope, in every garden.

R. rubrifolia.—One of the most useful of all the species. Its foliage is most ornamental for decorative purposes, and is so much sought after in my garden that I wonder the plant survives. It is not easy to describe the curious effect of the glaucous shot-silk appearance of the leaves, heightened as they are by the red stems of the plant. For association with pink Roses, such as *La France*, there is no foliage to beat it.

R. rugosa (Japanese Rose).—A species that is receiving, and rightly so, much attention from the hybridist. Everyone knows the type and its white form, and to mention half the varieties

that have sprung from them would take up too much space and is outside the scope of this article, but the whitest Rose that grows is *Blanc Double de Coubert* and the newer *Conrad F. Meyer*, one of the greatest acquisitions to our Rose gardens of recent years.

Purley.

H. E. MOLYNEUX.

(To be continued.)

ROSE BEDS IN SANDY SOIL.

It is a well-known fact that Roses thrive best in a rich retentive loam. They retain their vigour longer than when in a light, sandy medium. The nature of soils varies considerably in different parts of the country, being suitable in some districts and unsuitable in others. But where amateurs have to deal with a sandy soil they should not despair of growing very fine flowers. Numerous instances have come under my notice where splendid specimens have been grown in adverse circumstances. In a garden near Southport that I had charge of years ago, Roses were grown in one large bed. The soil was very sandy, so it was removed to a depth of about 18 inches and good loam put in. In that district plenty of moisture was found 3 feet below the surface; being distant about a quarter of a mile from the sea—at high tide—I was informed that the sea-water permeated the soil to a considerable distance from the shore, and as the garden in question was low-lying and almost on a level with the sea, water could always be found within a few feet of the surface. The Rose trees made excellent growth for many years, and always looked in the best of health.

But the subsoil is not moist in many districts, and, where a dry rooting medium obtains, heavy mulchings should be put on to prevent undue evaporation. Furthermore, I find it best to keep the surface of the newly-formed bed rather low and not rounded. It is much better to thoroughly prepare a few beds by putting in some good loam than to rely upon a poor sandy soil. Strong-growing varieties should be planted, the following being suitable, namely:

Dark Crimson Varieties.—A. K. Williams, Abel Carrière, Duke of Edinburgh, Earl of Pembroke, Fisher Holmes, General Jacqueminot, Horace Vernet, Pierre Notting and Prince Camille de Rohan.

Pale Rose and Pink.—Abel Grand, Marchioness of Dufferin, Mme. Eugène Verdier, Mrs. John Laing, Mrs. R. G. Sharman Crawford, Paul Neyron, Ulrich Brunner and Pride of Waltham.

Light Crimson.—Captain Hayward, Beauty of Waltham and Mme. Charles Wood.

Red in Various Shades.—Countess of Oxford, Alfred Colomb, Dupuy Jamain, Mme. Victor Verdier, M. E. Y. Teas and Sénateur Vaisse.

Rose.—Hippolyte Jamain, Victor Verdier and John Hopper.

White and Shades of White and Pink.—Boule de Neige, Margaret Dickson, Merveille de Lyon, Captain Christy, Mme. Hippolyte Jamain, La France and Baroness Rothschild. These are Hybrid Perpetuals.

The following Tea-scented Roses may also be planted; Mme. Bérard, Mme. Lambard, Mme. Bravy, Anna Olivier, Duchess of Edinburgh, Marie van Houtte, Mrs. Edward Mawley and Souvenir d'un Ami.

AVON.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

TOWN GARDEN.—Not much can be done in the town garden at this season, except perhaps to make the surroundings neat and tidy. Lightly fork over the surface soil of beds and borders. Rockeries may be made now. Select a fairly shady position and form mounds or heaps of good soil, into which should



1.—A PARSLEY ROOT AS DUG FROM THE OPEN.

be dropped burrs or large stones here and there. Plant Ferns, &c., in March, by which time the soil should be in a nice workable condition. Transplant shrubs of the hardiest and most vigorous kinds. Privet hedges should be put in order and gaps filled.

Trees and Shrubs.—Old and decayed branches of Lilac bushes should be pruned now, taking care to cut out only the useless pieces, leaving last year's shoots until June, when growths that have borne flowers should be shortened back to about a couple of inches. Deciduous-flowering shrubs of all kinds may be treated in like fashion, and in this category the beautiful Mock Oranges are included. Hardy creepers, both flowering and foliage, may be planted now, and those that are well established should be pruned and nailed to the walls and fences against which they are growing.

Flower Garden.—The early-flowering Gladioli may now be planted, and for an effective display group them in colonies of half-a-dozen to a dozen in each. The corns should be planted about 4 inches deep and 6 inches or rather more apart. A fine day when the weather and soil are both suitable should be selected for this work. In cold and bleak situations, where Carnations cannot be planted until the spring, take every opportunity of stirring the quarters allocated to them, using a fork for the purpose. This should get the soil in nice working order when the planting time comes round. Sparrows are injuring the shoots of Carnations just now. To stop them insert small stakes round the plants and strain between them black thread or cotton. This is a simple and most effective remedy. Most of the hardy perennials may be divided from this time forth. It is only necessary to deal with very large overgrown clumps, and these should be broken up into nice little pieces, each with a few shoots or crowns. Lupines, Phloxes, Pyrethrums, Sunflowers, Larkspurs and Michaelmas Daisies may be treated thus.

The Greenhouse and Conservatory.—Keep the glass clean and ventilate more freely than formerly, but avoid giving a chill to the more tender subjects. Tea-scented and other Roses under glass may be encouraged into free growth in a temperature of from 50° to 55°. Look over the plants frequently, and if insect pests are discovered, dust with Tobacco powder. If badly infested fumigate forthwith, using any of the excellent preparations now sold. The pretty greenhouse Mosses (Selaginellas) may be increased now by propagating the ends of shoots. These should be dibbled in half an inch apart in small pots (preferably 3-inch), using a compost of loam and leaf-mould that has been sifted, to which should be added a small quantity of silver sand. Fill the pots quite full of soil, and after the cuttings are inserted place them in a small propagating frame or hand-light on the greenhouse bench in a temperature of about 65° to 75°.

The Vegetable Garden.—Shallots may be planted forthwith, leaving the upper part of the bulbs visible above the soil. Nine inches apart in the rows and about 1 foot between the rows is a good rule to observe. The trenching and digging of the vegetable garden that have been delayed should be pushed forward with all speed. Do not work the ground when it is very wet. In warm quarters a sowing of early Carrots may now be made. Mustard and Cress may be sown in pans and boxes. They may be raised with ease on hot-beds or in the greenhouse. Those who desire to grow big Onions and Leeks should make a sowing in boxes at the present time. Ailsa Craig is an ideal Onion for this purpose, and Pризetaker and The Lyon are good Leeks. A shallow box of light and sandy soil that is properly crooked and drained will answer well. Sow thinly, slightly covering the seed, and after watering in with a fine-rosed can, cover the box with a sheet of glass, subsequently placing it in the warmest part of the greenhouse or in the hot-bed.

Chrysanthemums.—Cuttings of the spidery and miniature-flowered Pompon sorts for decorative uses should be inserted in light and sandy soil without delay. Late January and February is an excellent period to propagate the decorative varieties. The early-flowering varieties may be dealt with during the same period successfully. A temperature in the glass structure of about 45° answers the purposes of these plants admirably. The cuttings need not be kept in an air-tight glass structure, as they root in about a month in any ordinary greenhouse.

OBTAINING PARSLEY IN COLD WEATHER.

FREQUENTLY in severe weather the supply of outdoor Parsley runs short or ceases altogether, and, where there is a demand for garnishing or other purposes, it is necessary to adopt various precautions to ensure a supply. A cold frame placed over a portion of an outside bed will generally enable pickings to be made as long as the stock of leaves already in being exists. But a cold frame does not force new growth; it only preserves that already present. To obtain new growth, the greenhouse should be requisitioned and a few pots or deep boxes, according as much or little Parsley is required. The roots are dug up, as in Fig. 1, and all old and decaying foliage cut away. The tap-root and side roots are also trimmed in, as shown in Fig. 2. The roots are then ready for potting, and three of them will generally be found ample in a 5-inch pot. Fig. 3.—The plants should be well watered in,

and at first stood near the greenhouse door. In the course of a week or so they should be moved to a warm and moist corner of the house, and, if kept well watered and syringed, a quantity of fresh young growth will soon be forthcoming. Failing a greenhouse, very good Parsley can be grown in pots placed in a sunny kitchen window.

TO GROW PARSNIPS WELL.

DEEP culture is absolutely essential if long, tapering roots of high quality are to be produced. Although it would have been better to have thoroughly trenched the quarters allocated to this and kindred subjects some time since, it is not too late to do this effectively, even at this somewhat protracted period. Soil of a light and sandy nature is undoubtedly the best, but other soils by careful working can be made quite as suitable. Quarters that were planted with Celery last season should grow Parsnips well this season, and if such are available by all means utilise them for the purpose under notice. Should the ground be trenched forthwith only very rotten manure can be used, and this must be buried right at the bottom of the trench. See that this work is done at once, and leave the surface in a rough condition. A month or six weeks exposure to wind and weather will effect a great change. Then the surface soil may be forked over, broken up, levelled and raked over and a sowing made in late February or a week or two afterwards when the weather and the condition of the soil is favourable.

POTTING COMPOSTS OR SOILS.

Do amateurs generally take the care they ought to in making up the soil to pot their plants in? I think not. Some enthusiastic amateurs do, undoubtedly, pay special attention to this matter, and in due course reap a good reward; but the majority simply put off preparing the composts until they actually require them for use, and then, I am afraid, in their haste they use any kind of garden loam. It has been my lot to have to examine the roots of plants which amateurs have grown in greenhouses and windows, and in nine cases out of ten the loam has dropped away from the roots the moment it was turned out of the pots, most of the few roots remaining being quite dead. No amount of care in training, watering and feeding of plants will avail if the roots are growing in an unsuitable medium. Different kinds of plants require different kinds of soil, and, although it is a difficult



2.—THE ROOT TRIMMED READY FOR POTTING.



3.—THREE PARSLEY ROOTS IN A 5-INCH POT READY FOR THE GREENHOUSE OR WINDOW.

matter to provide them in the open garden, it is an easy one as regards plants in pots. The following table is not exhaustive, but it is sufficiently so to be a guide:

Kinds of Plants.	Soils.	Proportions.
Azaleas, Indian	Fibrous turf..	One-third
	Peat	Two-thirds
" mollis var.	Sand	1 peck to 4 bus.
	Fibrous turf..	Half a part
Begonias, tuberous	Peat	" 1 peck to 5 bus.
	Sand	One part
" fibrous-rooted	Fibrous turf..	Two parts
	Peat	One part
Chrysanthemums (final and previous potting only)	Leaf-soil ..	One part
	Sand	1 peck to 4 bus.
Ferns, Maidenhair..	Rotted manure	Half a part
	Fibrous turf..	Two parts
Dracena australis..	Peat or leaf-soil	Two parts
	Sand	Half a part
Palms (greenhouse var.)	Rotted manure	One part
	Sand	1 peck to 3 bus.
Liliums	Fibrous turf..	Two parts
	Peat	One part
Zonal Geraniums ..	Leaf-soil ..	Quarter of a part
	Rotted manure	" "
Roses, Hybrid Perpetuals	Sand	1 peck to 3 bus.
	Loam (rather heavy)	Three parts
" Teas and Hybrid Teas	Leaf-soil ..	Half a part
	Rotted manure	" "
Cinerarias.. . . .	Sand	1 peck to 6 bus.
	Loam (medium)	Two parts
Primulas and Cyclamen	Leaf-soil ..	One part
	Rotted manure	" "
Fuchsias	Leaf-soil ..	One part
	Sand	1 peck to 4 bus.
Annuals, tender ..	Fibrous turf..	Two parts
	Leaf-soil ..	One part
	Rotted manure	" "
	Sand	1 peck to 5 bus.

How to Treat the Different Ingredients.—*Loam.*—This may be kept in the open if it be stacked in such a way as to throw off water. *Peat.*—Keep this in a dry place in a shed. *Leaf-soil.*—This is best if kept in a neat heap in the open, as the collected leaves decay better than if placed in a dry shed. *Manure (Organic).*—

Always store the manure in an open shed, but rain must be kept off. Manure exposed to the weather soon loses its goodness, as it were; all the nutriment is washed out of it or dried up. *Manure (Artificial).*—Keep all artificial manures in a dry shed, cool. *Sand.*—This, too, should be kept in a dry place, as when dry it mixes with the other ingredients better. It is a good plan to wash all sand, thus getting rid of soil particles, and afterwards thoroughly dry it. AVON.

A SIMPLE MEANS OF RAISING PANSIES.

PANSIES may be raised with comparative ease. Many need no more than twenty-five to fifty plants of just a few varieties. In such circumstances get a few seed pans about 12 inches in diameter and 3 inches to 4 inches deep, and, after crocking them with potsherds, fill in with a light sandy soil to the rim. This should be made fairly firm, so that cuttings or rooted sucker-like growths may be dibbled in quite easily. A good soil should be made up of loam, leaf-mould and sand in equal parts, and these ingredients should be well mixed after being passed through a sieve with a half-inch mesh. Then sprinkle a quantity of coarse silver sand over the surface soil, so that as the cuttings are inserted some of the sand may be carried to the bottom of each hole and thus ensure perfect drainage. Old Pansy plants may be lifted when the weather is not frosty, and broken up into numerous pieces. Young and supple growths should be selected, and of these one old root should provide any number between twenty-five and fifty of suitable size. Old and coarse growths are useless. Insert the shoots about 2 inches apart, and the effect will be much the same as represented in the accompanying photograph. When completed, place the pans in a cold frame or any rough structure erected in a warm aspect. By the early spring a batch of plants should be in readiness for planting outdoors. D. B. C.

BEAUTIFUL GRASSES TO ORDER SEEDS OF NOW.

MANY people, especially amateurs, experience a certain amount of difficulty when making out their seed lists owing to the vast quantity of names that confront them, and many very good things often get overlooked. Judging by the very few gardens in which one encounters them, the ornamental Grasses must be generally left out, a fate they by no means deserve, as they have several good points that warrant the inclusion of at least a few in every order of flower seeds that is sent to the vendor. They are comparatively easy to grow, possess a distinction and charm that is hard to surpass, and besides being of considerable use for arranging with the more showy cut flowers of the summer, they may be cut just before the heads are fully developed and dried ready for decorative purposes during the winter months, when such material is scarce. The seeds, too, can be purchased cheaply. These may be sown in preferably rather sandy soil in the open during March in the South of England, but for the Northern Counties and Scotland some find it advisable to sow in pots, pans or boxes under glass. In both instances the seedlings are transplanted in small clumps as soon as large enough, protecting them from drying winds or heavy rains for a few days to enable them to become established, when they will easily take care of themselves. Soil of a rather light nature suits most of them best.

The Best Sorts.—Perhaps the doyen of the whole of the annual Grasses is the Cloud Grass (*Agrostis nebulosa*) This is exceedingly graceful, and forms the most lovely garnishing for Sweet Peas that it is possible to obtain. It grows about 18 inches high and is an ornament in itself. *A. pulchella* is also very beautiful, but of dwarfer habit than the former. The small or graceful Quaking Grass (*Briza gracilis*) is another beautiful Grass that is well worthy of a place in all gardens.

It has a very light appearance, and the flower-heads are so situated that the least movement sets them trembling, hence its popular name. The Hare's-tail Grass (*Lagurus ovatus*) is of different habit to those previously mentioned, the heads being cone-shaped and covered with a thin, soft downy coat. It grows about 1 foot high, and although an annual the best way to grow it is to sow seeds in pots under glass early in September, winter the plants in a cold frame and transfer them to the open the following April. The flower-heads of *Pennisetum longistylum* are of nearly the same shape as those of the foregoing, but the long awns or hairs render them much more graceful. It is an easily-grown annual providing a little protection is given to the seedlings during wet or cold weather in the early stages of their growth. It reaches a height of 18 inches and deserves to be much more widely grown than it is at present. Other Grasses that are well worth growing and that may be raised from seeds are the Feather Grass (*Stipa pennata*)—this is a 2 feet high perennial—the Squirrel-tail Grass (*Hordeum jubatum*), the Love Grass (*Eragrostis elegans*) and the curious Job's Tears (*Coix lachryma*). The list might be extended, but the above are the pick of the ornamental Grasses that may with reasonable care be raised from seeds.

THE PERSIMMON.

WE are asked a question about a fruit frequently seen in London shops—the Persimmon. This is to the Japanese and Chinese what the Apple is to us. It has been cultivated by them for its fruits for many generations, and there are hundreds of named varieties recognised by the fruit growers there. More than twenty years ago a selection of varieties was introduced into the orchards of California and planted extensively in the belief that the fruits would find a ready market. But the American public would not buy Persimmons. In England it has been grown and fruited in a few gardens, chiefly as a curiosity; but where it has succeeded it has been greatly admired, as much for the rich colours assumed by its foliage in the autumn as for the beautiful rich scarlet colour of its Peach-like fruits, which are ripened in late autumn and hang for weeks after they are ripe if the weather is favourable. They are not palatable until



PANSY CUTTINGS INSERTED IN A SHALLOW PAN.

“bletted,” as in the case of the Medlar, when, however, they are to some tastes delicious. In the warmer parts of these islands the Persimmon could be grown on walls outside if treated the same as the Peach, while in orchard houses their culture would be quite easy.

According to Dr. Henry, the fruit of the Persimmon has another use in China; it is cut into halves and put into water, and the oil thus obtained is used for waterproofing the common Chinese umbrellas and hats; it is known as the “Yu-shih-tzu.” Even if the fruits are not considered delectable to the palate they cannot fail to please the eye.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

KITCHEN GARDEN.

DIGGING and trenching should still be the chief work. Collect leaves and mix them with long stable manure for making hot-beds.

Forcing Vegetables should now be in full swing, and no better method can be practised than the hot-bed system. Potatoes, Asparagus, Carrots, Lettuces and Radishes may all be sown or planted now. If the supply of salad is running short, sow Golden Gem and Paris Market Lettuce in boxes. These come on very quickly and can be cut very young. Keep up the supply of Chicory, Dandelion and Endive, as well as Asparagus, Rhubarb and Seakale, by introducing a supply to heat equal to the demand each week.

HARDY FRUIT.

Continue to prune, tie and nail trees as the weather permits. Look over the stock of bush fruits, and if any additions are likely to be needed prepare cuttings and plant them in a border where they will not be lost sight of. Useful trees can be grown in about three years if skilfully handled. Plant Filberts and Cob Nuts, choosing high ground for the purpose of escaping frost. Old bushes and trees may now be pruned. Cut out all suckers from the base, and by this time many of the blooms will be seen, so that this should be a guide to the pruner. Leave as many catkins as possible for pollination.

FLOWER GARDEN AND PLEASURE GROUNDS.

Keep the lawns neat and tidy by frequently sweeping and rolling them. Cover up tender plants to protect them from east winds or very keen frost, removing the covering after the frost has gone. Continue to plant Azaleas, Camellias, conifers and similar subjects when the ground is in good working condition. Top-dress any trees or shrubs that require it. Nothing is better for the purpose than good cow manure with soot and bone-meal added. The latter, however, should be of the very best quality. A little soot or Sluicide should be put around bulbs and plants that are just pushing through the ground.

FRUIT UNDER GLASS.

The Earliest Vines may now have another 5° of heat. Disbud as soon as the bunches can be seen, and leave only one shoot to a spur. Syringe with tepid water twice daily and see that the roots are not dry.

Peaches.—Do not attempt too rapid forcing in the early house till the blooms have set, when an extra 10° may at once be given, as the sun will now be getting more powerful. Finish all the work of tying and training in late houses and give all the borders a top-dressing of good loam and a sprinkling of bone-meal or Le Fruitier. Pot young Melon and Cucumber plants as soon as possible after they have made a leaf and keep them near the glass.

PLANT HOUSES.

Propagate now any decorative subjects, such as Pandanus, Crotons and Dracenas. Excellent little table plants can be produced in a short time by the process known as "ringing."

Gardenias showing flower should have a little manure water, and as a preventive of mealy bug a spray with an insecticide every week.

Roses starting into growth must be kept free from aphids, maggots or grubs; these, if not detected, soon ruin a bloom.

Begonia Gloire de Lorraine.—Insert cuttings now for an early batch; plants of *Gloire de Sceaux* now in bloom need moving into a cooler

house. These are excellent subjects for conservatory and house decorations.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

THERE ought to be plenty of Roman Hyacinthus, Paper-white and other early Narcissi in bloom now, and if the retarded crowns of the Lily of the Valley are employed, these also will come into bloom very quickly in quite a moderate warmth, though the natural roots require special care and rather hard forcing to get them in bloom at this season. The chief points in the successful forcing of this plant are to cover up the crowns well with a good depth of Cocoanut fibre or moss and to keep the roots regularly moist throughout.

Toxicophleæ (Acokanthera) spectabilis.—Flowering as it does in the depth of winter this stove shrub is now at its best, and a plant or two will, when in bloom, suffice to perfume a good-sized structure, so fragrant are the small white Jasmine-like blossoms that are produced in clusters from the axils of almost every leaf. Cuttings root readily during the growing season, and if potted off as soon as rooted they make rapid progress. If intended to grow in a bush form, the plants must be freely stopped during their earlier stages, as it is naturally somewhat rambling in growth, and may, if required, be treated as a roof or rafter plant.

FRUIT UNDER GLASS.

Strawberries.—In places where the earliest dishes are not looked for until the middle of March the present is a good time to commence. A well-built brick pit, in which a good lasting hot-bed of leaves can be made up, and with a single hot-water pipe round it, is a very useful aid to Strawberry forcing. For early work strong single-crowned fruits should be selected, and after cleaning the pots and removing any decayed or broken leaves, each plant should be dipped in or syringed with some insecticide. For the early batches *La Grosse Sucrée* is still an excellent variety, *Royal Sovereign* and *Sir Joseph Paxton* making a trio hard to beat.

HARDY FRUIT.

Push on the pruning of all the outdoor trees and bushes during open weather, so as to get this work completed before the rush of the spring work begins.

FLOWER GARDEN.

Ranunculus Beds should now be prepared by forking in well-decayed cow manure and leaf-mould. Plant Anemones, if not already done, and protect the beds with well-rotted manure. Plant also at the first opportunity any bulbs of Narcissus that may not have been got in, and where plants of Pinks and Carnations have been loosened by frost they should be tightened by carefully pressing the soil, but this should not be done while the ground is very wet.

KITCHEN GARDEN.

By this time most vegetable growers will have secured their catalogues of seeds for the coming season, and to a beginner the selection is somewhat difficult, owing to the quantities described; and in such cases it will be well to get such as are well known. I am aware that many think new things should be avoided, but we should remember that our old favourites themselves were new once. Vegetables that have more size to recommend them are of little value, as, for instance, Carrots, Parsnips, or other roots.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

THE KITCHEN GARDEN.

THE BEST GARDEN PEAS FOR A LATE DISTRICT.

FROM time to time we get valuable notes on all sorts of vegetables in THE GARDEN, but so far I have not noticed that any of the writers have made mention of varieties of Peas suitable for the later districts in Scotland and the North of England. Having to supply large quantities of Peas of the best quality for as long a season as possible, I feel that I am able to speak with some little authority on this subject. Our garden soil is a heavy one and we stand high, so that earliness is out of the question as it is understood further south. During seven seasons I have only once been able to pick Peas in June, but, as part compensation for our late start, we usually have quite decent pickings in November. For several reasons, but mainly because I require a great deal of frame accommodation for flower raising, I do not sow my first crop under glass, but just seize the first dry chance in spring to sow on a south border. After experimenting with most of the approved early sorts, I now pin my faith to the Irish-raised variety named

The Pilot.—It is about a week in advance of *William I.*, and is certainly a Pea of much finer flavour. The crop, too, is excellent, and it is so hardy that I have never seen it damaged by frost. Of course, I dare not risk any of the early Marrow Peas in the ground before nearly the end of March. I then sow

Gradus, *Edwin Beckett* and *Boston Unrivalled*, all on the same date, and these afford a first-rate succession in an ordinary season. Last year, however, everything got out of joint somehow, and these three varieties came in together. Could I depend on the last-named coming every year as early as *Gradus*, I would grow it alone as my second early, for, without doubt, on this heavy soil it is the very best Pea in cultivation. The crop is at least three times the bulk of *Gradus*, the flavour is even better, and the pods remain usable for a longer period.

Edwin Beckett, here, is a better cropper than *Gradus*, and equal in flavour. To follow *Boston Unrivalled*, I find

Alderman usually excellent, but in 1907 it was not up to the mark.

The Bell, which received a first-class certificate from the Royal Horticultural Society in 1905, is the largest podded variety I have yet grown, and the quality is very good. As I have only grown it one season I will say no more about it just now, but will certainly grow it again. The next on the list is

Glory of Devon, a Pea of great merit, both as regards bulk of crop and excellence of flavour. I have grown it largely for four seasons and would not care to be without it. Among the later varieties

Royal Salute, another Irish-raised sort, stands pre-eminent. It only grows 3 feet to 4 feet high, and sets a heavy crop under all weather conditions. I have grown it during the last four seasons, and have never once had it fail. The next best late Pea here is

The Gladstone.—It is wonderfully productive, and stands a wet season well. The only time I have ever had to complain of this grand variety was during a year of intense drought. All the same, this Pea has given me great satisfaction during the nine years I have grown it. In good seasons

Autocrat is splendid, but as it does not set well in a wet season I have had to discard it.

Michaelmas I find very good for the latest crop if I sow during the last week in May. If I sow later it has not time to mature. I cannot close these notes without a special reference to

Daisy.—Here it is not only by far the finest dwarf Pea ever tried, but for bulk of crop and quality it is almost equal to many of the finest

tall sorts. So well does it succeed here that I put in several sowings, at intervals of about three weeks, and thus secure a fine succession of this one sort without taking up much space. With me it grows quite 2 feet high, and it is best when properly staked. To sum up, I would say that the best half dozen Peas for succession are The Pilot, Edwin Beckett, Daisy, Boston Unrivalled, Glory of Devon and Royal Salute.

Preston House, Lindlithgow. C. BLAIR.

RAISING EARLY VEGETABLES.

To maintain a constant supply of fresh vegetables and salads is a matter requiring careful attention on the part of all gardeners, professional and amateur. In addition to providing hot-beds as a means of producing early Carrots, Turnips, Radishes and similar subjects there are several varieties of vegetables which may be successfully grown from seed sown at this season in the greenhouse or in frames.

EARLY CAULIFLOWERS

are always appreciated, and by sowing seed of an approved variety in a box or pan in moderately light, firm soil nice plants may be raised for planting out in the spring. Sow the seed thinly, as this prevents damping off. When the plants have grown large enough prick them out into boxes, or if a frame is available a bed may be made therein and the plants pricked out into the bed. In raising and growing these early plants it is important that they receive the full benefit of both light and air. Draughts must be avoided. A batch of

EARLY CABBAGE

may be grown in the same manner, and those who experience difficulty in securing a good crop of this valuable vegetable from plants raised in the autumn should adopt this method. It is surprising how quickly a suitable variety of Cabbage will form nice tender hearts. Sutton's Earliest is a variety that is difficult to beat for this purpose.

LARGE ONIONS

are very popular; they are essential to the exhibitor of vegetables and are also most useful for certain culinary purposes. A small packet of seed selected from a good strain will provide a large number of plants, which, with careful culture, will in turn produce large, handsome bulbs suitable either for exhibition or kitchen use.

EARLY SPRING SALADS

are always welcome, and several varieties of the Lettuce may be sown under glass at this season. A Lettuce that may be grown in boxes throughout the winter and which provides a supply of delicious salad is Sutton's Forcing. This Lettuce does not form hearts, but the leaves grow very quickly and are very tender. Sow in rather light rich soil and prick out 3 inches apart. For a succession sow some approved Cabbage Lettuce, which should be gradually hardened for planting out in the spring. These early Lettuces are liable to burst after reaching

maturity, and it is therefore advisable to make a succession of sowings to maintain a supply. Plant the early Cabbage Lettuce in a warm sheltered corner of the garden.

BRUSSELS SPROUTS

require a long season in which to grow if a really first-rate crop of large solid buttons are to be secured. The seed may be sown now, and the plants treated as advised for the Cauliflower and Cabbage. When removing the plants from the seed-box take care not to damage the roots, and when finally planting them out in the garden dig up the plants with a ball of soil attached to the roots, and use a trowel in preparing the holes for their reception. Choose a dull showery day for this operation, and even then it is often advisable to carefully apply water to the plants to settle the soil about their roots. When carefully planted they quickly become established and make rapid growth.

C. RUSE.

AN INTERESTING PERGOLA CLOTHED WITH FRUIT TREES.

PERGOLAS of various descriptions are to be found in gardens throughout the United Kingdom, but generally only flowering plants are used to clothe them. Where beauty with utility is desired, nothing better than Apple, Pear and Plum trees can be utilised for covering a pergola. The illustration depicts such a structure erected by the well-known firm of Messrs. Richard Smith and Co., Limited, in their nurseries at Worcester. The photograph was taken about two years after planting, and shows what rapid progress the trees have made. Such a pergola is comparatively cheap to erect, and proves a beautiful and useful addition to any good-sized garden. Although fruit trees are best planted during November, there is still time to do the work. Take care to thoroughly prepare the ground by trenching before planting, as the trees will have to remain in their positions for a number of years, when deep cultivation will not be possible.

NEW ORCHIDS.

CYPRIPEDIUM SULTAN.

THIS is a lovely addition to this wonderful group of winter-flowering Orchids, and is the result of a cross between C. M. de Curte and C. Milo Westoubirt variety. The flower is an exceedingly beautiful one, and is also of large size. The dorsal sepal is very large, broadly heart-shaped, with a broad white edge. The ground colour is green, heavily mottled with dull crimson. The petals are long, oar-shaped, slightly twisted, and stand out at almost right angles to each other. Their colour is a deep yet glossy crimson with a slight gold edge. The lip or pouch is of medium size, deep yet somewhat brighter crimson than the petals. This also has a narrow pale yellow edge. The foliage is rather broad. It was shown by Major G. L. Holford, C.I.E., C.V.O., Tetbury. First-class certificate.

CYPRIPEDIUM MINOS YOUNG.

This is a most unique-looking *Cypripedium*, and one that is sure to become a great favourite. The dorsal sepal is very large, measuring 3 inches in diameter. It is erectly held, the edges being slightly curved inwards and beautifully waved. The ground colour at the base of this sepal is green, this being heavily striated with dull crimson. Around this ground colour comes a broad band composed of small purplish blotchings, the whole being surrounded by a broad white edge. The petals are narrow, mucronate, very drooping, with crinkled edges. The colour of these is dull crimson, shading off to green at the tips. The labellum or pouch is of medium size and of a dull crimson colour, with a light gold-coloured edge. The foliage is much like that of the well-known *C. insigne*. Shown by Messrs. J. A. McBean, Cooksbridge. First-class certificate.

LÆLIO-CATTLEYA CORUNNA.

This is a very handsome and striking member of the *Lælio-Cattleya* group, the parentage of which is unknown. The sepals are lance-shaped, the petals being much broader and slightly



PERGOLA CLOTHED WITH FRUIT TREES.

fringed. Both sepals and petals are of a uniform bright purplish mauve. The labellum or lip is of medium size, the colour being a very rich deep velvety crimson, with slight orange markings in the throat. The plant shown was carrying one flower only. Exhibited by Major Holford. Award of merit.

ODONTOGLOSSUM HYBRIDUM BINGELIANUM.

This is a very fine *Odontoglossum* of unique colouring. The sepals are relatively large, with a deep cream ground colour, this being very heavily mottled with brownish crimson blotches except at the tips. The petals are very similar, the markings, perhaps, being somewhat more crimson. The labellum is of medium size, white at the apex, with dull crimson and yellow markings at the base. The plant shown was carrying a raceme composed of seven fully-opened flowers and six buds. Leaves and flower-stem are characteristic of the large family of *Odontoglossums*. Shown by Baron Schröder, Egham. First-class certificate.

ODONTOGLOSSUM MACNABIANUM.

This a very lovely cross between *O. harryanum* and *O. wilkeanum* albens. The sepals and petals are large, with very crinkled edges, the colour being a mottling of deep brownish crimson and cream. The labellum is of medium size, purplish white at the apex, with crimson, purplish and deep yellow markings at the base. The plant exhibited was carrying a raceme consisting of twelve fully developed flowers. The leaves are broader and of a lighter green than most members of this genus. Shown by Messrs. Sander and Son, St. Albans. First-class certificate.

The Orchids described above were placed before the Orchid committee of the Royal Horticultural Society on the 14th inst., when the awards were made.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

COTONEASTER ANGUSTIFOLIA FROM DORSET.

Mr. George Manning, The Gardens, Stock Hill House, Gillingham, Dorset, writes to us as follows: "I am sending you a spray of *Cotoneaster angustifolia* for your table, which I hope will interest you. The colour is not so deep as it was last year, no doubt owing to want of sun. There has been a quantity of berries on the plant, and no doubt in a good season it will make a pretty feature in the garden as a berry-bearing plant, as it appears to be a free fruit-bearing subject. As far as I know, this is the first plant to produce berries in this country, at least that is what was told me by E. C. Buxton, Esq., of Coed Derw, Bettws-y-Coed."

ELEPHANT'S FOOT FROM SOUTH WALES.

The writer hopes the following may be interesting for the Editor's Table, viz., a photograph of the Elephant's Foot (proper botanical name not known to the writer). It was raised from seed some thirty years ago at this place and is now growing in a pot 1 foot 3 inches wide. The "bulb," if it can be so called, is like wood, with outside knotty squares. Strong roots go to the bottom of the pot. From the top of the bulb

the growth has gone to the top of the greenhouse (a few leaves enclosed). The foliage and stem die down about the end of June, when the stem is cut off. In about a fortnight a shoot appears, which at first grows rapidly—3 inches to 6 inches a day. Long, smooth, snake-like side shoots are thrown out, which are drawn together with a piece of tape very gently, as they snap like glass if done roughly. In a month the growth reaches



ELEPHANT'S FOOT RAISED FROM SEED.

the top of the greenhouse, then the foliage develops. — COLONEL HOWELL, *Penrheol, St. Clears, South Wales.*

[A very interesting contribution. The botanical name is *Testudinaria elephantipes*, synonymous with *Tamus elephantipes*.—ED.]

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Shrub for grass plot (H. W. H.).—The character of your soil and the fact that you intend to let the grass grow right up to the stem of the shrub makes your question a difficult one to answer, as very few shrubs would thrive treated thus. Under the circumstances you had better try *Berberis aquifolium*, which has rather a spreading habit. If something neater is required, plant an *Acuba japonica*. Many subjects could be advised did you care to go to the

trouble of making a small bed of good soil, a course we strongly advise you to take.

Climber for brickwork under window (H. W. H.).—If your brickwork is white or yellowish-white you cannot do better than plant *Cotoneaster horizontalis*. This is a neat dwarf-growing subject that looks well on any wall except a red one. For the side of the front door plant the Fire Thorn (*Crataegus pyracantha*), the remarks as to the colour of the brickwork applying equally to this as to the *Cotoneaster*. If the brickwork is red plant a *Ceanothus veitchianus* at the side of the door and a Japanese golden-veined Honeysuckle (*Lonicera japonica aureo-reticulata*) under the window. You must water these well during dry weather.

Where to obtain seeds of Verbena Miss Willmott (A. G. P.).—We cannot tell you where seeds of this *Verbena* may be obtained. It does not usually seed in this country, although one large grower of *Verbenas* that we know states that he believes that it would seed were the flowers fertilised. Propagation is usually effected by means of cuttings. Why not secure a plant or two and try and seed them yourself?

Tubs for Agapanthuses and other plants (Ignoramus).—Tubs of various sorts are used for these plants. Lard pails, to be had from any provision merchants for about 4d. each, answer very well, and will last for several years providing the insides are slightly charred and the outsides painted. Holes must be burned or bored in the bottoms for drainage. Small beer or wine casks sawn in half will cost more, but they will last much longer. Char and paint them as advised for the lard pails. If you require something of a more expensive and elegant character please write again. No, it is not too late to plant *Dielytra spectabilis*, but the sooner it is done now the better. Do not, however, attempt to plant it while the ground is at all frozen.

THE GREENHOUSE.

What to do with frozen Crassulias (W. L.).—As your *Crassulas* have become wilted and browned, we fear that there is little chance of saving them. However, your best course will be to cut away all the affected parts and dust the wounds with finely-powdered charcoal. Then remove the surface soil for a depth of about half an inch, and fill up the space thus made with clean silver sand. Then stand the plants in the sunniest position that you can. The object is to prevent decay; therefore be very careful indeed with water. These plants will stand the soil getting nearly dust-dry, and we advise you to let the soil in which yours are growing get in this condition before you give more water. If the roots are not killed, you may save your plants by acting on this advice.

How to utilise a range of glass houses (Enquirer).—This is one of those questions that a practical man on the spot could give a far more satisfactory answer to than it is possible for us to do. We presume that you wish to keep the small conservatory close to the house as gay as possible throughout the year. If so, the other structures will be none too many to grow plants necessary for the purpose. At all events, this structure, if flowers are needed in the depth of winter, must have additional hot-water pipes, sufficient, in fact, to keep up a minimum temperature, even during severe frost, of 45°. Nothing is said as to the relative positions of the other houses and frames. If they are near enough to each other to be heated from one boiler, we should advise you to certainly have pipes put in the two houses, as you can then grow various greenhouse plants therein. The frames will be valuable in the winter for bulbous plants of different kinds, and in summer for such subjects as Chinese *Primulas*, *Cyclamen*, *Cinerarias*, &c. For a spring display such bulbs as *Hyacinthus*, *Tulips* and *Narcissus*, potted in the autumn and placed out of doors, being afterwards brought on gradually inside, will make a goodly show. In addition to these there are Indian *Azaleas*, *Lily of the Valley*, *Eupatorium*, *Primulas*, *Spiraeas*, *Zonal Pelargoniums*, *Dielytra spectabilis* and hard-wooded plants of various kinds. Then in summer the choice of subjects is large, there being *Pelargoniums* of all sections, *Fuchsias*, *Roses*, *Lantanas*, *Petunias*, *Cannas*, *Lilium longiflorum* and many others. The bulbs of the *Lilium* just alluded to (*longiflorum*) must be potted in the autumn, and may be wintered in the frame, as well as *L. auratum* and *L. speciosum*, which flower later than it. In early autumn, apart from many summer-flowering subjects that are not then over, the *Chrysanthemums* figure largely, while the blue-flowered *Salvia azurea grandiflora* and the scarlet *Salvia splendens* are very useful. For late autumn and winter you have the choice of such things as *Begonias* of the *socotrana* section, including *Gloire de Lorraine*; *Roman Hyacinths*, *Winter-flowering Heaths*, *Tree Carnations*, *Primula obconica*, and the earliest *Cyclamen*, Chinese *Primulas* and *Cinerarias*.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

ANNUAL MEETING.

THE annual meeting of this beneficent institution was held on Thursday, January 23, when the chair was taken by the treasurer, Mr. H. J. Veitch, and a most encouraging report submitted. We need not enter into details here, as a report is given on another page, but the warmest thanks are due to Mr. Veitch and the committee for their unselfish work in holding out a helping hand, through the subscribers, to gardeners or their widows in a time of great distress.

The utmost care is taken in selecting the candidates for election, and it is pitiable to find that out of the list of fifty-two the funds would only allow of twenty-one receiving a pension, and in two instances a year's pension was granted to the candidates through the generosity of Mr. Arthur Sutton and Mr. George Monro.

We feel that the gardeners might work more earnestly in this charitable cause; it is for them and their widows that the institution was founded, and it has been the means of making comfortable in the evening of their lives hundreds of men and women struck down by permanent sickness. Looking through the list of subscribers we find practically the same names year by year, men whose purse seems always at the command of the institution—the Rothschilds, Veitchs, Sherwoods, Suttons and other names we honour for their rich gifts in the cause of suffering gardeners and their widows.

No charitable institution we are acquainted with is more efficiently and economically managed, and this is due to a great extent to the secretary, Mr. G. J. Ingram, who loves the work for its own sake. We look forward to the time when there will be no candidates waiting for that help which is so desired, but all will be placed on the pensioners' list.

There are two funds to relieve cases of exceptional distress, the Victorian Era and the Good Samaritan, which have been of the greatest service since they were established. We hope the institution will gain in strength, but this is only possible with increased subscriptions—the gardener should work more energetically.

FRUIT GROWERS, NURSERYMEN & RAILWAY RATES.

THE *Daily Telegraph* is, as we go to press, devoting much space to the discussion of excessive railway rates in connexion with market garden and nursery produce, a question that is of great importance, not only to the growers, but to the general public. The alleged attempt of the railway companies to form a combination for the raising of the rates for the carriage of such produce is foolish in the extreme, such a course only tending to restrict the sources of supply instead of extending them, which, we think, would be more to the companies' advantage. Such well-known men as Messrs. George Monro, Covent Garden; W. Cuthbertson (Dobbie and Co.); C. A. Pearson, hon. secretary of the Horticultural Trades' Association of Great Britain and Ireland; Edward H. Lewis and Son, Covent Garden; Jackman of Woking and many others have given their views on the subject, and all agree that something must be done to prevent any rise in railway rates and to remedy the many real grievances that already exist. Growers that have experienced any difficulty in the way of unreasonable delay, careless handling of goods, high rates, refusal of compensation for damage done and the many other points that occur in connexion with the transmission of produce by rail should send full particulars, written as concisely as possible, for publication in the *Daily Telegraph*. It is only by combined action that any real remedy can be effected, and growers now have an opportunity of putting their grievances before the public. As Mr. C. A. Pearson says, it is only by convincing the general public of the reality of these grievances that amendment will be secured.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

February 11.—Royal Horticultural Society, Committees meet, 12 noon; Annual Meeting, 3 p.m., Horticultural Hall, Vincent Square. Horticultural Club, Annual Meeting, 5 p.m.; to be followed by Annual Dinner, 6 p.m., Hotel Windsor, Victoria Street, London.

March 3.—Royal Horticultural Society, Committees meet, 12 noon.

"The Sweet Pea Annual."—The fourth issue of this official annual publication of the National Sweet Pea Society is now in the hands of the members, and, as usual, it contains a great deal that is of much use and interest to lovers of the numerous varieties of Sweet Peas. Mr. Hugh Aldersey writes the opening chapter on "Sweet Pea Enthusiasts"; Mr. S. B. Dicks contributes an exceedingly interesting illustrated article entitled "More Historical Notes"; Mr. W. Atlee Burpee sends an open letter on his impressions of the London Sweet Pea show and Sweet Peas in general in this country last year; Mr. Charles Foster deals with the "Germination of Seeds," "The Reading Trials" and

"Early-flowering Sweet Peas" in his usual interesting and concise style; Mr. G. W. Leak sets forth the merits of wire netting as a support for Sweet Peas, giving much useful information as to its cost and method of erection; Mr. G. H. Mackereth deals in a pleasant way with "The Popular vote for Sweet Pea Novelties"; and Mr. W. P. Wright, chairman of the floral committee, addresses a timely warning to the members about the "streak" disease and mixed stocks under the title of "Breakers Ahead." Other interesting contributions are "Sweet Peas in Devonshire," by Mr. R. Bathurst; "Sweet Peas in the Antipodes," by Mr. H. A. Fox, Wellington, New Zealand; and the audit of the London Sweet Pea show, 1907, by the hon. secretary, Mr. C. H. Curtis. The catalogue of Sweet Pea names and the opinions from all quarters are also exceedingly useful. Several attempts to break into poetry are also included, and these, to our mind, are the one deplorable feature about this interesting publication. Surely they do not represent the best and most poetical thoughts that this lovely annual inspires in Sweet Pea-loving bards? Copies of this annual can be obtained by non-members from the hon. secretary, Mr. Charles H. Curtis, Adelaide Road, Brentford, Middlesex; post free, 1s. 3d.

TO A SCHOLAR GARDENER.

O buried deep in Berkshire bowers,
O you that left the arid town,
By day to walk among your flowers,
By night to take the classic down,
And as on long-neglected land,
With maziest overgrowth perplexed,
With keen discriminating hand
Repair the roughness of the text,
And make an ancient plot more fair
And rid from weeds of later age,
Enclosing here, emending there,
The garden of the Muse's page.
There are to whom your gentle toil
Seems to lack reason or excuse:
For tilth that brings not corn or oil,
Such men may say, we have no use.
But others, wiser, when awhile
They call a halt to wain and team,
And glance beyond the alien pile
Deep-shovelled from Pactolus stream,
Will say: We envy not your bowers,
But hail you of the saving few:
While art is art, and flowers are flowers,
Mankind hath need of such as you.
"C. W. B." in *Country Life*.

School gardens in Essex.—The report on the elementary school gardens in Essex for 1906-7 by H.M. Inspector is a decidedly encouraging one. The number of these gardens in the county is forty-two. Of these thirty-three are worked by the school teachers, and in nine cases visiting gardeners are employed. According to the report, "school gardening in Essex may unhesitatingly be pronounced a practical success."

PRIZES FOR READERS. FEBRUARY.

THE BEST FIFTEEN HARDY ANNUALS FOR SUMMER EFFECT.

A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF-A-GUINEA
are offered for the best essays on the above
subject.

Competitors should describe briefly the colours of the flowers, height of the plants, and the best methods of raising and growing them.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Saturday, February 29. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Apples for the new year.—There are one or two notes under the heading of "The Fruit Garden" in THE GARDEN of the 18th ult. which I scarcely think should pass without comment. Your correspondent Mr. W. A. Cook is, I think, rather hard upon the newer varieties of Apples and Pears. Tastes differ, and one cannot lay down any rules for other people's guidance, but personally I should scarcely have chosen Blenheim Orange as one of the best dessert Apples for the new year, as it generally gets mealy before the old year is done with, and certainly for a late variety it is not comparable with Lord Hindlip, which I consider the best late Apple we have for eating. King of Tomkin's County is a very good second to this, but does not develop its full flavour in a bad season. Unfortunately, Lord Hindlip is a weak grower, but the cause of this is most decidedly not over propagation; the writer of the paragraph must have had Chrysanthemums or some such plants in his mind when he wrote about Apples "having been pushed rapidly to get a supply of scions for multiplying the stock for commercial purposes." I have never known Apples forced in heat to produce wood for either budding or grafting, and any attempt to do this would be a miserable failure; at the same time, I cannot think of any other explanation of this most mysterious sentence. As to "inbreeding" being the cause of Apples having a frail habit of growth, I do not think we have sufficient data to form any opinion upon this point, for very few raisers have paid much attention to it, and I know that many of the parentages given are purely guess work, as, for example, Newton Wonder, said to be a cross between Blenheim and Dumelow's. As a matter of fact, it is a chance seedling, with no record whatever of even the Apple the pip came from, but, on the other hand, "cross-breeding," which is also given as a cause for weak-growing seedlings, is generally looked upon as a potent factor in the production of vigour. Turning to Pears, I have nothing to say against the varieties named, except that Thompson (not Thompson's, if you please) being an October and November fruit is sadly out of place among Christmas Pears. Glou Morçean is an excellent variety, and most useful from the fact that it usually ripens at the festive season of Christmas; but out of a collection placed before the Royal Horticultural Society's fruit committee on the 14th ult., Olivier de Serres was the best, followed by Bergamotte Esperen, Glou Morçean and Easter Benrre in the order named, and none of them were anything like equal to President Barabé or Santa Clans, both of which, he it remarked, are new varieties. Passing on to the subject of Plums named in another article, I quite agree with the writer that many of the best Plums far surpass the Green Gage in point of cropping, for in most situations this is a shy bearer, and several of them are quite equal in point of

flavour. Among these I should include Reine C. de Bavay and Bryanston, but I should not include Denniston's Superb, which is, at any rate in the Midlands, of poor quality. I presume it must be good elsewhere or it would not be asked for as it is. I was very pleased to see Alger Pett's remarks upon watering trees planted on walls; dryness at the roots is a very frequent cause of non-success with trees of this class; not only does the wall keep off the rain, as the writer says, but as most of them are built without damp courses they absorb moisture from the soil, which is afterwards lost by evaporation. In the majority of cases a good soaking of water to the roots of wall trees twice a year would be most beneficial, in the early autumn to plump up the buds and in the spring to help the trees to bloom and set their fruit.—A. H. PEARSON, *Lowdham*.

Carnation Winsor.—There would appear a general tendency to propagate an error—quite a pardonable one, it is true—in the spelling of the name of the above Carnation. The variety is of American origin, and a novelty of 1907 so far as we in this country are concerned. Quite freely of late the name has been rendered "Windsor," and as the variety promises to be one of the most popular of recent introductions, it may be as well to set the matter right at once. The correct way to spell it is W-i-n-s-o-r.—E. J.

Window gardens in streets.—For the past three years about this time you have been good enough to allow me to draw the attention of your readers to the efforts of the Metropolitan Public Gardens Association to encourage the formation of outside window gardens in the poorer streets of the Metropolis. The object we have had in view is to relieve the great monotony of many of these thoroughfares, by getting the occupiers to grow plants, flowers, creepers, &c., in boxes, pots, or baskets outside some of their windows. It is astonishing what a transformation is effected by even a few such efforts on the part of the inhabitants, which change the whole aspect of a dull street and gladden the eye of every passer-by. Many of the thoroughfares are too narrow for trees, so no other form of foliage is possible; but, even where trees do exist, the window gardens are a most desirable addition. The association has therefore started prize competitions in various centres, getting the assistance of some suitable organisation in the vicinity to arrange local details. Last year there were twenty centres (chiefly situated in the central, eastern and south-eastern parts of London), 520 entries and 140 prize-winners, entailing an outlay on our part of some £25. The results are considerably in excess of those of 1906, and we are encouraged to go on. I am anxious, therefore, to let it be known that the association is again prepared, so far as its means allow, to make money grants for prizes this year to any suitable parochial or other local organisation, school, or flower show society, &c., willing to arrange as part of its summer programme outside window garden competitions in the poorer parts of the Metropolis. We were able to arrange for competitions last year in connexion with several elementary schools, whose scholars proved to be keen competitors, and I hope that their number may be increased. I should like to add that we should be extremely glad of any contribution towards our prize fund, so that we may not have to curtail the number of our competitions for lack of funds. Any who desire to take advantage of our offer should apply without delay to our secretary, 83, Lancaster Gate, W., who will supply copies of regulations, &c.—MEATH, *Chairman, Metropolitan Public Gardens Association*.

Twelve best Apples for flavour.—There is sure to be a diversity of opinion on this subject, but as your correspondent rightly states the various opinions of growers on "Twelve of the best dessert Apples for flavour"

will prove most interesting and instructive. Some people prefer an acid Apple, a large number a sweet Apple, and others give preference to varieties possessing what is known as a Pine flavour. In dealing with this question it is most important to bear in mind the locality in which the individual varieties of Apples have proved to be of superior flavour. In the county of Hertfordshire the following twelve dessert Apples have been found difficult to beat in respect to flavour, while the majority of them are in suitable seasons good croppers, and when the necessary cultural requirements are afforded them are mostly of clean, healthy growth. These Apples are placed in their order of ripening, and it will be seen that the season extends from August to the following May. *Irish Peach*.—This is an old favourite, of medium size, possessing a delicious flavour. This Apple has often failed under severe pruning; it should be lightly pruned, as the fruits are produced chiefly on the points of the shoots. *James Grieve* is an Apple of Scottish introduction, and one that is often successfully grown where Cox's Orange Pippin fails. This is an Apple which is fast gaining favour, as it is hardy, prolific and of excellent flavour. *Ribston Pippin* comes next, and although much has been said against planting this Apple, owing to it being subject to canker, there are still many growers who, by selecting trees from a clean healthy stock and planting in warm soils and aspects, are very successful with this variety. *Cox's Orange Pippin*.—There is no better Apple for flavour, and, fortunately, this variety can be well grown in all forms, but prefers a warm, rather rich soil. It is wise to plant this variety among other Apples to ensure cross-fertilisation. The finest fruit has been gathered from bush trees growing on the Paradise stock. *Allington Pippin*.—This is an abundant bearer and the fruit possesses somewhat the flavour of Cox's Orange Pippin. The growth is vigorous and healthy. May be grown in all forms with good results. *Adam's Pearmain*.—This Apple is of a distinct sugary flavour and very juicy. In shape the fruits are conical and very pretty, having a yellowish skin, with russet spots and red streaks. Trees of moderate growth and pendulous habit. *Mannington's Pearmain* is an abundant bearer. The colour of the flesh is yellow and the flavour rich and sugary. This Apple is sometimes ready for use in November, but is often in season as late as February. *Warwickshire Pippin* or *Wyken Pippin*.—This is an Apple below medium size, is of rich aromatic flavour, a great favourite in some localities, and deserves a place in every good collection. *Scarlet Nonpareil*.—Fruit rather small, but of a refreshing crisp flavour and very handsome in colour and shape. Growth slender; makes a prolific bearer on the Paradise, but may also be grown as an orchard tree on the Crab stock. *Claygate Pearmain*.—Fruit medium in size, possessing a very rich flavour somewhat resembling Ribston Pippin. Growth of tree strong and rather spreading; succeeds both on the Crab or Paradise stock, but is, perhaps, more fertile on the latter. *Fearn's Pippin*.—Fruit medium in size, of a brisk refreshing flavour and very brilliant in colour. Growth moderate, generally good as a bush, and also successful as an orchard standard. Although most frequently classed as a late Apple, it is often fit for the table in late November and early December. *Allen's Everlasting*.—For dessert in April and May this is an Apple of excellent flavour. Size of fruit medium, and flat in shape. This variety is of rather slender growth, and forms a dwarf and compact tree when grown as a bush. Fruit must not be gathered too early or it will shrivel and become worthless.—C. RUSE, *Munden Gardens, Watford*.

—In selecting the best twelve Apples, the planter will need to have regard to those varieties best suited to his particular climate, position and soil. *Mr. Gladstone* is one of the earliest Apples we have. It is a medium-sized fruit of excellent

flavour. In colour it is red with yellow stripes. The tree is a great bearer and very adaptable to orchard culture. It is in season July and August. *Irish Peach* is a great favourite when in good condition. It requires to be eaten direct from the tree, when its flavour is fine. The tree is of medium growth and a good bearer. It makes a good orchard tree, and is also suited for the garden. It is ripe early in August. *Worcester Pearmain* is probably the most popular Apple in its season that we have. It is a splendid orchard variety, and is in great demand for market. A medium-sized fruit of splendid appearance and excellent flavour. In season August and September. *Lady Sudeley*.—This is a beautiful Apple when well grown, but, like most early sorts, should be eaten directly after gathering, when its flavour is excellent. It is a very persistent bearer, and very suitable for the garden as bush or pyramid. In season with Worcester Pearmain. *Ribston Pippin*.—This variety is too well known to need description. It is, undoubtedly, one of the best flavoured Apples we have, and succeeds best in a sheltered position on a warm soil. In season October to May. *King of the Pippins* is one of the best known Apples. It does excellently in almost any form. In season at Christmas. *Allington Pippin* is becoming a great favourite, as it is

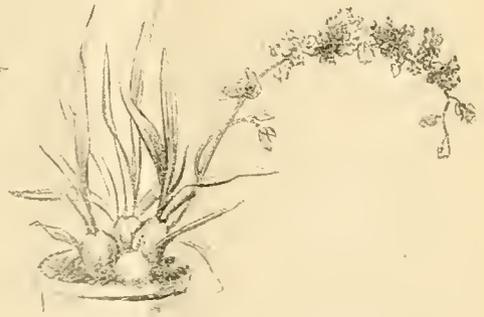
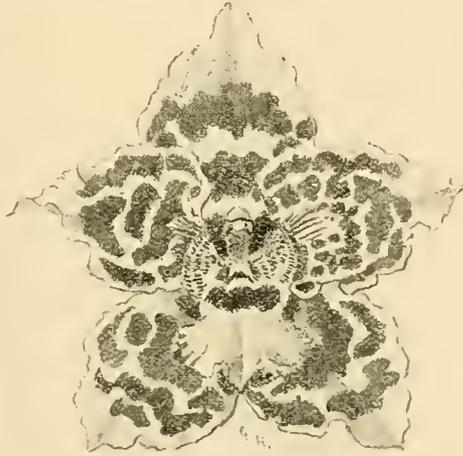
THE GREENHOUSE.

SOME OF THE NEWER CHRYSANTHEMUMS.

THE season that has just passed has not been remarkable for first-class novelties, although a few sorts are of great excellence. The Japanese blooms, as usual, have largely predominated, a few noteworthy specimens being conspicuous. Strange to relate, an impetus has been given to the incurved section by the introduction of one or two sterling novelties. The single-flowered sorts have been shown in immense numbers, and it is pleasing to note that the decorative aspect of these flowers is being better appreciated than was the case at one time. Decorative or market Chrysanthemums are now regarded with more favour. The following embrace some of the better varieties of more recent introduction:

JAPANESE.

H. J. Jones (1908).—This is a very handsome large flower of Japanese incurved form, having long, broad florets of good substance, and the colour may be described as rich golden yellow,



ODONTOGLOSSUM HYBRIDUM BINGELIANUM. (FLOWER REDUCED ONE-HALF.)

(Shown before the Royal Horticultural Society on the 14th ult. by Baron Schröder, when it was awarded a first-class certificate. See page 48.)

better known. In point of flavour it much resembles Cox's Orange Pippin, which is one of its parents, but it is not so fastidious as that variety. It is not keeping well this season, which is no doubt due to the wet, sunless season of last year. November to February. *James Grieve*.—This variety is perhaps not so well known as some of the above, but for flavour and cropping qualities it is hard to beat. It is ripe in September. *Adam's Pearmain* is an excellent flavoured Apple. The tree is an abundant bearer. Can be recommended as being specially suitable for the amateur grower. In season December to February. *Cox's Orange Pippin* is, undoubtedly, the greatest favourite of all dessert Apples. Where the conditions are suitable it should be planted largely. It succeeds well either in the garden or orchard. In season from November to end of February. *King of Tomkin's County* is one of the latest sorts we have. It is of American origin and has a splendid flavour. The fruit should be allowed to hang on the trees till late in the season, when they will keep in good condition till May. The tree is a great bearer and succeeds well in almost any form. *Duke of Devonshire* is another late variety of sterling merit. It is a medium-sized fruit of fine flavour. The tree is a good bearer of free habit, succeeding well in any form or situation.—E. H., *Frogmore*.

with a paler reverse to the florets. This variety received a first-class certificate from the National Chrysanthemum Society on October 14 last, and on the succeeding day an award of merit from the Royal Horticultural Society.

William Petty.—In this instance we have a very interesting novelty of Japanese reflexed form, which impressed the National Chrysanthemum Society's floral committee so much that they wished to see it again. The colour may be described as rich cream, suffused with light rose, and its attractiveness is added to by its yellowish-coloured centre.

Mrs. L. Thorne.—This is an excellent counterpart to the variety H. J. Jones above mentioned, being similar in character to that promising sort. The difference in this novelty, however, is its colour, which is best described as light canary yellow. The florets are long and broad, and build up a Japanese flower of good substance. First-class certificate, National Chrysanthemum Society, October 14 last.

Mrs. G. F. Coster.—This is one of the most remarkable blooms of the past season, being an ideal type of Japanese reflexed. It is an immense flower, having long, broad florets, and is ideal for exhibition. The colour is best described as amber, shaded bronze, a colour that is very pleasing under artificial light. It is of English origin, emanating from the gardens of Mr.

Martin Silsbury, Shanklin, Isle of Wight. First-class certificate, National Chrysanthemum Society, and award of merit, Royal Horticultural Society, in October last.

Lady Smith of Treviske.—This variety will be best appreciated when it is stated to be a primrose-coloured sport, with light reverse to the florets, from the popular white variety Mme. Marguerite de Mons. Like the parent variety, the flowers are deep and solidly built, and are seen to great advantage when arranged in stately vases. First-class certificate, National Chrysanthemum Society, October 28.

F. W. Lever.—This is a Japanese novelty, having very long, broad florets that are slightly indented, curled and incurving at the ends. As an exhibition flower it should be very largely in demand. The colour is rich creamy white, with a richer cream centre. First-class certificate, National Chrysanthemum Society, and award of merit, Royal Horticultural Society, October 28 and 29 respectively.

Miss Faith Moore.—This is an interesting type of the Japanese incurved section, and is a flower having rather narrow florets. It is pure white, and is a distinct acquisition to this section. First-class certificate, National Chrysanthemum Society, October 28.

Wallace Godfrey.—Seldom are Chrysanthemums recognised for their colour alone, but in the present instance the National Chrysanthemum Society commended this beautiful flower for its colour. It may be described as a rich golden amber, tinted rose in the centre.

Metchet Beauty.—The colour in this instance is a rich yellow, freely suffused and tinted rosy red. The flower is quite distinct in form, being a beautiful Japanese reflexed. The petals are broad and long, and are of good substance.

Clara Vernal.—This is another distinct Japanese reflexed decorative bloom, and was certificated by the National Chrysanthemum Society as such. It is a flower of good form and useful size. The colour may be described as a deep rich crimson self. The Royal Horticultural Society also gave an award of merit in favour of this variety on October 29 last.

George Milham (1908).—This is an excellent English seedling from the gardens in charge of the individual in whose honour the flower is named. The date appended to the name of this variety is to distinguish it from an older one bearing the same name, but probably now out of cultivation. The flower is a Japanese incurved, having broad florets of good length and naturally incurved. The colour in this instance is canary yellow. First-class certificate, National Chrysanthemum Society, November 6.

Freda Bedford.—This is a market or decorative variety, and as a representative of this section is distinctly pretty. The florets are of medium width and drooping. In a good light the colour is a warm tone of deep apricot, and under artificial light it is distinctly pleasing. First-class certificate, National Chrysanthemum Society, November 6.

Felton's Favourite.—This is one of the prettiest Japanese sorts of the present season, but cannot be regarded as an exhibition flower. As a matter of fact it is of medium size, having somewhat stiff, crisp, reflexed florets. The colour may be described as glistening creamy white. A magnificent vase of these flowers was exhibited at the November show of the National Chrysanthemum Society, on which occasion the variety received a first-class certificate.

Marquis of Northampton.—This variety will be better appreciated when it is stated to be a beautiful bright bronzy yellow sport from the popular Japanese, sort W. A. Etherington. As an exhibition variety it should be much in demand; the blooms staged on the occasion when the National Chrysanthemum Society gave it a first-class certificate were large and of good form. To see good blooms, a mid-August bud selection should be made. D. B. CRANE.

(To be continued.)

HOW TO GROW THE WINTER CHERRY (SOLANUM) IN POTS.

DURING autumn and the New Year berry-bearing plants are much appreciated by amateurs for the embellishment of their conservatories, windows in the dwelling-house, and on tables in the rooms. *Solanum Hendersoni*, *S. capsicastrum* and *S. Williams's Hybrid* are the best varieties for the purpose. The plants are easily raised from seed and also from cuttings taken in spring. Some put out the plants in the open border during the summer months, and then lift and repot them early in September; but I advise the amateur to grow the plants in pots throughout the year, as there would not be the risk of giving a check to the development of the berries and of losing some of the leaves, as often happens when the plants are put out in borders and afterwards repotted.

PLANTS FROM SEEDS.

The seeds should be sown in a shallow pan or in a flower-pot; but, as good seeds germinate freely, it is a mistake to sow them thickly, as the seedlings would be weakly. It is far more satisfactory to have a few very strong plants,

have reached the stage of growth for being put into pots singly, they may be grown in a cool frame, and they should be kept in this structure until the final potting has been done, for which purpose 6-inch and 7-inch pots will be large enough. The loam used at the final potting should be fibrous and lumpy. Directly the plants are established in their flowering pots, put them on a bed of ashes in an open, sunny position, and keep the foliage clean by frequent syringings. Straggling shoots should be pinched, and then each plant will form a nice bush. Do not feed until the large pots are getting filled with roots; then give weak doses of clear soot water once a week and similar ones of manure water twice a week. After the berries have formed, use an artificial manure according to the directions given with it. Put the plants in a warm greenhouse early in September, but admit plenty of air on all fine days; frost and fog must be kept out.

PLANTS FROM CUTTINGS.

The best cuttings are obtained by severely pruning an old plant and then selecting the strongest of the resultant young shoots. The



FRUITS OF PURPLE GAGE PLUM.

busby and shapely, than many small, weakly ones. The soil should consist of rich loam, two parts; leaf-mould, two parts; and sufficient very coarse sand to make it porous. The drainage of the pan or pot should also be ample. Drop the seeds about 1 inch apart all over the surface of the soil, and then bury them a quarter of an inch deep. Place the seed-vessel in a greenhouse or a warm pit where a temperature of 58° or thereabout can be maintained during the day from the heating apparatus. The temperature may be a few degrees lower at night. If water is needed, immerse the pan to its rim in a vessel containing tepid water, and hold it so until the surface of the soil becomes moist.

When the seedlings are about 1 inch high they must be carefully transplanted in a similar soil in boxes 4 inches apart. Keep them near the glass; then a sturdy growth will result. The next shift must be to small pots, one plant in each. To the soil above recommended add a peck of well-rotted manure and a 6-inch potful of soot to two bushels; also put some Oak or Beech leaves on the corks and a teaspoonful of soot on the leaves. By the time the young plants

latter should be inserted in a light, sandy soil in small pots, and then kept under a bell-glass or in a propagating frame until they are rooted. Afterwards pot them and treat them as advised in the case of seedlings, but the point of each plant must be cut off when they are about 4 inches high, in order to induce a branching habit of growth. AVON.

FIBROUS-ROOTED BEGONIAS.

CUTTINGS where increased stock and shapely plants are required must not be overlooked, as these strike readily; the present time should be seized upon to augment the existing batch. Begonias of the ornamental-leaved type, of which *B. Arthur Mallet* may be instanced, should be similarly treated; these if struck now and pushed on soon become useful sized plants, which are most serviceable on account of the rich velvety tone of colouring in the foliage. *B. M. Hardy* comes next to *B. Arthur Mallet* in point of merit, and even stands the season better. Other varieties of good habit and character are *B. Naomi Mallet*, *B. Lucy Cluson*, *B. Marie Louise* and *B. Decora*.

THE FRUIT GARDEN. THE ROSE GARDEN.

SOME GOOD PLUMS FOR AMATEURS' GARDENS.

AT this, the planting season, the amateur is anxious to secure the best Plums, and I will note a few really good croppers, suitable methods of culture and their fruiting qualities. The Gages will always be general favourites, but some of the best as regards flavour are shy croppers. This is unfortunate, as it is not advisable to grow such varieties in quantity. The variety illustrated (Purple Gage, or, as it is sometimes called abroad, the Reine Claude Violette) is a splendid Plum of medium size, roundish, slightly flattened at the end, the skin purple, with yellow dots and covered with a blue bloom. The flesh is a greenish yellow, firm and sweet and the flavour is delicious. The tree is very hardy and a great bearer in any form, but well worth a wall in the northern counties.

For early supplies the useful River's Early Prolific is valuable. This makes a compact tree and is by no means a bad dessert sort when fully ripe at the end of July. Victoria, another of the cooking class, is also most useful for early September; it rarely fails to crop and is a great bearer. River's Monarch is also excellent and a heavy cropper. It is a large black Plum, and does well as a standard, but it must not be hard pruned. For later supplies the late Orange is a splendid fruit, and though a dessert variety is so free that I give it a leading position for late use.

I have referred to the Gages, and here mention must be made of Early Transparent, a splendid early variety, with yellow fruits, and excellent for wall culture. Jefferson or American Gage is a grand dessert Plum, doing well as a bush, pyramid or standard. It has a rich flavour. Late Transparent Gage is another very good variety that does well in any form; it is well worth a wall in the north. The fruit keeps well when gathered. The Gages are specially noted for their very sweet and delicious flavour.

G. W.

GRAPE APPELLE TOWERS

AMONG the many introductions of new Grapes of recent years this variety stands out prominently as one of the best, and bids fair to replace some of the older varieties which we have had to rely on for late use. Many gardeners (especially amateurs) whose resources are limited need be very careful in the selection of varieties when planting young Vines. It is usually three or four years before he can prove for himself whether a new introduction is going to be a success or not, hence it is not wise to place too much reliance on the recommendation usually sent out by the introducers. After several years experience of the above variety I can confidently say it is one of the best late Grapes we have. It is a black Grape of medium size, round oval berry, the bunch is handsome in appearance, its quality and constitution all that could be desired of late Grapes, and its long keeping quality is one of its most prominent features.

Frogmore.

E. H.

ROSE DUNDEE RAMBLER.

DUNDEE RAMBLER ROSE, shown in full flower in the illustration, is one of the old Ayrshire Roses which are happily not quite overshadowed by more recent sorts. Among the many ways of worthily using the free Ayrshire Roses, one of the best is to leave them to their own natural growth, without any staking or guiding whatever. Due space must be allowed for their full size, which will be a diameter of some 10 feet. Of these useful garden Roses none is more beautiful than The Garland, with its masses of pretty blush



ROSE DUNDEE RAMBLER ON A GARDEN ARCH.

white bloom. It is well worth getting up at 4 a.m. on a mid-June morning to see the tender loveliness of the newly-opening buds; for beautiful though they are at noon, they are better still when just awakening after the refreshing influence of the short summer night. Several others among the old Ayrshires are excellent in this way of growth, though perhaps there are none to beat The Garland and Dundee Rambler, the latter with flowers of a pleasing warm white. A grassy space where they may be seen all round, or a place where the great bush may be free at least on two sides, are most suitable, or they may be used as central or symmetrically recurring points in a Rose garden of some size. The young growths that show above the mass when the bloom is waning are the flowering branches of next year; they will arch

over and bear the clusters of flowers on short stems thrown out at each joint. The way these young main branches spring up and bend over when mature is exactly the way that best displays the bloom. Each little flower of the cluster is shown in just the most beautiful way; and it is charming to see, when light winds are about, how the ends of the sprays, slightly stirred by active air, make pretty curtsying movements arising from the weight of the crowded bloom and the elasticity of the supporting stem.

TWO NEW ROSES.

EMPERESS ALEXANDRA OF RUSSIA.

MESSRS. WILLIAM PAUL AND SON, Waltham Cross, Herts, are the raisers of this unique Tea Rose. It was introduced in 1897, and does not seem to be as widely known and appreciated as it ought to be. Let me recommend all amateur rosarians to at least get one. The raisers describe it "as having buds of bronzy salmon and open flowers a rich lake-red, shaded orange and fiery crimson." Now this description, although perhaps as near the mark as possible, utterly fails to give one any idea of its colour. One must not use too many adjectives, but besides being original in respect to its colour, it really is a lovely shade, and most striking in the garden. I saw three very fine specimens of it at the Gloucester show last summer. Everybody was attracted by them; in fact, they were so distinct and beautiful that no one could have passed them by. I have only had one tree in my collection, and have been fairly successful with it, though I am told that in some localities it is a Rose that does not open any too well. Anyhow, last summer it did so well with me, and seeing the very perfect blooms of it at Gloucester, I ordered more for 1907-8. It is a good grower, has nice foliage and bears freely flowers of good size, full and globular, with somewhat thin petals. I may have been lucky in its culture, but it had quite ordinary treatment, and if only its sisters do as well this coming summer I shall recommend it strongly. At all events, it is most effective in the garden, and should be tried by all who have not got it.

ELIZABETH BARNES.

Some of us may think 7s. 6d. rather too much to pay for a new dwarf Rose, but my wife tells me, when discussing a new hat, "If you must be in the fashion, you've got to pay for it." Well, if any reader can screw up courage sufficient to order this new Hybrid Tea for 1908 and pay his or her 7s. 6d., they will get a lot for their money. On its arrival do not on any account unpack it till frost is out of the ground or either when the ground is wet and sodden. The best month for planting Roses is November. Now I would order for delivery early in March. The raisers are Messrs. Alex. Dickson and Son, Newtownards, County Down, Ireland. It is a Rose of the most entrancing beauty and formation, and will attract attention not only from the connoisseur, but from everyone who sees it. I saw it in the raisers' grounds at Ledbury last summer, and predict a great future for it; indeed, in a very few years it will become a most popular Rose. The raisers describe it as in

colour satiny salmon rose, with a fawn centre, suffused with yellow, the outside of the petals deep rosy red, shaded with copper and yellow. The flowers were large and extraordinarily full—a beautiful type, somewhat pointed in the centre and deliciously scented. Q.

DO WE MANURE OUR ROSES TOO MUCH?

WE shall soon have our thoughts directed to the matter of manuring our Roses, and it occurred to me that this subject might profitably be ventilated through the columns of THE GARDEN. We are constantly being told that the Rose is a gross feeder, and the beginner, thinking he is doing the right thing, gives his newly-planted Roses liberal doses of both animal and artificial manure, on the principle that if a little is good a quantity will be better. This pernicious practice is responsible for an enormous mortality among Rose plants, especially where chemical manures are employed. I firmly believe some of our more advanced Rose growers are finding out to their cost that there is such a thing as over-dosing with chemicals, and it would be interesting to have their experiences of successes and failures. One great disadvantage of over-feeding is the stimulus given to the production of gross unripe wood, which a severe winter would most assuredly destroy, although the grower can somewhat regulate this matter by judicious thinning out of the old wood in August and pinching out the points of the gross wood. We can do much to counteract the evil effects of over-manuring by periodically transplanting our Roses, say, once in three or four years, but when this is done a new site should be found for the plants, so that the soil in the old situation may be sweetened by exposure to the air.

My opinion is that we cannot do better than adhere to well-decayed farmyard manure, with the addition of, say, sewage, soot and steamed bone-meal. P.

NOTES ON THE WILD ROSES (SPECIES).

(Continued from page 43.)

ROSA SANCTA.—From Abyssinia. This is said to be identical with the Rose of the early Egyptians, and used by them in the wreaths that have been found with mummies. Its large, bright pink flowers are not very distinct, that is if my plant is true to name, and I have not so far been able to verify it.

R. scabrata.—A fine vigorous bush with distinct foliage and strong spines, the flowers rather larger than usual and of a pretty shade of pink.

R. sericea.—One of the most distinct of species. The flowers have only four petals instead of five, and they are pure white, contrasting well with the small dark green foliage, at the base or axils of the leaves of which they are produced; the whole appearance of the plant is distinct. Some notice has perhaps been attracted to the type by the introduction during 1906 of a very striking variety sent out by Messrs. Paul and Son of Cheshunt under the name of *Sericea pteracantha*, its prominent feature, from which I take it its name is derived, is its enormously large flat spines or thorns extending often over the whole space on the stem between the leaves, sometimes 2 inches

in length. In their young stage and on the growth of the year these are bright red, and if grown so that the sun shines through them they are translucent and very beautiful. The flowers are I think slightly smaller than those of the type, but have the same characteristic four petals only and are likewise white. As it is only on the young wood that the extraordinary colour is seen this should be encouraged as much as possible, but so far the growth of my plant is not vigorous.

R. sinica (sometimes known as *camellifolia*).—A beautiful evergreen Rose, that is ten'er, with



THE MOON DAISY (PYRETHRUM ULIGINOSUM) IN THE GARDEN OF MR. A. GILL, EVERSLEY, POOLE.

large white flowers. Interesting as one of the parents of *Sinica anemone*, that most beautiful of all single Roses.

R. setigera (the Prairie Rose of North America). Interesting by reason of its late-flowering period; semi-climbing and fairly free.

R. spinosissima (the well-known Burnet Rose). A native plant and parent of all those beautiful Scotch Roses; the most interesting I have already referred to (*R. s. maxima*) under the head of *Altaica*.

R. simplicifolia or *herberifolia*.—I have only the variety known as *Hardy*, the peculiarity of which lies in its foliage, which is very minute, and its curious *Cistua*-like flowers. It is the only Rose that I can recall that has a spot or blotch on the petal. Its colour is yellow and the spot dark brownish maroon; a very dwarf grower.

R. watsoniana.—Another curiosity with its foliage reduced almost to filaments and with small insignificant pink flowers.

Purley.

H. E. MOLYNEUX.

THE FLOWER GARDEN.

THE MOON DAISY.

(*PYRETHRUM ULIGINOSUM*.)

ONE of the finest groups we have seen of this beautiful flower is represented in the accompanying illustration. The Moon Daisy is a great favourite of the writer's—tall, leafy and crowned with white flowers in the late year, flowers of a soft white, which seem to gain in beauty on moonlit evenings, much the same as the White-stemmed Bramble does in winter. No plant is more easily grown, if some care is taken, than the Moon Daisy; its growth is remarkably vigorous, as the illustration suggests, and it increases rapidly, replanting of the strong tufts being needful, in our experience, once in every three or four years. One thing it does appreciate and that is a moist soil. We planted a lot of it a few years ago in a damp ditch and there sprang up a little forest of stems and in autumn an abundance of flowers, which bent prettily in the wind. It is very pleasant to see the wavy flower-burdened stems on a sunny September day, when the Asters or Michaelmas Daisies are making blue clouds everywhere. The Moon Daisy may be planted whenever the weather is favourable, but only in well dug and manured soil, and watered freely during the summer if prolonged dryness is experienced. On a dry, hungry border the stems do not rise more than 18 inches. Its true beauty is only revealed when we see it as represented.

ALPINE OR ROCK PLANTS FOR DRY PLACES.

It* very frequently happens in many gardens that there is a border or corner fully exposed to the rays of the sun nearly all day, with the result that the soil becomes so parched and dry that the owner is at his or her wit's end to know what to plant in it with any hope of success. Happily, Nature has provided many plants that will thrive in such a position, and it is now intended to point out some that are especially adapted for planting on rockeries that are notorious for their parched character during the summer months.

Perhaps the most showy subject of all is the charming dwarf-growing annual *Portulaca grandiflora*. This delights in a sunny aspect, and, providing reasonably good soil is afforded, it will grow and flower with but little attention. Seeds are sown the third week in April where the plants are to flower.

The Stonecrop or *Sedum* family is one from which we can select plants for our purpose with comparative freedom. The common little British plant, *Sedum acre*, is charming when draping a large boulder with its bright yellow flowers and green leaves, while for variation the golden-leaved form may be planted. *S. spectabile* is a tall-growing species that may well find a position at the back of the rockery; its pink flowers will be very welcome during September. *S. rupestre*, *S. spurium* and *S. Sieboldii* are others that are well suited for a hot, dry rockery.

The Houseleeks or Sempervivums also provide an abundance of sun-loving, shallow-rooting plants, the pretty rosettes of pointed succulent leaves, often surmounted by curious-looking inflorescences, rendering them objects of much interest. *S. glaucum* and *S. tectorum* are two well-known yet handsome sorts that will thrive in the hottest position during the summer months, and the lesser-known *S. montanum* and *S. californicum* will also do well in some localities. Gold Dust (*Alyssum saxatile*) is another good subject for a hot position, and the evergreen Candytuft (*Iberis sempervirens*) may also be successfully employed if a good rooting medium is provided. In the South of England some of the Prickly Pears (*Opuntias*) are used, their curiously-lobed stems, studded with clusters of spines, producing a unique effect in the rock garden. *O. camanchica albispina*, *O. Engelmanni* and *O. Ficus-indica* are sorts that might well be tried.

The great thing during the winter is to keep them dry, and to this end they must be provided with very porous soil, one in which a quantity of crushed bricks has been incorporated being preferable. There are many other plants that could undoubtedly be used for a hot and dry rockery did the circumstances demand them, and owners of such positions would do well to experiment with any plants that are of a succulent or woolly character.

THE MOUNTAIN CLEMATIS (*C. MONTANA*) IN NEW ZEALAND.

DR. ALEXANDER DOUGLAS writes from Reed Street, Oamaru, New Zealand: "The accompanying illustration may be of interest to your readers. The Clematis montana shown on the arch and pergola displays its wealth of white bloom for an extent of 60 feet in length, growing through the yellow Banksian Rose on one side and Paul's Carmine Pillar on the other. These flowering, as they all do here, at one time, make a great show of colour. In front is a native Flax and behind a native Cabbage Tree." [A similar effect might be obtained here, the Clematis and Paul's Carmine Pillar Rose both making a free growth; the Banksian Rose is certainly tender, but in southern counties flowers abundantly out of doors.—ED.]

COLOURED PLATE.

PLATE 1342.

THE ANNUAL SCABIOUS.

ONE of the most beautiful of annual flowers is the Scabious, which was so finely shown last year by Messrs. Dobbie and Co. of Rothesay, Scotland.

The flowers represented in the accompanying plate were taken from this strain, which was remarkable for its varied and exquisite colours. Nothing much can be said regarding the culture of the Scabious, as it is very simple. To obtain the best results the seed should be sown in a greenhouse during February, the seedlings transplanted into boxes or frames when large enough to handle, hardened off, and duly planted out in well-prepared enriched beds about the beginning of May. This is how the fine flowers which Messrs. Dobbie exhibited before the Royal Horticultural Society last autumn were obtained, and which caused so much comment at the time. The strain received an award of merit. Seed may also be sown out of doors in March and April, and the plants will bloom in the autumn. This old-fashioned yet beautiful annual is grown much more extensively in the North of England and Scotland than it is in the South, great interest being taken in it by cottagers and gardeners there.

TREES AND SHRUBS.

TWO BEAUTIFUL AND EASILY-GROWN FLOWERING SHRUBS.

IT is surprising how seldom one meets with the double-flowered Chinese Plum (*Prunus triloba flore-pleno*) outside large establishments, yet its many merits and few requirements render it a plant eminently suitable for the amateur and small grower.

It is one of the most handsome and showy hardy flowering shrubs that we have, and, providing a few simple rules are observed in its cultivation, it is a remarkably easy shrub to grow. Although quite hardy it is advisable to plant it against a south wall, owing to its flowering in April, else late frosts are very apt to seriously damage the handsome bright pink flowers. It needs a rich, well-drained soil of medium texture, and on no account must it be allowed to suffer for want of water during the summer months. It flowers entirely on wood of the previous year's growth, hence pruning will consist of cutting close back to the old wood all these growths as soon as they have flowered, which will be the end of April or early in May. If a good mulch of well-decayed manure can be given immediately afterwards, so much the better, as this will induce strong young shoots to be formed for flowering the following spring. The splendid specimen on the Duchess wall at Kew is a subject well worth looking for during the early spring months. Besides forming such an excellent shrub for south walls or beds in the open, it is splendid for forcing under glass.

to until the plants have reached the height required to fill the position in which they are planted. Almost any good garden soil suits this shrub, but, where the cutting back system is adopted, heavy feeding by means of mulching with well-decayed manure as soon as the pruning is done will be required, the idea being to encourage the formation of strong young shoots. This shrub is also suitable for gentle forcing under glass. *Forsythia viridissima* is also a good species, much like *F. suspensa*, but of more erect habit.

OLEARIA HAASTI.

THIS pretty dwarf shrub is well adapted for growing in towns, as smoke and other fumes do not affect it, and it is especially suitable for small gardens, being dwarf in habit and possessing very free-flowering qualities. It is grown somewhat extensively in the cemetery at Blaina on an exposed situation, but it is quite at home, and the smoke and sulphury fumes from the furnaces do not seem to affect it at all. For the last three years at least the plants have flowered very profusely, being really a sheet of white blossom. I may add that this beautiful shrub is much more hardy than a great many suppose. I have seen old-established plants doing well and flowering very profusely every year at East Lothian.

J. KENNEDY.

STAPHYLEA COLCHICA.

THIS is a very beautiful shrub, suitable alike for early forcing in the greenhouse or for outdoor planting, as it is quite hardy. But it is to call



ARCH COVERED WITH THE MOUNTAIN CLEMATIS (*C. MONTANA*) IN A NEW ZEALAND GARDEN.

Forsythia suspensa is another shrub whose merits demand that it should be more extensively grown. It is true that one meets with it more frequently than the *Prunus*, but it is always welcome and there is no danger of it being planted too extensively. Like the *Prunus* it is very easy to grow, and it has the additional advantage of the flowers not being injured by frost. Two systems of growing it are adopted, one being to allow the plants to grow naturally and produce long, pendent branches that are covered with bright yellow bell-shaped flowers in April; and the other is to prune the young shoots back hard to the old wood as soon as they have flowered, precisely the same as advised for the *Prunus*. This cutting back will not, of course, be resorted

to until the plants have reached the height required to fill the position in which they are planted. Just at this season many amateur and professional gardeners are procuring such plants as Azaleas, Lilacs and Rhododendrons for the beautifying in the near future of their greenhouses. May I suggest a trial to those who have not done so of a few plants of the above? Compared with the afore-mentioned plants, the sight of the *Staphylea* is rare indeed. Yet I venture to say it is equal to either of them for beauty and fragrance combined. Its flowers are pure white, are produced in large terminal trusses and are bell-like in shape. Its lasting quality is also good. Any good garden soil will suit it, but a partially-shaded position will be better than where the hot sun would play upon it. C. T.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

WINDOW PLANTS.—The weak and elongated growths of straggly Geraniums should be cut back to within 2 inches or 3 inches of their base. This will promote fresh, vigorous growths, and ultimately make shapely plants. Shoots at the base of the plants should be detached and made into cuttings. Keep the leaves of foliage plants clean by frequent sponging. Water somewhat sparingly for a time—really until the days lengthen appreciably—such plants as Fuchsias, Geraniums, Cacti and Amaryllis. Fuchsias may with advantage be cut back at once with the object of providing cuttings and encouraging the development of sturdy shoots.

Greenhouse and Conservatory.—Violets in pots in the cold greenhouse should be kept near the glass and the structure freely ventilated. Cinerarias in the cool greenhouse and conservatory should now be progressing, but as they are very liable to attacks of green fly, they should be carefully overlooked. Plants affected should, just previous to coming into bloom, be dipped in some insecticide and washed free from it immediately afterwards. A solution of Sunlight soap is a simple and effective remedy. Arum Lilies are benefited by frequent applications of manure water. Eradicate green fly directly it is seen or trouble will ensue; a sponging of the leaves will save much trouble in this respect.

Hardy Flower Garden.—For early displays sow Sweet Peas in borders with a warm aspect where the soil is well drained. Sow thinly about 2 inches to 2½ inches deep. Plant Lilies and other bulbs; this work should not be delayed. Plant in soil that is nicely broken up and friable, afterwards mulching the bulbs with leaf-mould. In warm situations old plants of Pansies will be making splendid clumps. If an early display is desired, they should be left undisturbed; but if stock has to be increased, lift the old plants and divide them into pieces, each with a few shoots and roots adhering.

The Fruit Garden.—Trouble from birds may be anticipated at this period. For this reason dust the branches of Gooseberry trees with slaked lime as a protection for the fruit-buds, doing this on a showery day. Another simple remedy against their depredations is to stretch freely over the branches black cotton or thread.



2 THE SAME PLANT AFTER THE GROWTHS HAVE BEEN DETACHED.



1.—AN OLD STOCK PLANT READY FOR CUTTING BACK.

Morello Cherry trees on walls will now need attention. Securing them to the walls or fences needs to be very carefully done. Use good shreds fully 2 inches in length and half an inch or more in breadth. Place the shred in loop-like form round the shoot it is desired to control and fix it in such a way that the whole of the weight rests on the shred itself.

Cold Frames.—For the next month or two the cold frames should be used continuously for raising and increasing the supply of many plants. Constantly overlook the occupants and remove decaying foliage. Auriculas should be coming on. Keep the soil free from weeds and decaying foliage, and give them a light top-dressing of some rich soil. Green moss on the surface should be carefully scraped off. Sow Sweet Peas in pots for planting outdoors in April next. Five or six seeds in a pot 3 inches in diameter, or one seed in a deep 3-inch pot, will answer well.

The Vegetable Garden.—We are just making a new bed of Mint. The ground has been trenched and a heavy dressing of well-rotted manure incorporated. We plant the creeping-like roots in rows about 9 inches apart and about 2 inches deep. For the earliest crops of Peas, Beans, Carrots, Spinach, Lettuces and Radishes we always select a sheltered border with a warm aspect, and make sowings at this early period when the weather is free from frost. It is well to make small sowings thus early, to be supplemented by others of a larger kind later on. The first sowing of Parsley is now being made. This is sown 1 inch deep in drills about 1 foot apart.

PROPAGATING ZONAL PELARGONIUMS OR GERANIUMS.

THESE may be increased now in very simple fashion, provided care be observed in the preparation of the cuttings and their treatment during propagation. Soil, too, is of some importance, and no pains should be spared to procure ingredients of a suitable character. The advantage of beginning propagation early in the year is that plants of a desirable variety are available the sooner.

HOW TO DEAL WITH THE OLD PLANTS.

At this period our stock of Geraniums is, perhaps, represented by a few old plants such as Fig. 1. The increasing length of the days has promoted growth of a suitable character, and

with such material it is possible to procure cuttings that should root readily enough. Some of these old plants will develop shoots in sufficient quantity to provide six good cuttings. Each growth should be detached with a sharp knife, leaving about two joints of the shoot removed on the old stems. Old plants treated in this way will soon emit new shoots, which will provide a free display of blooms later on in the year. Fig. 2 represents the same old stock plant after it has been cut back for the purpose of providing cuttings.

HOW TO MAKE THE CUTTINGS.

Fig. 3 represents a shoot detached from the old stock plant. It will be seen that the long-stalked leaves continue nearly down to the base of the cutting. To insert the cutting just as it is would be to court failure, and for this reason remove the lower leaves by simply bending back the leaf-stalk. At the same time trim off all the bracts or scales found at the bases of the leaf-stalks. Should any of the cuttings have a truss of flowers in embryonic form, they, too, must be pinched out. Fig. 4 is a good type of cutting, and aptly illustrates the points to which attention has been drawn in the above notes. In this case it will be seen the lower leaves and all bracts have been removed, and as a finish the



3.—A SHOOT SUITABLE FOR A CUTTING.

stem of the cutting has been cut through just below a joint. The prepared cutting in Fig. 4 is the actual shoot represented by Fig. 3.

HOW TO INSERT THE CUTTINGS.

THESE may be inserted singly in deep 2½-inch pots, or a number may be placed around the inside edge of pots measuring 3 inches or 5 inches in diameter. Where large plants of high culture, bearing trusses of bloom of good quality, are desired, it is better to insert the cuttings singly in small pots, but for ordinary greenhouse or conservatory decoration the other method will answer very well. With a dibber about the size of a Cedar-wood pencil make a hole about 1½ inches deep, place a pinch of silver sand in the bottom of this and insert the cutting so that it rests firmly on the bottom of the hole. A couple of sharp raps on the potting bench, followed by lightly pressing the soil with the thumb round the edge of the pot, will finish the operation. A suitable soil for this purpose is made up of equal parts of loam, leaf-mould and good silver sand, all well mixed and passed through a sieve with a half-inch mesh. Fig. 5

shows the method of inserting a number of cuttings in one pot.

TREATMENT OF THE CUTTINGS.

After inserting them, place the pots close together in a light and warm corner of the greenhouse, and give the cuttings a watering overhead through a fine-rosed can to settle the soil round them. Flaggings must be avoided, if possible, and watering lightly overhead on bright days is a great boon. For three to four weeks the temperature must be maintained at from 55° to 60°, and all that is then required during this



4.—THE SAME SHOOT PREPARED FOR INSERTION.

period is to supply the cuttings with water only when they need it.

POTTING UP THE CUTTINGS WHEN ROOTED.

When roots have formed, remove the young plants to shelves near the glass to keep them sturdy. Should any grow unduly fast, pinch out the top of the shoot. Water sparingly for a few days after this pinching process. Other plants must be carefully looked after regarding watering, as on fine, bright days the soil quickly gets dry. When the young plants give evidence of making headway they must be repotted. The larger and more robust young plants need pots 4 inches across, and those less vigorous may go into pots measuring 3 inches or 3½ inches in diameter. The soil for this repotting ought to consist of two parts good fibrous loam, half a part leaf-mould, half a part well-rotted horse manure, and one part of coarse sand, with just a dusting of bone-meal if this is easily obtainable. Break up the loam with the hands, but riddle the leaf-mould and manure through a half-inch sieve. Mix well before using. After crocking the pots, which should be washed quite clean, fill in a small quantity of the compost; then place the young plant (rooted cutting) in position, filling in all round with the prepared compost and pot firmly. Subsequently place the plants together on a nice cool bottom on the side benches of the greenhouse. Shade for a day or two should the weather be bright, and in about three days water with a fine-rosed can.

FINAL POTTING.

This must be done when the plants have filled their smaller pots with roots. The soil should consist of two parts good fibrous loam, half a part each of leaf-mould and well-rotted manure, and a quarter part each of crushed charcoal and silver sand. A dusting of bone-meal is highly beneficial. Pots 6 inches in diameter should be used, and the soil made very firm.

HINTS ON WATERING POT PLANTS.

THERE is perhaps more art in watering pot plants than in any other phase of their culture, hence it is not surprising that amateurs, and even some professionals, often go astray in this seemingly simple operation. Although hard and fast rules cannot be laid down for the watering of pot

plants, the consideration of some of the most dangerous points may perhaps be of profit. At the outset I would impress upon the cultivator the absolute necessity for knowing his plants. By this merely knowing their names is not meant; what is required is a knowledge of their rooting system, their leaf system, the kind of soil in which they are growing and also the temperature of the atmosphere that surrounds them. We must, above everything else, always keep the fact prominently before us that plants growing in pots, even under the most favourable conditions, are existing under artificial treatment. Armed with an intimate knowledge of his plants and bearing in mind that they are existing under artificial conditions the cultivator is well on the road to success in watering them.

Before the plants are put into their pots the careful grower will see that ample drainage is provided by placing broken pots or cinders over the drainage hole. This will go a long way towards the mitigation of over-watering. In applying water always give sufficient to soak the ball of soil from top to bottom, nothing being worse than serving it in dribbles. If a plant requires water at all it needs enough to thoroughly soak the whole of the soil in the pot, and to this end enough space should be left when potting to enable sufficient to be given. Many amateurs make the mistake when potting of filling the pots right to their brims with soil.

If a plant has become so dry as to cause the leaves to flag the best course to adopt is to immerse the pot in a bucket or tank of water for an hour or two, because it will be almost impossible to soak the ball of roots and soil by watering it in the usual way, owing to the soil having shrunk away from the sides of the pot. The amateur, especially during the dull days of winter, is far more likely to over than to under water his plants, and the former is the most fatal of the two, because its ill effects only reveal themselves gradually. In the winter months, therefore, only give water when there is a likelihood of the plant suffering for the want of it.

Newly-potted plants often suffer much at the hands of a careless or ignorant wielder of the water-pot. After they have had one watering to settle the soil about them great care should be taken not to apply more before it is actually required. Remember that the plant has had a check, and that roots will permeate the new soil much more readily when the latter is moderately moist than they will when it is saturated. If the leaves hang down at all this does not necessarily mean that the soil is dry, but rather that the atmosphere is arid, and a light syringing overhead under these circumstances will put matters right. The same remarks apply even more forcibly to cuttings. Keep the soil moist, not sodden, if you desire them to root, preventing evaporation of moisture from the leaves and soil by plunging the pots in Cocoanut fibre refuse and placing a glass case or frame over them.

Many amateurs have an idea that when a plant begins to assume a sickly appearance it needs water, and accordingly supply it in large quantities, never thinking that they are making matters worse. In all probability the mischief was first caused by superfluous moisture in the soil, and the proper course to take will be to examine the drainage hole and see that it is clear, then withhold water until it is quite evident that the plant will suffer if it is kept longer without it. The life of a valuable plant that has become sickly may often be saved by keeping the soil in the pot on the dry side for a time.

WORK TO DO DURING FROSTY AND WET WEATHER.

WE may still with almost certainty look forward to several weeks of frosty or wet weather, when the usual gardening operations must necessarily be at a standstill, and the amateur is apt to regard this time as lost, at least so far as his or her garden is concerned. This need not,

however, be the case, as there is plenty of work that can be done when the soil is frozen hard or when heavy rains prevail, and it is the object of this article to remind amateurs of the various tasks that need attention now.

Where manure has to be wheeled on to kitchen garden, fruit tree or flower plots, advantage ought to be taken of a hard frost to get it done. No damage will be done to the soil or paths, and the work can be performed with ease and comfort. Leave it in heaps until the frost departs. Although a cold task, it is often necessary to complete the pruning and nailing of fruit trees during frosty weather, as one can get about the plots or borders then without treading the soil into a concrete-like mass.

Stakes that were used last summer will need overhauling, as the bases of many of them will be decayed and therefore need resharpening. Do this at once; then paint those that require it and stand them in a box or other receptacle to dry, after which they ought to be tied into bundles according to their length. Labels, too, will need renewing, and this work ought not to be left until the spring, else a rush of other work at that time will probably mean that they will get entirely overlooked. Where the seed-list has been made out—and this ought to have been done by now—new labels may be written for the various seeds that are to be sown later on. If this is done, much anxiety and worry will be saved at sowing-time. The best way to deal with the ordinary wooden labels is to give them a very thin coat of white paint, rubbing it into the wood well with a piece of soft rag, and then write the name and any other particulars before the paint dries. Not only is it easier to write when the paint is moist, but the writing is rendered much more lasting, and it may be done with an ordinary lead pencil, preferably an HB. Labels written thus in April last year are still in the writer's garden, and the names are perfectly legible.

Where the amateur owns a glass house, or even a frame, advantage should be taken of a spell of wet weather to wash all the glass, wood or iron work, the shingle on the stages, and repair any portions of the latter that may require it. Where



5.—CUTTINGS INSERTED IN A 5-INCH POT.

the house is a lean-to against a wall the latter ought to be lime-washed, and all pots, whether empty or containing plants, should be made clean, and the empty ones stored in their respective sizes so as to be readily available when required.

Seed-boxes usually need overhauling at this season, many of them requiring new bottoms, and the same remarks apply to window-boxes. It is a good plan to remove the virgin cork from the fronts of the latter where it is employed, and give the boards under it a good scrubbing with strong soft soap water, and if time can be spared to give the cork a washing with the same solution so much the better. By this means the eggs and larvae of many insects will be destroyed.

Nets that are used for protecting fruit during the summer months often get torn, and these ought to be attended to without delay, as nothing is more irritating than to find holes in them when they are perhaps hurriedly required for use during the busy summer season. Stakes for Peas and Beans may also be trimmed ready for use, and where a difficulty is experienced in obtaining these many of those used last year will be sound enough to use again in conjunction with a percentage of new ones, taking care to ensure the latter being evenly distributed among the old ones.

If these operations, and any others of a similar nature that may crop up, are attended to at once much time and worry will be saved during the busy spring and summer months. Work well forward is a splendid motto in every calling, but in none does it apply more forcibly than in gardening.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

AFFORD Primulas, Cyclamen and Cinerarias manure water to prolong the flowering period. These plants should now be making a fine show. Among Primulas, The Duchess and its forms are excellent. Cinerarias should have feeding stimulants every week; keep them free from aphids. They are all the better when grown on a moist bottom such as ashes or shingle. Calceolarias may now have their final potting, using good loam and leaf-soil, with a little cow manure and a small quantity of bone-meal. Prune back Fuchsias and start them in gentle heat. Sow seeds of *Asparagus plumosus*, *A. Sprengeri* and *A. decumbens*. Old plants that have done duty may be potted or top-dressed.

Balsams sown now make very pretty, useful and attractive plants for furnishing jardinières, &c. As soon as possible prick them out, three or four plants into a 3-inch pot, and keep near the glass. They may be flowered in these pots with skilful treatment.

Amaryllis seed ought to be sown now; I prefer sowing in a pan and pricking the seedlings out. See that all the stages are thoroughly cleaned and new shingle or old material thoroughly washed. At this season all houses containing plants should be put in thorough good condition.

FRUIT HOUSES.

Peaches and Nectarines still in bloom should be carefully dealt with. Tap the trees in the middle of the day when the pollen is ripe and dry, and gently spray with tepid soft water at closing time. Keep a chink of air on all night.

Vines.—Attention should be regularly paid to disbudding and regulating the growth, and, if by any chance there is any mealy bug present, a keen watch must be made in the afternoon and each pest dosed with methylated spirit. At this stage much can be done towards extermination, as they crawl out of the crevices on a fine, sunny afternoon. The first Muscat house may now be closed, as this popular Grape requires a long season to thoroughly mature.

Cherries and Figs may now be started, 45° to 50° being a suitable night temperature.

KITCHEN GARDEN.

Continue with the work as advised in the last calendar. Keep up the supply of forced vegetables by introducing every week, or as often as is required, a fresh supply. Make Mushroom beds and hotbeds for *Asparagus*. Make *Seakale* sets, tie up in bundles of fifty, and cover over with ashes and store in a cool house or frame. Take up Broccoli that are ready, to

preserve from frost. Examine all seed Potatoes, and, where practicable, stand them on ends, removing during the process all the weakest growths.

HARDY FRUIT.

Continue to clean, prune and train trees, and on wet days examine all protecting material, so that this will be ready when wanted.

FRUIT ROOM.

Look over the fruits regularly and eject all decaying specimens. Keep the house cool, dry and sweet. Look over Grapes in bottles regularly.

W. A. Cook.

(Gardener to Sir Edmund G. Loder, Bart.)

Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

FICUS ELASTICA.—The present is a good time for propagating this useful plant. If the tops are taken off before they begin to start into new growth they will root with little trouble. Tops about 4 inches long are best, they need not be cut off close below the joint, as they will root from any part of the stem. Some dry sand should be applied as soon as they are cut off, as this will check the loss of sap. The cuttings are best put singly into small pots and kept in the stove propagating pit until they are well rooted, and after removal they will soon be ready for potting into 5-inch pots.

ORCHIDS.

Phaius grandifolius.—The flower spikes of this fine and useful old Orchid are rapidly advancing, and I would warn cultivators against letting aphides get the upper hand before the blossoms open. These insects soon ruin the appearance of the flowers, but if the spikes are examined every few days and a damp sponge passed over them, it will keep them clean.

HARDY FRUITS.

Ground Work.—Where the site for new Strawberry beds or Raspberry or bush fruit plantations has not yet been prepared, no time should be lost in digging it. In most cases bastard trenching and heavy manuring will be the best way of treating them. Such plots may have a light crop taken off them before the bushes or Strawberries are planted, and no crop is better for this purpose than early Potatoes.

KITCHEN GARDEN.

Rhubarb and Seakale.—The crowns of this should now be covered where forced out of doors. Where earthenware pots are not at hand, old tubs, with the bottoms removed and converted into lids, will be found very useful. Place around and all over each a good thickness of material as recommended for hot-beds. All light must be excluded, and a moderate temperature must be maintained by renewing the heating material; particularly is this necessary in the case of Seakale, the quality of which is much impaired by an irregular temperature.

Herbs.—Mint and Tarragon may be brought on by lifting the roots and planting them in boxes. Where earthenware pots are not at hand, old tubs, with the bottoms removed and converted into lids, will be found very useful. Place around and all over each a good thickness of material as recommended for hot-beds. All light must be excluded, and a moderate temperature must be maintained by renewing the heating material; particularly is this necessary in the case of Seakale, the quality of which is much impaired by an irregular temperature.

Make successional sowings every fortnight.

FRUIT UNDER GLASS.

Cool Orchard House.—Where the occupants of this are in pots and are still plunged in the open ground, they should be examined, and if the buds on any are found to be getting forward—which will probably be the case in sheltered districts—the trees should be removed under cover for safety. Many of the Apricots, Cherries and some of the early-flowering Peaches will need the protection of the orchard house long before the flowers are likely to expand, as severe frost would seriously injure them were they exposed

to its influence. Some are of opinion that frost does not harm the bloom-buds, but from careful observation I have noticed that if severely frozen, even before there are any signs of colour in the petals, there will be no fruit.

WINDOW PLANTS.

Campanula isophylla alba.—This is a great favourite as a pot plant, and in some districts it may be seen in almost every cottage window. When suspended, the drooping masses of pure white blossoms are very effective. The present is a good time for propagating this useful plant. Good cuttings may be obtained from those which were cut back after they had done flowering last autumn. About the same treatment as is required for Marguerites will suit them well. Later-struck cuttings should be grown three in a pot. A window with a northern aspect may be kept gay for at least two months; in fact, I have seen some plants in the same windows for a longer period. The blue or normal type is not so much grown, though equally pretty.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

BEDDING PLANTS FROM SEED.

FEBRUARY is none too early to sow many of the flowering and foliage plants that will make the beds attractive from May until November. The gardener who has a moderately-warmed greenhouse can do wonders in the way of seed sowing, but it is when seedlings have been pricked off and require more space that he is often at a loss how to act. If he buys some inexpensive iron brackets, to hold strips of wood and thus make shelves, and nails these brackets to the wall of the greenhouse, or even to the window frames, he will find that the house will hold an extraordinary number of pots of seedlings without being overcrowded. During summer the wooden shelves can be lifted down, leaving only the brackets, which are not unsightly, or they can even be covered by creepers from below, or trailers from hanging baskets or wall-pockets above.

Verbenas should be sown at once in soil composed of two parts loam, one of leaf-mould and half a part of silver sand; this we may call the ordinary potting-shed compost that suits most plants. These lovely flowers only show at their best in gardens when they have been raised early and so attained good growth before being put out into beds.

Nicotianas are of immense service throughout the season, and either the ordinary white *N. affinis* may be chosen, or the charming rosy crimson *N. Sanderae* or one of the less known species that are equally simple to cultivate, and of which seed can be obtained without difficulty. *N. sylvestris* has fine foliage, and its long-tubed white flowers droop over most gracefully. *N. suaveolens* is of shrubby growth and only 2 feet tall, being deliciously perfumed at night. *N. acutifolia* is also remarkable for the long tubes of its flowers; its leaves are fine and it is often 3 feet high. Then *N. Tabacum virginica*, the common Tobacco plant, with red-purple blossom, attaining a height of 4 feet, is both interesting and effective.

Phlox Drummondii is one of the best of all carpet plants, and if sown in boxes may be pricked out an inch apart in other boxes, and can then be left for weeks undisturbed in the coolest part of the greenhouse. Some gardeners sow each seed an inch from the next in little drills an inch apart, so as to save having to transplant into other boxes, but waterings or the moving about of the box so often shifts seeds that the chances are seedlings will come up crowded after all. Any seedlings which show signs of growing

tall should have their shoots pinched out at once to encourage a dwarf, spreading habit.

Petunia seed should also be dealt with, either of double or single varieties; the dwarf varieties are only 6 inches in height and prove admirable for edgings or carpets among giant sorts. Seed should be sown on moist soils in pans and covered in with only a little silver sand; the pans must be thoroughly glass covered and the soil must never be allowed to become really dry. The seedlings are somewhat tender, so should be handled with extra delicacy when pricked out 1 inch apart in pans or boxes. At the end of March they can be given each a small 3-inch pot. Shaded from sunshine in an airy part of the greenhouse they should grow strong, but if the temperature ever exceeds 60° they had better be placed in a cold frame.

Lobelias and Pyrethrum aureum can be sown in boxes of ordinary compost; the former is a plant demanding patience, since the seedlings are very difficult to handle on account of their diminutive size. For making edgings it will be enough to prick out Lobelia seedlings in bunches of three or four 1 inch apart in boxes and allow them to form a group to be planted out later as though each were one plant. For beautiful bedding designs, however, this is not sufficiently careful, and each seedling should be pricked off separately at 1 inch intervals. The lovely double-flowering blue Lobelia makes an exquisite carpet plant.

Antirrhinums (tall, medium and dwarf), Pansies of the bedding order, Dianthus Hedde-wigii, the Japanese Pink, Dianthus chinense, the Indian Pink, Fuchsias (double and single), single Dahlias and Marguerite Carnations can all be raised easily in the greenhouse, the temperature of which keep between 50° and 60°. E. J. D.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Plants for north border in South Scotland (Mrs. O. C. C.).—Last season affords no criterion for flower-growing in your district, as all through the South of Scotland the soil was unusually wet, and never came into proper condition for many flowers. You appear to have gone about the preparation of the soil correctly, and with a better summer you should have more success this year. Colour schemes are frequently more difficult to work out well than they appear when in writing only, as different districts cause different conditions, which affect some plants more than others. In ordinary seasons Gaillardias and French Marigolds would do quite well in your north border, but you must not depend upon the perennial Gaillardias being hardy enough to stand your winters. Until you have a large stock of perennials worked up you should fill your borders largely with annuals, either hardy or half-hardy. Some good yellow and orange-flowered annuals, besides the French and African Marigolds, are Coreopsis or Calliopsis in variety; Chrysanthemum coronarium, of which you can

have yellow and white; Sweet Sultans; pot or Scotch Marigolds, such as Calendula Orange King; Chrysanthemum segetum Helios or Evening Star, Limnanthes Douglasii, Rudbeckia bicolor and the miniature annual Sunflowers would be useful. Good hardy perennials of similar colour are Heliopsis pitecherianus and others, although they did badly last year; Rudbeckia speciosa, Doronicum plantagineum excelsum and Inula glandulosa. Oriental Poppies bloom too early for satisfactory effects with late flowers. Try Monarda didyma, Gem coccineum and one or two of the early-flowering Tritomas. Anemone japonica alba and white Phloxes would be useful, with such hardy annuals as you can select which do not close when the sun is off them.

Soil for Watsonias (R. F. J.).—I should recommend a mixture of peat and loam, with a good proportion of grit for the Watsonias. With this I should mix a good proportion of old Mushroom-bed or hot-bed manure, as I am certain these bulbs want strong food in this country. I should plant at the end of October and keep the pots in a cold frame, when they would be likely to throw up in the early spring.—F.

How to treat Ornithogalum lacteum (Penvarne).—In a garden where Ixias, Babianas and Watsonias thrive there should not be much trouble with Ornithogalum lacteum. A position and soil suitable to the Belladonna Lily would answer quite well, a deep sandy loam with cool bottom being preferred. In planting the bulbs should be kept a few inches below the surface of the soil. The plant, which is by the Kew authorities now referred to as O. narbonneuse, is less reliable in its flowering than some species; but in your favoured situation, when established, should give but little trouble. Endeavour to give the bulbs complete rest from the rainfall each year when the foliage has died down.

TREES AND SHRUBS.

Four creepers for a wall (Phloem). The following plants will prove satisfactory on your wall: Jasminum nudiflorum, a free-flowering shrub, which is at its best in midwinter. The main branches should be trained to the wall and the secondary branches may be spurred back after the flowers have fallen; it should be planted against the higher wall. Escallonia macrantha will form an excellent shrub as a companion to the former for the higher wall. It is quite evergreen, and bears reddish flowers freely during summer. The branches should be trained to cover the wall and the breast wood must be cut well in annually, April being a good time. For the lower wall Cotoneaster thymifolia will be found a suitable shrub. It is an evergreen with neat, tiny leaves and white flowers, followed by red fruits; very little pruning will be required to keep it in place. On the low wall, with the Cotoneaster, Euonymus radicans Silver Gem might be grown. This has silver variegated leaves of very ornamental appearance. It should be kept nailed against the wall until it has covered its allotted space, after which cut it well in annually.

Information about Clematis, Pyrus and Jasminum nudiflorum. (H. P., Leicester).—Clematis Jackmanii superba and Ville de Lyon belong to the Jackmanii section, and should be pruned at once or within the next month. Cut the branches back fairly hard; in fact, if the plants are covering their allotted space fairly well, you may cut them back to within a few eyes of the base of last year's wood. Mrs. G. Jackman belongs to the Patens group, and may be pruned now. The pruning, however, should be less vigorous than advised for the foregoing; the branches of last year may be shortened about halfway back. C. paniculata is a good species which blooms during autumn; it may be pruned moderately hard now. C. montana is a spring-flowering plant and should not be pruned until after the fall of the flowers. It may then be pruned fairly hard, if it is covering all the space that can be spared, if not the branches may be spread out and left at almost their full length. It is a distinct species. Cydonia or Pyrus japonica may be spurred back as soon as the flowers are over. If on a wall it ought to begin to flower in a few weeks' time.

It will stand hard cutting, and flowers best from spurred branches. Jasminum nudiflorum may have the branches pruned well back to within a few eyes of the base as soon as the flowers have fallen.

Shrubs and plants for woods in place of Laurels (H. P. B.).—The Fox-gloves and bulbs will be excellent for filling up the bare spaces made by the removal of the Laurels. The common Bracken would also be useful if the soil is of a porous character and contains plenty of decayed organic matter such as leaves. If the trees are only thinly placed, Berberis Aquifolium, Rhododendron ponticum and even Berberis vulgaris in the most open spaces would thrive. Naturally, the choice of flowering shrubs for such a position is very limited, and before planting anything you must have the soil well dug. If you wish to destroy the Laurels, you must root them up, but do not do this simply because they are Laurels. We should think that a certain number of them would be useful in your case.

Information about Daphne (G. F. B.).—There are two species of Daphne that will answer your description, and both are perfectly hardy. One, D. Laureola, is the common Spurge or Wood Laurel. It forms a bush 2 feet to 4 feet high, with thick, glossy leaves, and bears clusters of greenish yellow or creamish fragrant blossoms in the leaf axils from January to April. The other, D. pontica, is found in Eastern Europe, and forms a spreading bush 3 feet to 4 feet high. The flowers are very similar in colour to those of the previously-mentioned shrub, but the flowering season is not until April or May.

Treatment of a Copper Beech (E. B. E.).—We are afraid that you could not do your tree any permanent good by watering it with manure water; the mulching as previously recommended is the best method to adopt. It will doubtless injure your turf; in fact, to do your tree any real good the turf ought to be removed, the ground forked up and the mulch left on the ground for twelve months before resowing with grass seeds. If you wish to benefit your tree to any appreciable extent you will have to sacrifice the appearance for a time. Should the mulch be disturbed by wind, as you suggest, you could spread a light covering of soil over the material to keep it in position.

Climbers for partly shaded wall (H. P. B.). Prunus triloba fl.-pl., Escallonia macrantha, Crataegus Pyracantha, Cydonia japonica, Clematis montana and Ceanothus thyrsiflorus are all suitable shrubs for your wall. The Escallonia, Crataegus and Ceanothus are evergreens, the others deciduous. All are of an ornamental character. The border at the foot of the wall would look very well planted with old-fashioned herbaceous plants such as Pinks, Carnations, Wallflowers, Snapdragons, Polyanthus, Primroses, Sweet Williams, Lilies, Mignonette and Pansies, with here and there a group of Roses or some dwarf shrub, such as Lavender, Rosemary, Hypericums, or summer-flowering Spiraeas. The spaces made by spring-flowering plants being over could be filled with Stocks, Asters, Tobaccos or other annuals.

THE GREENHOUSE.

Cigar ash for greenhouse plants (H. S. W.).—We do not know the exact constituents of cigar ash, hence cannot say definitely what its value as a food for pot plants would be. It possibly contains a certain amount of potash, and in that case it would be of some use to plants grown for their flowers or fruits. However, we do not think that sufficient benefits would accrue from its use as to justify one going to the trouble of saving it. Your other question about boiler flue-dust is one that you make difficult to answer by omitting all particulars. If it is of a sooty nature, as we may reasonably suppose, it certainly will not take the place of sand for garden purposes. Soot contains nitrate, a valuable plant food, and is usually applied to soil for the purpose of supplying food. Sand contains a very little, if any, plant food, its function being to render the soil porous.

Sowing seeds of winter-flowering Carnations (J. D.).—The present is a very suitable time to sow seeds of perpetual-flowering Carnations, as by sowing thus early the plants have a long growing season before them. With regard to hints on their culture, you will find an exhaustive illustrated article in THE GARDEN of the 18th ult. Again, being always anxious to assist the would-be cultivator of these beautiful plants, we last year offered a series of prizes for the best essays on winter-flowering Carnations. The prize essay was published in the number of THE GARDEN for March 16, 1907, and the second prize one on April 6. Previous to that a most-



TALL DOUBLE SCABIOUS
(DOBBIE & CO.).



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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

THE BEST POTATOES AND HOW TO GROW THEM.

(First Prize Essay.)

INTRODUCTION.

THE Potato (*Solanum tuberosum*) is one of the most important articles of food obtained from the vegetable kingdom. It is a native of South America, chiefly Chili and Peru, and is generally believed to have been brought from Virginia to Ireland in 1585 or 1586 by Thomas Herriott (who accompanied Sir Walter Raleigh on several of his voyages) and to have been planted near Cork.

THE SOIL AND ITS PREPARATION.

A good sandy loam, rather dry than otherwise, is that best suited for Potatoes. Crops of good quality cannot be grown on wet, heavy, undrained land, but anyone having such can greatly improve it by draining, trenching, throwing the soil up in ridges for the frost, wind and sun to pulverise and sweeten it through the winter. Partially decayed leaf soil, road grit, old potting soil, charred garden refuse, half-decayed strawy stable manure, lime, &c., are all good things for improving heavy soils. Potatoes grown in very rich soil are never of such good table quality as those from one less rich, and are also more liable to disease. Ground that has been trenched and manured with a good dressing of stable manure for the previous crop is to be preferred to heavy manuring for the Potato itself. Potatoes should not be grown on the same land two years running.

SEED POTATOES AND THEIR TREATMENT.

Trials of Potatoes have shown that a frequent change of seed is necessary if the best possible crops are to be grown, and that Irish and Scotch grown seed is the best, the reason given for this being that the tubers are not so ripe, and the contents being in a more soluble condition are more readily available as plant food, which gives the plant a quicker and more vigorous start. The seed should be perfectly sound and properly prepared for planting. To do this (before they begin to grow) spread them out thinly in a cool, light shed, or, better still, place them on end in boxes, with the crown end up, and stand these in a frame or on a greenhouse shelf close to the glass, but if the least frost gets to them they will be useless. Seed Potatoes should weigh about 2oz., and the shoots should be reduced to the three strongest. It is not advisable to use cut seed for early varieties, but for main crop varieties Potatoes weighing about 4oz., cut so that each half has three strong shoots, yield as good a crop as, and in some cases slightly better than, whole ones.

PLANTING.

The best time for this is from the beginning of March till the end of April. I once saw some planted the first week in June and a fair crop resulted, but this was an exceptional case. Planting should not be done if the soil is at all

wet. A good guide for this is, if it clogs the boots of the planter it is too wet and should be left till a more favourable time. For early varieties the rows should be about 20 inches apart and the sets 15 inches, for second earlies 2 feet and 1 foot 6 inches and for strong-growing main crop varieties 2 feet 6 inches and 20 inches. The dibber should not be used, except in the lightest of soils, as it causes the soil round the hole and the roots have a difficulty in breaking through it, and the sets are almost certain to be at unequal depths. The best way is to stretch a line across the ground and take out a drill from 4 inches to 6 inches deep (the heavier the soil the more shallow the drill) with a spade or a heavy hoe, give a light dusting of quick-lime, plant the sets and cover. Pick off any stones, rake out any footmarks and leave the ground tidy.

AFTER TREATMENT.

When the tops appear through the soil if there is any fear of frost they should have a little soil drawn over them, and when they get too high for this a little dry litter, stout paper, Rhubarb leaves, hay, straw, evergreen branches or anything suitable that is to hand should be used, as the tops are very tender and if the least frost-bitten are severely checked and often ruined. If weeds appear hoe them up, and when the tops are about 6 inches high fork over the soil between the rows and mould up with a heavy draw hoe. In clay soil the ridges should be drawn up rather pointed to throw off heavy rains, but in dry soil they should be left more open to let the rain in to the roots. Moulding should be well done to keep the crop covered, as a Potato exposed to the light for a length of time is spoilt for eating or show.

LIFTING.

For this a broad four-pronged fork is best, and great care should be exercised not to run it into the Potatoes. Choose a bright day and let the crop remain on the ground a few hours to thoroughly dry. First pick up the store size, then the planting size and store separately; the small ones should always be picked up clean, as if any are left in the ground they are a great nuisance the following summer. If there is convenience to do so store Potatoes should be kept for about three weeks before clamping. Burn the haulm and any diseased tubers.

CLAMPING.

Choose a dry piece of ground, smooth over the surface, lay a covering of straw on it, place the Potatoes on this in ridges, cover with straw and then with 6 inches of soil taken out to form a trench on each side of the ridge. The straw should be pulled up in a tuft to protrude through the apex of soil at every 5 feet for ventilation. The clamp should run north to south, as then it is possible to open it at the south end without injury on a bright day during frosty weather if the Potatoes are wanted.

POTATOES FOR SHOW.

Choose an open piece of well-drained ground, deeply trench it in the autumn and plant about the middle of March. The soil to be used is one-half old Mushroom-bed soil and one-half good leaf-soil passed through a half-inch sieve. Take

out a trench 1 foot wide and 1 foot deep and in this place 6 inches of the prepared soil and plant the sets down the centre. They should have been prepared as previously advised, and disbud shoots to the strongest one. Then place over them another 6 inches of the prepared soil and over this a little of that taken from the trench. If old Mushroom-bed soil is not obtainable, clean leaf-soil is nearly as good. The rows should be 3 feet 6 inches apart and the sets 2 feet. Hoe frequently, protect from frost and mould up as soon as fit with the best soil taken out of the trench. The haulm should be kept upright by driving some stakes down on both sides of each row and running some stout string along them. As soon as they are ripe they should be lifted. Have a shallow box at hand and into this place all the best tubers as they are got up, and shade from sun and air, as the less exposed they are the fresher they will look. Store in moist soil, and the day before showing wash them with soap and water, using a soft sponge. Finish off with a little new milk and wrap separately in soft white paper. Potatoes for show should be of good shape, shallow eyed, clear-skinned and all in a dish of an even size.]

POTATOES IN POTS AND ON HOT-BEDS.

Soil—leaf-soil or old Mushroom-bed soil one-half, good loam one-half. Properly prepared sets should be planted one in an 8-inch or two in a 10-inch pot. Disbud the shoots to two. Use clean, well-crooked pots, and warm the soil before using. Half fill the pot with soil, plant the set, just cover, and top-dress later. Keep plants close to the glass and never force hard. Water with care. In frames on hot-beds the chief thing is to get a steady lasting heat. Use the same soil as for pots, and well protect from frost. The distance should be about 15 inches between rows and 1 foot between sets.

VARIETIES.

Among the best forcing and early varieties are: Yellow-fleshed—Sharpe's Victor, Early Ashleaf and Duke of York; white-fleshed—May Queen, Snowdrop and Ringleader; second early varieties—Sir J. Llewelyn, Duchess of Cornwall, Windsor Castle and Centenary; main crop varieties—Up to Date, The Factor, Discovery and Syon House Prolific; show varieties—Royalty, Empress Queen, Monarch, Million-maker, Klondyke, Advancer, Eldorado, Empire, Goodfellow, Snowball, Ruby Queen and Evergood.

DISEASES OF THE POTATO.

Phytophthora infestans.—This is the worst scourge the Potato is subject to, and first came into prominent notice in 1845. Bordeaux mixture, properly applied, reduces the risk of this disease to a minimum. As the disease seldom appears before the middle of June, the first spraying should take place about then, a second about a month later, and, in bad seasons, another in August. Early varieties will only require spraying once, and in a favourable season not at all. Recipe for Bordeaux mixture: Copper sulphate (blue stone) 10oz., quick-lime 6oz., water 5 gallons. Always use wooden vessels for this mixture. Dissolve the blue stone in some boiling water, mix the lime with water, strain through some coarse sacking, and add to the blue stone solution, then add enough water to make 5 gallons. Stir well and it is ready for use. Well wet the leaves both top and under sides.

Winter Rot.—Flowers of sulphur sprinkled over them at the rate of 2lb per ton when storing will destroy this fungus. Land that has carried a badly diseased crop should not be planted with Potatoes again for several years.

Wireworms, Beetles, &c.—Fresh gas lime applied in November at the rate of 4oz. per square yard will clear off most of these.

JAMES RAWLINGS.

The Gardens, Ridgemount, Enfield, N.

PRIZES FOR READERS.

JANUARY COMPETITION—AWARDS.

In this competition readers were asked for essays on "The Best Potatoes and How to Grow Them." The prizes are awarded as follows:

The first prize of four guineas to Mr. James Rawlings, The Gardens, Ridgemount, Enfield, N.;
The second prize of two guineas to Mr. George Cooper, Beauvoir, St. Saviour's, Jersey;

The third prize of one guinea to Mr. A. J. Long, Wyfold Court, Reading; and

Fourth prizes of half-a-guinea each to Mr. Charles Hott, Crosses, Great Warley, Essex; and T. Scott, 20, Greenville Terrace, Bloomfield, Belfast.

This competition was the most popular that we have ever held, the number of essays sent in constituting a record. The quality of these was so high that the task of awarding the prizes was an exceedingly difficult one. We have awarded an extra fourth prize of half-a-guinea, the two essays sent in by the competitors named being of equal merit. Many otherwise excellent essays were barred from entering the prize group, owing to diseases not being even mentioned. The treatment of diseases constitutes one of the most important phases of successful Potato culture, a fact that most essayists failed to grasp.

The essays from the following were so near the prize-winning one that we very highly commend them: James Bethell, H. Tomalin, A. B. Melles, G. Bloxham, Rev. J. Bernard Hall, E. H. Caterer, W. J. Crawford, D. R. Gull, W. Hookey, F. J. Dyer, W. Crossland, J. W. Hall, J. W. Forsyth, G. H. Webster, S. W. Pettit, G. Crone, Duncan Davidson, R. W. McHardy, W. G. Holtom, S. E. D. Turner, A. Shakelton, Arthur J. Cobb, E. Jenkins, E. Platt, G. S. Jordan, A. McKinnon, J. F. Colman, J. Mackay, jun., E. Neal, F. Isted, S. T. White, W. Marchant, H. Ollington, H. Davies, J. Hobson, F. W. Gooch, Arthur Mays, R. Gibson, W. Warner, D. B. Allwork, D. Faulkner, Miss A. P. Manly, Miss M. G. Foster, D. Greenwood, T. Hayton, R. Eddersley, T. Alexander, J. Day, W. P. Wood, E. May, L. Bigg-Wither, S. G. Smallridge, A. Sutcliffe, G. H. Simmons, E. F. Hart, W. H. Morton, M. Dearden, W. L. Lavender, E. Walker, V. H. Lucas, F. Lee, T. Smith, J. C. Wadd, J. J. Thorpe, C. M. Craze, A. J. Rennie, H. Rowles and R. Steward.

NOTES OF THE WEEK.

FORTHCOMING EVENTS

February 11.—Royal Horticultural Society, Committees meet, 12 noon; Annual Meeting, 3 p.m., Horticultural Hall, Vincent Square. Horticultural Club, Annual Meeting, 5 p.m.; to be followed by Annual Dinner, 6 p.m., Hotel Windsor, Victoria Street, London.

February 14.—Annual Meeting of Gardeners' Orphan Fund, Simpson's Restaurant, Strand, London.

Sweet Peas.—In our next issue several interesting articles will appear on this popular flower, and a coloured plate will be given of the twelve leading varieties.

Royal Gardeners' Orphan Fund. The annual general meeting will take place at Simpson's Restaurant, 100, Strand, London, on Friday, February 14 next, at three o'clock.

The Royal Horticultural Society's Guild.—The first meeting will be held in No. 3 Committee Room in the Horticultural Hall, Vincent Square, after the annual general meeting on the 11th inst. The business will be the election of officers, formulation of rules, &c.

The Gardeners' Royal Benevolent Institution.—Lord Aldenham will

preside at the sixty-ninth anniversary festival dinner at the Whitehall Rooms, Hotel Métropole, on June 24 next.

School gardening in Surrey.—The first of English counties to promote evening or continuation school gardens is naturally forward in the number of elementary school gardens created since the County Education Committee became the school authority. In what may be described as the rural or administrative county area there were last year no less than eighty centres or blocks of gardens, and a total of over 1,200 boys under garden instruction. This number does not include boys' gardens in urban districts where independent education committees exists. In the borough of Kingston there are at two council schools no less than fifty-six such gardens of nearly a rod in area each, and having a capable gardener instructor. It is thus seen that in Surrey the good work begun in the evening gardens is now widely extended to the day gardens, with the great advantage that while in the evening gardens attendances were naturally irregular at lessons, in the day schools attendance is regular and assured. In some two or three years hence there will no doubt be fully 2,000 boys learning gardening, each one for two years at least. The problem to be solved is, what results are likely to follow from all this garden instruction? If it is to be all wasted, then its cost is to be lamented. If, on the other hand, it is to result in creating in years to come a literal army of cottage garden, allotment, small holding and amateur garden workers, then the results must be beneficial and the present cost of the instruction amply justified. It will be no matter for surprise if out of it all grows stronger each year that form of land hunger of which we hear so much now. If it does so, and small holdings and allotments are readily furnished, then indeed may myriads of boys now learning gardening develop into cultivators and producers of food, and become gardeners in the best sense of the term.—A. D.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Watsonia Ardernei.—I can re-echo all that is said by Mr. Fitzherbert in praise of *Watsonia Ardernei*, which he says is identical with *Watsonia O'Brieni*. Several years ago Mr. Arderne of Claremont, Cape Town, kindly sent me several bulbs. They have grown well and increased greatly in my garden. I have now three large clumps, which bore about fifty spikes of bloom last year. Previously they had not flowered well. When they were lifted I found that the one clump I had had grown into a tangled mass of old and new bulbs. The old ones of previous years were then thrown away and three new clumps planted in good loamy soil mixed with leaf-mould and old manure. They responded well to this treatment, and last year were much admired. *Watsonia Ardernei* is really a very fine plant, possessing a distant likeness to *Gladiolus The Bride*. It differs, however, very widely in height, leaves, size and shape of bloom. The flowers are long and tubular and much smaller than those of *The Bride*. I saved some seed last year, and if it germinates it will be interesting to see whether it reverts to type or still continues to bear white flowers. The leaves of my bulbs are now (January 22) growing apace; they are now all sizes, from 6 inches to 18 inches high. I have never grown or seen *W. Ardernei* in pots. It seems to me to be a bulb better fitted to growth in the open. I should imagine that the spikes of bloom would grow up too tall under glass to be effective, and, as Dean Hole once said of standard Roses, you would require a balloon to see them properly.—(Rev.) WILLIAM W. FLEMING, *Coolfin, Portlaur, County Waterford.*

Twelve best Apples for flavour.

Always a debative yet an interesting theme is the rigid selection of Apples, whether they be for cooking or dessert purposes. There is such a large selection of good Apples now available for planting that to reduce their list to a mere dozen must necessarily leave out many good varieties: besides, the tastes of electors are bound to conflict in the rigid choice of Apple varieties. *Irish Peach* I place in the front rank, as this variety is praised by everybody for its pleasant flavour, and when well developed there is handsomeness of outline and colour. This has the peculiar trait of fruiting from the tips of branches, which necessitates cautious pruning in order to secure a fulness of crop. *Kerry Pippin*, like the last named, is an old variety, and much appreciated for its piquant flavour and crispness of flesh. It is a very healthy-growing Apple, adapted to orchard standards as well as the garden bush or pyramid. It is often shelved by electors, because in size the fruit is small, but for home use this is not an important failing. *James Grieve* follows these for autumn use, and is one of the most attractive fruits we have; its flesh is soft, juicy and sweet. An Apple that has many admirers is *Gravenstein*, but is one that does not often get into an elected twelve, yet everyone partial to Apples will readily praise its flavour when this is placed under trial. We find a difficulty in preserving sound fruits for the store, because of the voracity of birds and wasps, which are attracted by its bright colour and highly aromatic perfume, which actually loads the atmosphere in its immediate neighbourhood. *Cox's Orange Pippin* scarcely needs a passing mention in flavour tests, for no other Apple competes with it unless it be the *Cornish Gilliflower*, which has a flavour and yellow flesh exactly identical. There is this difference, however, that while one is very handsome in well-developed samples, the other can only be defined as an ugly-shaped fruit. *Cox's* in suitable soil crops well, grows freely, and the fruit keeps firm and full-flavoured well into the winter. *Egremont Russet* is one of the handsomest and best flavoured in this old-fashioned but popular section. There are some ignorant in pomology who regard a russet simply as a russet, thinking erroneously they are represented by one sort only. *Blenheim Pippin* must not be omitted from the round dozen, for next to *Cox's* no Apple has a wider acceptance or more popular character. *The Houblon*, one of Mr. Charles Ross's best, is a new Apple that is destined to take a very high position in Apple elections of the future. It is of the same or similar parentage as the namesake of Charles Ross, but I believe, good as this last is, *The Houblon* has superior merits. It is of healthy character, free in growth and crop, and as handsome, if not more so, as *Cox's Orange* itself, which is one of its parents. *Christmas Pearmain* has been recently mentioned in THE GARDEN as a high-class fruit, and we might add that it claims every favourable characteristic in the Apple electorate. *Ribston Pippin*, the favourite of the hard, crisp-fleshed Apples, is too well known to call for exhaustive comment; special culture will produce finely-grained, high-flavoured fruit, and freedom from its vigorous enemy—canker. *Claygate Pearmain*.—In this variety there is the embodiment of a good Apple that will remain in fresh, edible condition until April or even later, and its distinctly rich flavour never fails to please even the critical connoisseur. *Mannington's Pearmain* closes the list, and in this there is a still greater richness of flavour than any of the foregoing, save *Cox's Orange Pippin*, but it has scarcely so vigorous a constitution as some of the more familiar sorts already described. With me it makes an extremely handsome bush and bears regularly. It is fully recognised that the critical pomologist will not find in the foregoing list all that will satisfy, but I am persuaded that for fine flavour they possess very strong claims to popular demands.—W. STRUGNELL.

THE FRUIT GARDEN.

AMATEURS' FRUIT TREES.

SHOWN in the illustration is an Apple tree in full bloom in an amateur's garden, and the variety is one of the best an amateur can grow, namely, *Lane's Prince Albert*; this is at its best now. It will, however, keep till the spring, and I have seen splendid examples of it staged at the Royal Horticultural Society's Temple Show at the end of May. As shown in the illustration, the tree is covered with bloom. It has been kept open in the centre, thus enabling the fruits to colour much better and keep sound longer, owing to their being well matured. This variety is a late one to flower, and on that account escapes late spring frosts. It is also a free cropper, so that it is one of the best and most profitable varieties grown for winter or spring supplies.

Some varieties of Apples are so much more suitable for amateurs than others, and those that fruit in a young state are welcome. Grown in bush form on the *Paradise* stock, *Lane's Prince Albert* soon comes into bearing. Such as *Mr. Gladstone* or *Worcester Pearmain* do well as dwarf standards, as these do not grow unwieldy, and the fruits can be gathered and eaten from the trees. For earliest use to follow these in bush form, such sorts as *James Grieve* (a Scotch Apple), the well-known *King of the Pippins* and *Ribston Pippin* are advised. *Allington Pippin* and *Cox's Orange Pippin* are valuable for supplies before *Christmas*, and after that date *Christmas Pearmain*, *Scarlet Nonpareil*, *Duke of Devonshire* and *Sturmer Pippin* come in for use. In the cooking section, *Lord Grosvenor*, *Ecklinville Seedling*, *Warner's King* and *Bismarck* are good for the autumn supply, and for later the one noted above, *Lane's Prince Albert*, is excellent. *Newton Wonder*, *Bramley's Seedling*, and the older but good *Alfriston* are also very reliable for late supplies. There are many other varieties to select from, but those named are best to fruit in a small state, and most of them rarely fail to crop. In planting bush Apples, many amateurs think they cannot be too good to their trees at the start, and therefore use large quantities of manure. This is a mistake. Feed in later years when the trees are in full bearing. Manure given at the start causes a rank, barren growth. On the other hand, the land may

require lime or other material. For instance, heavy clay soil should have a liberal amount of old fine mortar rubble or broken chalk. Garden refuse after being thoroughly burnt is excellent, also wood ashes, marl, or road scrapings from limestone roads. Light soils require more food, and spent manure and heavy loam are good. G. W.

APPLE DUKE OF DEVONSHIRE.

The above variety is not so great a favourite as many others which are more showy, or larger with more colour, yet it is a splendid late dessert variety and in season from February to May, a period of the year when dessert Apples are not plentiful; the quality, too, is excellent. The fruit is under medium size, and may be described as roundish ovate, and the skin is of uniform



LANE'S PRINCE ALBERT APPLE IN A SMALL GARDEN.

lemon colour with a dull red or bronzy cheek and veined with russet. The stalk is very short, and the flesh is yellowish, juicy, rich and sweet with a fine aroma, thus making it a most desirable dessert variety. The flavour differs from many dessert Apples as it much resembles that of *Cox's Orange Pippin*. The tree is of stronger habit than the last-named, and it makes a handsome bush or pyramid. In the Western Counties I have seen splendid fruit from standard trees, and grown thus it makes a compact head and rarely fails to crop well. This variety was one of the best late dessert dishes in Messrs. Veitch's gold medal collection at the Royal Horticultural Society's meeting on December 31, and it should not be overlooked by amateurs who are planting dessert varieties. G. WYTHES.

ORCHIDS.

DENDROBIUM WARDIANUM.

THOUGH most of the Dendrobiums are very beautiful, and many of them decidedly gorgeous in their colouring, they are certainly less popular than some other classes of Orchids. Why this is so is difficult to say, and, perhaps, some day the swing of the pendulum will again bring them into the foremost place.

Certainly one of the showiest of all is *Dendrobium wardianum*, which was first introduced from Assam about forty-five years ago, and for a long time after that was very rare. It has, however, for many years been largely imported from Burmah, and is now one of the best-known and popular of Dendrobiums. It is a robust-growing species that flowers very freely. The individual blooms are from 3 inches to 4 inches, or occasionally more, in diameter, the

there is time for them to perfect a well-ripened growth before winter sets in. Whether pots or baskets are used for the culture of this *Dendrobium*, care must be taken that they are not too large, and are at the same time effectually drained. Good fibrous peat mixed with a little sphagnum moss and charcoal form a very suitable compost for the roots. Whether the plants are imported or established, they should, after the flowers are past, be encouraged to make good growth by keeping them in a warm, fairly moist house, and watering them freely at the roots. This will lead to a vigorous growth, and when this is completed the plants must be removed to a cool house, fully exposed to the sun, and given less water. The result of such treatment will be that the plants lose all their leaves and the stems become almost like dried sticks, but it will lead to the formation of flower buds. As the nights get cold the plants will need the protection of a warm greenhouse, and later on a higher temperature may, with advantage, be given them. By putting batches in heat at fortnightly or longer

TREES AND SHRUBS.

THE LILACS (SYRINGA).

IT is difficult to understand how the word *Syringa*, the botanical name of the Lilac, should have become associated in the popular mind with the Mock Orange (*Philadelphus*), which by the uninitiated is nearly always spoken of as a *Syringa*. Of the Lilacs proper the best known is the common sort

Syringa vulgaris.—This, a native of Eastern Europe, has been grown in this country since the sixteenth century, so that is often regarded as a true native of these isles, in every part of which it forms such a charming feature during the flowering period. Another notable point is that it is one of the least fastidious of our flowering shrubs, and in park, garden, or even the town forecourt, is equally at home, and each recurring May furnishes an object of great beauty. The popular name of Lilac is derived from the colour of the blooms of the original species, but so many varieties have been raised that the flowers now range in colour from white to deep red or purple-red through various intermediate shades of blue, lilac and pink.

With so many varieties now in cultivation a selection is essential, especially for small gardens. Among the best are: *Alba grandiflora*, white; *Cerulea* or *Delphine*, bluish; *Congo*, red; *Dr. Lindley*, rosy purple; *Mme. Kreuter*, bright rose; *Marie Legraye*, white; and *Souvenir de L. Spath*, dark red.

Double flowers are just as freely represented as the single forms, and some of the best are: *Alphonse Lavallée*, pale blue; *Charles Joly*, dark red; *La Tour d'Auvergne*, violet-purple; *Leon Simon*, bluish, very large flower; *Mme. Lemoine*, the best, pure white; *Michel Buchner*, lilac; *Senateur Volland*, reddish; and *Virginité*, blush.

These varieties readily lend themselves to various modes of treatment in gardens. Where ample space exists, they can be grouped together in a large mass, bed or clump, while trained to a single stem I know no more beautiful object than a good specimen of Lilac in full bloom. Again, planted as a hedge or screen the

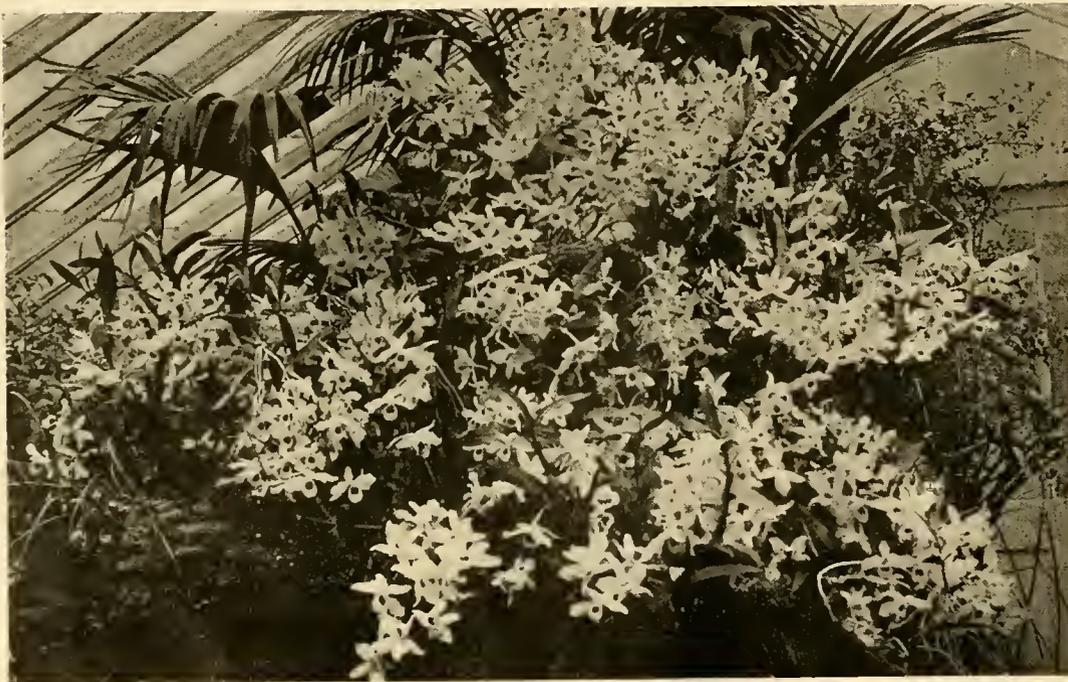
Lilac, though not of an impenetrable nature, might be far more often used than it is. H. P.

(To be continued.)

SHRUBS THAT NEED PRUNING NOW.

DURING the early spring months the necessary pruning may be done to various kinds of hardy shrubs. It must not, however, be imagined that all shrubs may be pruned at this period. Pruning during early spring would mean the cutting away of flowering wood. The set of shrubs that require pruning now are those that produce their flowers on wood of the current year's growth, while as soon as the flowers are over the very early-flowering shrubs may also be pruned.

One of the most important groups requiring pruning now is formed by the late summer and autumn-flowering *Spiræas*. Some of the most prominent sorts in this set are *S. japonica* and varieties, including the pretty red form called *Anthony Waterer*; *S. salicifolia*, *S. Menziesii*, *S. Douglasii*, *S. betulifolia*, *S. pumila*, *S. Aitchisoni*, *S. lindleyana*, *S. nobleana* and a few other sorts. With the exception of *S. Aitchisoni* and *S.*



DENDROBIUM WARDIANUM.

sepals and petals being of considerable substance and usually waxy white broadly tipped with amethyst purple, the lip large, tipped with the same colour as the petals, with a broad blotch of soft yellow at the base, where there are two large eye-like spots of rich magenta-crimson. Like all Orchids, a good deal of individual variation occurs among them, but this description applies to what must be regarded as a good example of the typical form.

It flowers as a rule during the spring months, and when in quantity it forms, as may be seen in the accompanying illustration, a gorgeous display. Not only does this illustration give one a good general idea of this charming Orchid, but it also serves as an object-lesson against tying up the growths in a stiff and formal manner, as is too often done, for in this way not only is the natural beauty of the plant spoiled, but stiffer-trained plants do not flower in as satisfactory a manner as when left to assume their ordinary spreading or semi-pendulous habit.

Immense numbers of *Dendrobium wardianum* are imported every year from their Asiatic home. Those that reach here comparatively early in the year give the best results, for if potted at once

intervals, their flowering season may be spread over a lengthened period. H. P.

CYPRIPEDIUM SULTAN.

This beautiful variety of the popular Lady's Slipper Orchid was shown by Major G. S. Holford, C.I.E., C.V.O., before the Orchid committee of the Royal Horticultural Society on the 14th ult., when it received a first-class certificate. It was described on page 47 of *THE GARDEN* for the 25th ult., its parentage being given as *C. M. de Curte* crossed with *C. Milo Westonbirt* variety. As may be seen in the illustration, which is natural size, the flower is a very large one, with brilliant and well-defined markings. It is really remarkable what a great advance has been made with these beautiful winter-flowering Orchids by hybridists and raisers during the past few years, every winter meeting of the Royal Horticultural Society witnessing the advent of one or more varieties of unusual merit. The lasting qualities of the flowers and the comparative ease with which they can be grown render them great favourites with all plant lovers.

lindleyana all require the same treatment. The pruning for these should be severe, and consist of the thinning out of old and weak shoots and the shortening of the remaining branches. It is not advisable to leave in any wood over two years old, the best results always being obtained from one year old wood. The shortening of the branches should consist of reducing them to within 9 inches or 12 inches of the base; this will allow of all the energy of the plant being thrown into the production of strong young shoots, both from dormant eyes on the branches and from the rootstock. *S. Aitchisoni* and *S. lindleyana* are different-habited plants and require somewhat different treatment. They grow naturally to a height of at least 9 feet or 10 feet, and are remarkable for their immense terminal inflorescences. On well-grown examples these inflorescences often attain a length of 1½ feet or 2 feet. To obtain such a result pruning is necessary, but the height of the plant has also to be considered. The plan to adopt is to spur back weak wood and reduce the strongest of the previous year's shoots to about half their length. Should any old branches be showing signs of deterioration, as many as possible should be removed, and suitably-placed young branches be encouraged to take their places. Shrubs of this description are gross feeders, so it is a good plan to give the ground a top-dressing of well-rotted manure after the pruning has been done.

The late-flowering *Ceanothuses*—typified by the garden varieties of the azureus group, such as *Gloire de Versailles*, *Indigo* and *Rose Perle*—require pruning now, and these should be treated in much the same manner as the last-mentioned *Spiræas*, except that the shoots of last year may be shortened rather more. *Colutea arborescens* may either be grown naturally or may have its branches spurred back now. *Hydrangea paniculata* and the variety *grandiflora* may be spurred back, and in this case a second pruning will be required when the new growth appears. Usually a mass of shoots is formed and it is necessary to reduce these in number if the best results are desired. The various members of the Blackberry and Raspberry group should have all old wood removed to allow plenty of room for the young growth of last year to perfect flowers and fruit during the coming summer.

The various species and varieties of *Clematis* should be pruned early in February with a few exceptions. The chief of the exceptions are the *C. florida* group, *C. alpina* and *C. montana*, all of which flower from last year's wood. All the *C. Jackmani* varieties may be cut well back, as also may *C. viticella* varieties. *C. patens* and *C. lanuginosa* require less vigorous treatment.

As soon as the flowers of *Jasminum nudiflorum* have fallen the shoots may be cut well back, and the same may be said of *Forsythia suspensa*. The double-flowered *Prunus triloba* is another shrub that benefits largely by an annual spurring back of the branches, and the double-flowered form of *Prunus japonica* may be treated the same.

All shrubs when grown for the sake of their bright-coloured stems, such as *Cornuses*, *Willows* and *Leycesteria formosa* should be cut hard back about the middle of March, while subjects grown for the sake of obtaining extra large foliage, such as *Paulownia imperialis*, *Ailanthus glandulosa* and *Rhus typhina* may be cut down at once.

Evergreens, such as *Laurels*, *Privets*, *Rhododendron ponticum* (when grown simply as an evergreen), *Aucubas* and various other things should be pruned in April, especially when it is thought desirable to cut them hard back; this allows of a long growing season, and they commence to grow again almost at once. Bamboos should have all old inside shoots cut away in April, and a really good thinning will be found very beneficial. In the event of any shrub having to be cut hard back it sometimes happens that it is advisable to sacrifice a season's flowers in order to obtain as long a growing season as possible; this, however, has to be left to the discretion of the owner. W. D.

THE GREENHOUSE.

TREATMENT OF OLD SEED PANS AND BOXES.

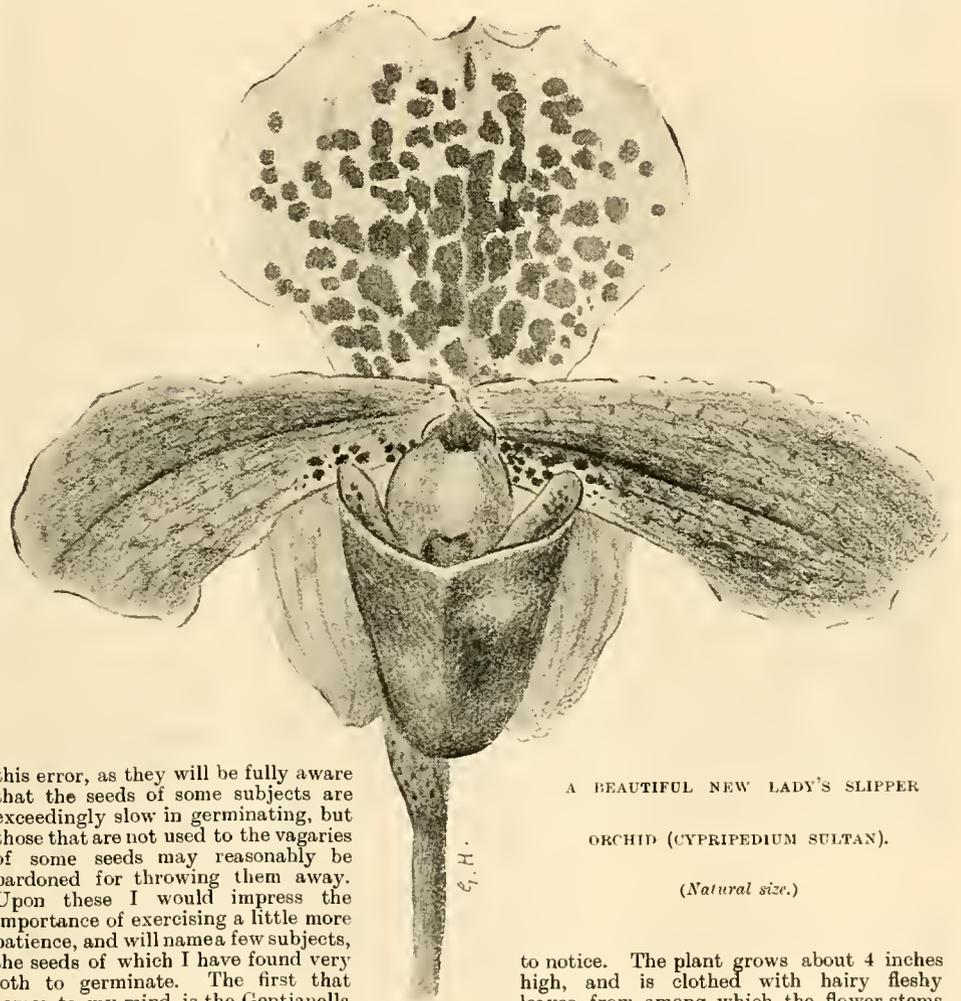
EVERY year, as seed-sowing time comes round, there will be at least a few pots, pans or boxes, the contents of which have not made an appearance, although the seeds were, perhaps, sown the previous spring or summer, and as room under glass is none too plentiful during the spring months, the temptation to empty these and utilise them for other seeds is very great, it being, perhaps, considered that the seed was bad and that it is of no use keeping the contents any longer.

Those who are used to raising a very mixed collection of plants from seeds will not fall into

irregular in growing, a few perhaps of a sowing germinating quickly and others not developing for months. Primroses, Auriculas and Polyanthus may be included in this category. The awned Anemones, too, are frequently very irregular or slow, and the same may be said of the Hellebores or Christmas Roses. Where the seeds are large enough, it is a good plan to sort them out from the old soil in the spring and sow them in fresh, giving them a rather warmer temperature than usual for a few weeks. This will often induce them to germinate more quickly than they would do otherwise.

SAINTPAULIA IONANTHA.

This beautiful little plant is a native of the East African mountains. Although comparatively little grown this is not from any fault of its own, but rather owing to its not having been brought



A BEAUTIFUL NEW LADY'S SLIPPER

ORCHID (*CYPRIPEDIUM SULTAN*).

(Natural size.)

this error, as they will be fully aware that the seeds of some subjects are exceedingly slow in germinating, but those that are not used to the vagaries of some seeds may reasonably be pardoned for throwing them away. Upon these I would impress the importance of exercising a little more patience, and will name a few subjects, the seeds of which I have found very loth to germinate. The first that comes to my mind is the *Gentianella* (*Gentiana acaulis*). Seeds of this were sown one spring, but not a seedling appeared until the next, or as nearly as possible twelve months after sowing, when a fine crop appeared. Some hybrid *Pæony* seeds, again, although the tiny root or radicle had pushed its way into the soil, refused to develop their leaves for some months, despite a careful filing or chipping of the hard integument or coat. Many seeds of trees and shrubs are notoriously slow in germination, the Thorns, Apples and Plum types being among the worst. Seeds of the former have lain dormant in the soil for two years and then developed into good plants, and possibly some may have been known to need even a longer period than this to germinate. Again, there are many seeds that are most

to notice. The plant grows about 4 inches high, and is clothed with hairy fleshy leaves, from among which the flower-stems spring, each one bearing about five blooms of a dark blue colour, whose golden anthers make a pleasing contrast. Plants are mostly raised from seeds in March, but it may be propagated in various ways. Plants raised from leaves in the manner practised with *Begonias* and *Gloxinias* will give a nice supply through the winter, and will be valuable for small vases in rooms. A good-sized plant may be purchased, grown in a warm greenhouse through the winter for trial, and if approved of propagated by leaves in spring with every prospect of a good supply of plants and flowers for the coming winter. Everyone with glass accommodation should certainly give this easily-grown little plant a trial. GEORGE W. SIZER,

Elsham Hall Gardens, Lincoln.

A BEAUTIFUL HIBISCUS.

(H. MANIHOT.)

THE sulphur yellow flowers of this Hibiscus, with their conspicuous bronze crimson centre, are always admired. It is a plant that the amateur may enjoy in the open garden for three or four months of the year, and by sowing seed in spring it shows its full beauty the first season, while being a perennial it can be lifted in autumn and potted up to do duty another year. A native of India, it is generally given greenhouse treatment, but when grown among a collection of these plants its beauty is greatly diminished, and it often falls a prey to insect pests, from which it is absolutely free in the open garden. Seed offers the readiest means of increase, which can be obtained from most nurserymen. The seed is sown in pots about the end of February or beginning of March in light sandy soil and placed in gentle heat, shading the pots until the seedlings appear. After this a warm, airy greenhouse is best, choosing a position where the seedlings will have plenty of light. Transplant

THE ROCK GARDEN.

A SANDWORT (ARENARIA BALEARICA).

ONE of the prettiest of all rock plants is the Majorca Sandwort, and since its introduction into this country in 1787 it has added charm and interest to many a rock garden. Although it is a native of the warm islands of the Mediterranean—Sardinia, Corsica and the Balearic Islands—it is, curiously enough, perfectly at home with us, surviving the cold and damp of our severest and wettest winters with equanimity. It is such a rapid grower that it quickly spreads over a large area. It is more compact in growth than any Thyme, more compact, indeed, than many Mosses. It will grow almost anywhere, but is seen at its best when spreading over moist rocks, its trailing tracery of bright green clinging to the rough stone and here and there exposing its

The illustration shows this *Arenaria* growing on a low wall, about 2 feet in height, composed of large flat stones, between which a little peaty soil is inserted. The wall faces north. The *Arenaria* no longer occupies this position, having been rooted out to make way for *Ramondias*, which are now making excellent growth in the interstices of the stones. The best of the other *Arenarias* are *A. graminifolia*, which has grass-like leaves and white flowers; *A. loricifolia*, also a dwarf evergreen perennial with white flowers; *A. montana*, a handsome spreading rock plant producing large white flowers in the late spring, with its variety *A. grandiflora* and *A. verna*, which flowers in the spring. All these will thrive in the rock garden in ordinary soil. S. W. FITZHERBERT.

THE WALL CRESS (ARABIS ALBIDA).

WHAT is possible of accomplishment by the correct placing of a commonplace subject is amply shown in the accompanying illustration, where a free-growing mass of the well-known

Wall Cress has, in the most natural manner, draped a very considerable portion of a rockery bank. Too frequently these easily-grown and beautiful subjects are overlooked, and plants less worthy and decidedly less hardy are given prominence in positions where it is not possible for them to grow or, at least, to remain long in good condition. The plant now under notice, however, is but one of many that should be seen more frequently on steep slopes or banks, such as that shown in the illustration, and where but little moisture can reach the roots in summer-time. It is not possible to select any hardy plant possessed of a growth more free or better suited to the position indicated.

There is a variety with double white flowers on taller spikes that most nearly resembles a miniature Ten-week Stock. It is a delightful plant for cutting, and as hardy as the first-named. Nor must one overlook the sheets of white blossoms produced by such plants as the perennial Candytuft (*Iberis sempervirens*) or the pure white *Arenaria grandiflora*, *Cerastium tomentosum* and the like. In the alpine Phloxes, the yellow Alyssum and *Saponaria ocyroides*, to name but a few, the amateur may provide pretty colour masses that are most effective under similar circumstances. All of these plants will succeed in quite ordinary garden soil, and may be planted at any time now during open weather.

When it is desired to increase the *Arabis*, a few of the shoots may be pulled from the sides of the plant and inserted quite firmly in the soil in a shady spot for a time. This may be done at any time when the plant is not in bloom, but, if done during the month of August, nice young specimens will be formed for planting during the autumn months or in spring. Where it is desired to quickly cover a large surface of soil—such, for example, as a stony bank—a number of the young plants just referred to should be planted at 12 inches or 18 inches apart in autumn or in spring. Thus arranged a large area may be effectively covered in a short time.

In shady places London Pride is excellent, and in positions where a deeper soil prevails the Mossy Saxifragas will be found most valuable. The *Aubrietias* in rose-pink, lilac and violet are among the most valuable of early spring flowers for banks, borderings, or edgings, and succeed in almost any position in which they are placed, the evergreen growth but a few inches high being hidden in spring with flowers. E. JENKINS.

THE MAJORCA SANDWORT (*ARENARIA BALEARICA*) IN MR. FITZHERBERT'S GARDEN.

into single pots as the seedlings become crowded, and as these become filled with roots move into $\frac{1}{2}$ -inch pots, in which they remain till planting out in June. Light soil with liberal drainage when in pots, and light rich soil in a sunny position when planting out are the main features in its cultivation.

The tallest plants I have had from seed reached a height of 4 feet 6 inches, though the majority only attain 3 feet the first season. When lifted in autumn they are potted in light soil, using pots just large enough to contain the roots. Water sufficient to keep the soil moist is all the attention required till spring, when they are pushed forward for planting out again. By cutting down one year old plants to within 6 inches of the ground when lifting several shoots are produced, which form nice bushes the second year. A noticeable feature of the flowers is that they turn away from the sun, so that due allowance must be made for this trait when selecting a position for planting out. THOMAS SMITH.

Walmgate Gardens, Louth, Lincs.

surface with charming effect. It will thrive either in shade or sunshine, as long as the shade is not too dense, but it generally dies if planted in a spot where no gleam of sunshine can ever reach it. Perhaps the best position for it is where it can grow over rocks having a northern exposure, where it will enjoy full light but is not exposed to the burning rays of the sun. In the spring the tiny white starry flowers on their thread-like stalks are exceedingly pretty, and spangle the green carpet, which is not more than an inch in height, in great numbers, remaining in beauty for many weeks. Even when out of flower its close growth of vivid green is very attractive, being very rich in colour and giving beauty and cheerfulness to the rock garden. It may be established on walls, where it makes a charming companion for *Aubrietias*, *Arabis* and such-like plants. As a carpeting subject it is also useful, and extremely pretty effects can be obtained by planting hardy bulbs such as *Iris reticulata*, *Scilla sibirica* and *Narcissus* beneath a carpet of this little Sandwort.

THE ROSE GARDEN.

ROSES AND MANURE.

NEARLY all amateur rosarians read in the different catalogues, &c., "that Roses are gross feeders and require a large quantity of manure." The general result is you see all their Rose beds at the beginning of every winter with a surface-dressing 6 inches to 9 inches deep. The theory is for protection against frost throughout the winter; and then it is forked or hoed in during spring for fertilising purposes. It is quite true that Roses want a rich soil, but it is a serious mistake, especially in heavy soils, to apply these annual heavy dressings of rank stable or farmyard manure. Do these gardeners ever realise what a dressing of soot would do for a heavy soil, or, say, nitrate of soda for light soils?

Cow or pig manure is grand stuff, so also is stable manure, but do let us use them properly. Speaking generally, the best of these is, undoubtedly, farmyard manure, as it supplies almost all that is necessary for the growth of Rose trees. In soils that are not too heavy, cow or pig manure is quite the best; it is so much cooler for the roots, and also is much more lasting than stable manure. In very heavy, cold, clayey soils, the latter is the best, and a very good plan is to mix a lot of leaf-mould with it, where one wants to lighten the soil and keep it as open as possible. Now to densely coat one's Rose beds with these manures as a protection from frost is a mistake, not to mention what an ugly sight it is in one's garden. It is, in fact, not only needless, but worse than that, as it often causes the loss of the Roses. I do not mean we need no protection from frosts, far from it, in fact, not only Teas but all should have the surrounding soil of the beds, in the case of dwarfs, drawn up well over the centre of the plants several inches; for after a severe winter few sorts, if unprotected, will be found with perfectly sound wood even within a few inches of the surface of the beds. Place Bracken or light evergreen stuff among the branches of tender Roses against walls or fences and standards, or with the latter draw the shoots together and thatch with straw. So much for protection from frosts.

Roses do not like damp, it is one of their greatest enemies. Mulching with manure during winter retains moisture around their collars, their most vulnerable part, and in a wet winter or a wet spring this mass of rank manure round them is the worst possible thing. Again, the heat of it hurries them on too soon in the spring, only to be cut back by the cold east winds. And further than that, when April comes all the goodness has been washed away from the roots with the rains, and it is no good away down in the subsoil.

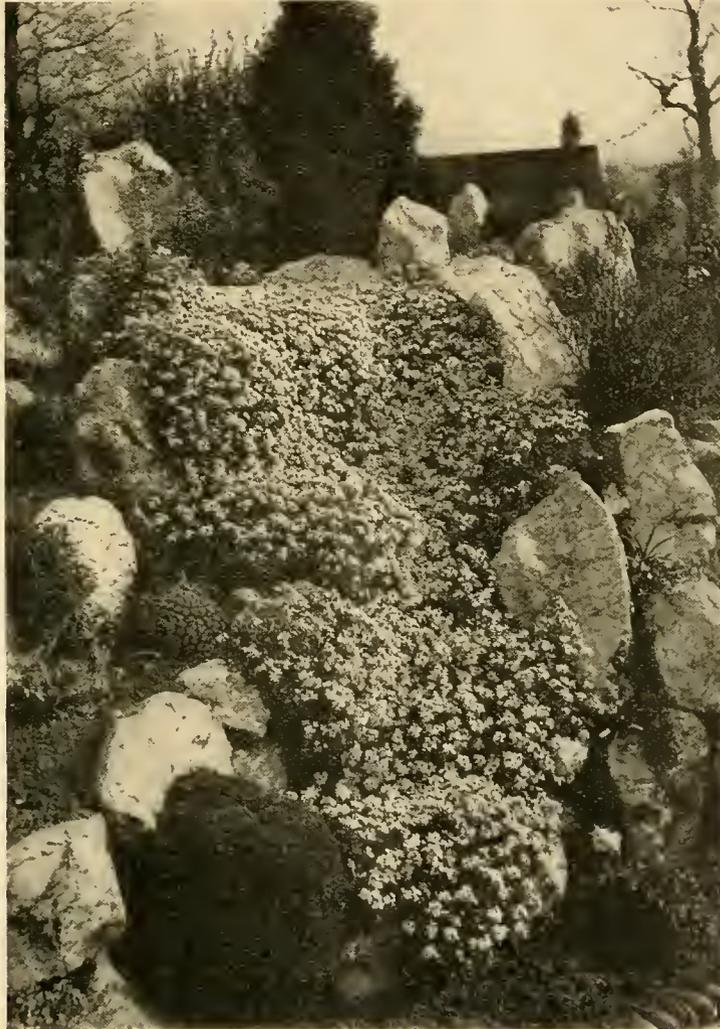
Firstly, of course, Rose beds should be properly prepared, adding what the ground is most deficient in. What suits them best of all is a deep yellow greasy loam. Light soils should have this, if possible, added to them in addition to manure. Strong clay land should be broken

down by adding cinder or wood ashes, lime rubble, chalk, sand and long stable manure. The soil should be dug or trenched 3 feet in depth, for remember that most of our garden Roses are worked on the Dog Rose of our hedgerows, which does best in the heavy cool loams of the Midlands, so if we want success we must prepare our beds at least 30 inches in depth. In the trenching, mix the manure (according to the character of the soil) like a sandwich, *i.e.*, alternate layers of manure and soil. Beds, of course, should be prepared a month or two previous to planting so as to allow the soil to settle down properly. As an extra fertiliser, a good thing is to work in, say, the top foot, some bone-dust or quarter-inch bones. Given beds properly prepared in such a way, all that is

with the surface soil by means of a fork, or liquid manure may be used from June onwards, once a week, by mixing three parts cow manure, one part soot and one part guano thoroughly in a tank or tub with water, only using it weak, especially the first applications. Never even then use it stronger than when the colour of pale ale, and mind in dry weather, before applying, first to water well artificially. The best time to give liquid manure is after rain. Q.

DO WE REPOT OUR ROSES TOO OFTEN?

It has long been my opinion that the amateur's practice of repotting his Roses annually has often been the cause of many failures. The roots, perhaps, have just begun to take hold of the new soil when they are ruthlessly turned out of their pots and seriously disturbed, many being lost, which gives the plant such a check that it rarely recovers from it. A much better plan would be to adopt that employed by many commercial growers, and that is to remove in autumn 3 inches or 4 inches of the top soil (or less if the pots are rather small), then give the plants a dressing of some good fertiliser, replacing the soil removed with other consisting of two parts fibrous loam and one part well-decomposed manure. Of course, the crocks should be examined first, and, if at all clogged with soil, let them be set free. In the spring one or two dressings of the same fertiliser, supplemented with waterings of weak liquid manure about once a week as soon as flower-buds are visible, would produce Roses of the finest quality, providing due care be taken to prune the growths to plump eyes, and that careful training is adopted so as to admit air and sunshine to the foliage. The splendid forced Rambler Roses that are now so important a feature in most establishments would benefit largely by this treatment, for their success depends so much upon having a thorough active root action. It must not be forgotten that those plants that have their pots full of roots need watering very copiously and frequently when new growth is active. P.



THE ROCK CRESS (ARABIS ALBIDA) FALLING OVER SIDE OF ROCKWORK.

necessary in future years is to fork in a very light top-dressing (at pruning time, say, every March or April) of short, well-rotted manure. Prune first and manure after is a sound maxim.

What I wish to particularly emphasise in these notes is that a great thing is to keep Rose trees as dry as possible throughout the winter. This is quite as important as protection from frost. With the exception of bone manure, avoid all artificial fertilisers with newly-planted Roses. The following year and afterwards a small handful of soot may be dusted round each Rose, say, in early November and early March; Clay's Fertilizer, Tonk's Manure, or any of the other artificial Rose manures, mixing the same

its flowers more erect, the drooping character of those of Grand Duc de Luxembourg being their one defect. The coral red centre to the blooms of Mrs. E. G. Hill is, if anything, more intense than in the old favourite. I cannot say whether it is as good in growth, not having proved it outdoors, but we know it must be a good grower to surpass or even equal Grand Duc de Luxembourg. This old Rose always reminds me in growth of Viscountess Folkestone; in fact, the two would go well together. Mrs. E. G. Hill was introduced by Messrs. Souper et Notting, and is said to be the result of a cross between Caroline Testout and Liberty. I fully expect to find it extremely popular very soon. P.

ROSE MRS. E. G. HILL.

Those who enjoy the contrasting shades of colour in Grand Duc Adolphe de Luxembourg will welcome the above novelty, for it closely resembles the old sort. I should not be surprised if it surpasses this variety. It carries

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

HARDY FLOWER GARDEN.—That the beds and borders may be in nice condition for planting a little later have those that are now vacant dug over and plenty of manure incorporated at the same time. Increase such subjects as the Periwinkle, London Pride and Creeping Jenny by dividing the plants as soon as convenient. As the frosts



1.—AN OLD STOCK PLANT.

disappear Carnations, Violets and other plants that have been lifted by the frost should have the soil made firm round them. Beds and borders planted with bulbs should have the surface soil stirred where the growths are pushing through. Remove weeds at the same time. When the weather is suitable and the soil workable, transplant such subjects as Pansies, Tufted Pansies and Canterbury Bells.

Greenhouse and Conservatory.—In greenhouses where a temperature of from 65° to 70° can be obtained from hot-water pipes for bottom-heat, numerous plants may be raised by inserting cuttings in pots and boxes filled with light and sandy soil, and these placed in an improvised or other frames on the greenhouse bench. Plants that may be raised in this way are Verbenas, Fuchsias, Bouvardias, Geraniums, Heliotropes, Salvias, Mesembryanthemums, Coleuses, Lobelias and Petunias. Cuttings inserted now will make beautiful plants for summer and autumn flowering. In the same temperature as that already mentioned sow seeds of such half-hardy and tender annuals as Celosias, Lobelias, Petunias,

Salpiglossis, Verbenas, Cockscombs, Nicotiana affinis and the newer beautiful hybrids and Balsams. Sow the seed thinly. Geraniums that were propagated last autumn should be potted up into larger pots, as they will make a comparatively early display in the conservatory.

Vegetable Garden.—Sow Broad Beans in rows about 3 feet apart, dropping each seed 6 inches from its neighbour; 3 inches is a good depth to sow. The earliest Peas may be sown for early supplies. Varieties such as Sherwood's Early Dwarf Prolific and The Pilot are commendable for early work. The former attains a height of about 1 foot, and the latter about 3 feet. Sow the seed thinly. Plant Myatt's Ashleaf Potato on a border facing south for early use, setting the tubers 6 inches apart in drills 6 inches deep and 15 inches asunder. Spinach may be sown at once, selecting ground that has been deeply dug and of a rich character. Sow the seed 1 inch deep and in drills 1 foot asunder. Plant Jerusalem Artichokes in rows 3 feet apart and 1 foot asunder in the rows.

Fruit Garden.—Complete the pruning of fruit trees as soon as possible, finishing off with Cobnuts and Filberts. When doing the latter take care not to cut away too many of the catkins; a goodly number must be retained for pollen to fertilise the female flowers. The catkins are the pollen bearers. Young Grape Vines should be planted this month. Where young canes are laid in they must be shortened back to at least half their length. This may seem a somewhat drastic operation, but it is better for their future well-being. Old Grape Vines should have already been pruned and made secure. Cut back all lateral growths on the main rods to the second or third bud. Complete the nailing and securing of all fruit trees on walls and fences.

Trees and Shrubs.—Ivies may be planted now, and that they may do well dig the soil deeply, incorporating at the same time plenty of well-decayed manure. Heavy soils are considerably benefited by the addition of old mortar and road grit. The Virginian Creeper may now be taken in hand, trimming the growths of superfluous and weakly shoots and training with due care those retained.

Cold Frames.—This valuable adjunct of the garden is becoming increasingly valuable. Give Calceolarias in frames plenty of air when the weather is fine and they will then make rapid



2.—THE SAME PLANT CUT BACK.

progress. Auriculas will now need attention. As they give evidence of fresh growth more water must be supplied; they will also appreciate a top-dressing of some good rich soil. Keep the frame freely ventilated, but avoid rain and drip, and, most important of all, damp. Stir the surface soil between Violets and ventilate freely on all favourable occasions. Continue to mat up the frames when the weather is frosty. Place the earliest batch of young Chrysanthemums in the cold frame to keep them growing on sturdily. Afford ample protection against frosts, however.

Chrysanthemums.—Young plants that were recently rooted must be kept sturdy, and to achieve this result give the plants a position on shelves near the glass in a cool greenhouse and ventilate without causing draughts. If such a position is not possible, stand the plants in cold frames, and mat up the latter in frosty weather. When the weather is mild give a little ventilation.

HOW TO PROPAGATE AND GROW FUCHSIAS.

This is a subject especially suitable for the beginner, as the plants are of fairly easy culture. As a plant for greenhouse or conservatory embellishment throughout the summer months it has few equals, and for massing in beds or for the centre of large mixed beds a beautiful effect is created.

When to Propagate the Fuchsia.—These plants are usually propagated in early autumn, say, September, and early spring, say, February and March. A September insertion of the cuttings is made when the object in view is to produce ideal specimens in the



3.—CUTTINGS PREPARED READY FOR INSERTION.

succeeding summer. A February or March propagation answers the purpose of growers who require plants of moderate size for ordinary purposes. Preparations for this latter period of propagation may commence at once, and for this purpose it is first necessary to cut back the old plants.

How to Cut Back Old Plants.—Fuchsias that have been kept in cool greenhouses or in warm sunny windows should by this time be in fair condition for cutting back. The first thing to do is to cut back the plants in such a way as to make use of every available piece of growth, and at the same time leave the old cut-back plants in such a condition as to encourage the development of a shapely specimen subsequently. Fig. 1 is a fair illustration of many of last season's plants at the present time. There is nothing very attractive about it, but by cutting back the plant with care we may leave it as represented by Fig. 2. If placed in a temperature of about 60°, fresh young growths will soon be formed, so that our bare-looking cut-back plant will in a comparatively short time become a thing of beauty again. As soon as the new growths are seen to be making headway, these old plants should be repotted into pots a size larger, and be flowered in these. The leading shoot is often cut back one-third to two-thirds its length to make a shapely plant subsequently.

Making Cuttings.—Not a single shoot should be detached from the old plants, unless use can be made of it. If properly trimmed and prepared each shoot will make a cutting that will root readily enough. The cuttings should be from 2 inches to 3 inches in length. To make a cutting the two lower leaves should be detached and the stem of the cutting severed with a sharp knife immediately below them. Fig. 3 depicts cuttings prepared for insertion.

Soil for Rooting the Cuttings in.—Any light and sandy soil will answer very well indeed, but an easy way of rooting cuttings is to insert them in



4.—CUTTINGS INSERTED IN A 5-INCH POT.

pans filled with sand and a sprinkling of charcoal dust, this being kept absolutely wet throughout the rooting process. If these pans are placed near to the hot-water pipes or in specially prepared propagating frames with a good bottom-heat the cuttings will root quickly.

Methods of Inserting the Cuttings.—Fig. 4 depicts a number of Fuchsia cuttings inserted in a 5-inch pot. In this case the soil is of a very sandy, porous nature. The cuttings are inserted to the depth of about an inch, and the soil or sand pressed to the base of each one. It is a simple operation and is easily done. Fuchsia cuttings may be rooted in warm windows by placing a bell-glass or empty jam jar over the pots containing the cuttings.

What to do with Rooted Cuttings.—Fresh growths will soon indicate that the cuttings are rooted, and when this is so the pots or boxes should be removed to more airy conditions forthwith. As soon as they appear established and sturdy, the rooted cuttings (young plants) should be potted up singly into deep pots 2½ inches across. Use pots that have been washed quite clean and soil made up of three parts nice fibrous loam, broken up small, one part leaf-mould and about a sixth part of the bulk of coarse silver sand. Mix these thoroughly. Fig. 5 represents a rooted cutting. Pot with moderate firmness, first of all crocking the pots carefully and covering the crocks with some of the rougher portions of the soil. In a day or two water in the young plants by the aid of a fine rosed can. Maintain a temperature of from 50° to 60° at all times.

Subsequent Treatment.—Pot on when well rooted into 5-inch pots, and later into 8-inch pots if large plants are desired. Soil for these repottings should comprise two parts good fibrous loam, one part well-rotted manure, one part leaf-mould and a sixth part of the whole of coarse silver sand. Add a quart of bone-meal to each bushel of soil and mix well. Pot with moderate firmness throughout. To make bushy growths, the points of the more vigorous shoots should be pinched out two or three times during the growing period. In the autumn stand the plants outdoors to ripen, but place them under glass again before frost sets in.

Good Varieties.—Singles: Guiding Star, Cannell's Gem, Mrs. Rundle, Rose of Castile (improved), Princess May, George Gordon and Lord Beaconsfield. Doubles: Champion, Phenomenal, Miss Lizzie Vidler, Molesworth, Berliner Kind, Frau Emma Topfer and Beauty of Exeter.

REPOTTING AGAPANTHUSES.

THE African Lilies, as *Agapanthus umbellatus* and its varieties are popularly called, are the most accommodating and beautiful plants that we have for growing in large pots and tubs for verandah, terrace, or even hall decoration during the summer months, and it is probably due to their tolerant nature that one so often sees them neglected in the matter of potting. It is true that they flower best when the root-run is restricted and the soil is on the poor rather than the rich side, but this should not prevent us giving their root system an annual overhauling. It often happens that owing to the drainage becoming blocked through the agency of worms or other causes the soil gets into a sour and unhealthy state, and it is mainly to remedy this that an annual examination of the roots is advised.

The best time for doing this work is early in the spring, say, February, then the plants become well established in their new quarters before they are required for outdoor purposes. Turn them out of their pots or tubs without breaking the ball of soil and roots, and if the drainage and soil are in a sound and sweet condition they may be put back, some of the old surface soil and roots removed, and given a top-dressing. Where the soil has become soured as much of it as possible, together with the blocked drainage, must be removed by means of a pointed label or stick, and it will often be found possible to get them into pots or tubs of the same size that they previously occupied. Any decayed roots must be cut clean away with a sharp knife. Thorough drainage is absolutely essential, and a good soil consists of three parts fibrous loam, used rather coarse, and one part well-decayed manure, with enough rough sand to render the whole porous. Some nuts of charcoal if handy may be advantageously added, as they have a tendency to keep the soil sweet. Potting must be done moderately firm, and the plants should afterwards be stood in a warm greenhouse

and given a light syringing occasionally until established, when they are hardened off for use outside during the summer. Old lard pails, if charred slightly inside and painted outside, with a few holes bored in the bottom for drainage, answer well for growing these plants in.

THE AIRING OF HOUSE AND FRAMES.

HINTS FOR AMATEURS.

THE spring season being so near, a few words on the above will not, I think, be out of place. The method and time of giving air to plants are of greater importance than many think,



5.—A CUTTING ROOTED AND READY FOR POTTING UP

and during the next few months the successful treatment of the lives of thousands of seedlings and other mature plants will depend a good deal on the wisdom exercised by the individual who gives it. Air can be given so as to be beneficial or detrimental to growth. When to admit air will depend altogether on the weather each day brings forth. The brighter and warmer it is the greater the amount of air that will be necessary.

Taking it for granted that a thermometer is already at hand, a fairly safe rule for general management is to give air when the temperature has risen from 5° to 10° higher than that usually maintained. For one who has not had a frame or greenhouse before, it will be necessary for such an one to enquire what the general temperature should be of the particular class of plants he wishes to go in for, and then apply the above rule. The way to admit air is by degrees, and not to give an abundance at one time as some do. That is the wrong way, especially in the beginning of the season. Another important item to bear in mind is to give air from the leeward side if possible, and not from the windward. Cold draughts and large quantities of air put on suddenly are both very dangerous to plant life. Many tender-leaved plants (such as Ferns and Vines) have been marred, if not spoilt, for the season through careless airing.

As the sun becomes hotter it will be wiser to use a little artificial shading, such as tiffany, summer cloud or whitewash, in preference to giving much air when the day is very windy or breezy.

C. T.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

KITCHEN GARDEN.

SEEDS TO SOW.—Sow Giant Windsor, Prolific Longpod and Mammoth Longpod Beans, also Green Giant and Green Longpod; these will make a good succession of all the best varieties. Sow also Peas of the second early type, such as Early Giant, Early Morn, Buttercup, Daisy and Edward VII. Give plenty of space between the rows, and do not sow the seed too thick, as this interferes with development and, subsequently, quality. Carrots and Lettuces may also be sown on a warm, protected border. On a dry day run the hoe through Cabbage and Lettuce plantations; also prick up the soil in the Parsley bed and pick off all decayed portions. Get all digging finished as soon as possible.

FRUIT GARDEN.

Pruning.—Push forward all the pruning now of bush fruits such as Gooseberries and Currants, and manure and fork over the ground; see also that all labels are intact, replacing those that are illegible. Use some good bone-meal and basic slag where the trees are poor. The weather has been much against the well-being of the

Earliest Peaches; a great guide should be the weather. Do not run the temperatures up in dull, foggy weather or syringe the pipes to cause vapour, as this may do much mischief. See that the roots do not suffer when near the hot-water pipes, and when watering give a thorough soaking; on closing the later houses the borders should have a good drenching.

Vines.—Continue to regulate the growths. Vines that have been tied down to ensure a regular break should be tied up to the wire when the growths are between 3 inches and 4 inches long, care being exercised that no shoots are broken in the process.

Strawberries.—Do not force these too rapidly, and if they are being accommodated in early vineries or Peach houses, move them to a dry, airy house to flower, after which, when well set, they may be taken again to a warm house and rapidly forced, when they should subsequently be taken again to a cool house to ensure perfect flavour.

FLOWER GARDEN AND PLEASURE GROUNDS.

Run the hoe through the beds to loosen the soil. Pick off any weeds or rubbish. Plant Lilies. Top-dress and dig or trench and rearrange herbaceous borders. Sow more Sweet Peas, also Chinese Primulas and Polyanthus in quantity and seeds of shrubs and trees. Top-dress and manure forest trees and conifers; it is surprising what the effect of a good top-dressing will do. Thin and transplant all kinds of shrubs; this may be continued up till the end of March and even later with care. In bad weather prepare soils, stakes and labels.

Oil and clean tools, machines, &c. These duties are of great importance, and should be carried out when the weather is wet or frosty and the men cannot be otherwise employed.

GREENHOUSE.

Chrysanthemums.—The first batch of these will now need attention. Pot off singly those that have been struck in pots and boxes. If the plants are not grown for exhibition, good batches of one colour are preferable than many varieties.

Greenhouse Plants from Cuttings.—Cut down Bouvardias and stand in a warmer temperature, in order to get cuttings for a new supply. Salvia may be given the same treatment, also Solanums. Put in cuttings of winter-flowering Geraniums, and pot on for large specimens for midsummer effect. Persian Cyclamens that have

been in boxes should now be potted up singly, using a sweet soil. Propagate in earnest now all that is necessary. Calla elliptica may now be taken out and potted; use a good rich, light compost for the first potting, and water carefully till the plants begin to make roots; they are charming when well grown. Freesias should be brought along in gentle heat in batches; they are much appreciated in the dwelling-house and conservatory. Continue to take in and

Force Hardy Plants such as Lilies, Azaleas, Spiræas, Laburnums, Prunus and the like. Give Arum Lilies in bloom plenty of stimulating manures. Keep Roses clean by syringing with quassia water or Mitchell's Soluble Petroleum.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

TUBEROUS-ROOTED BEGONIAS.—The tubers must now be looked over and the double varieties started, as these take a longer time to develop flowers than the single forms. Use shallow seed boxes, with a layer of sifted leaf-mould and sand in the bottom, in which the tubers should be placed. Let the leaf-mould be fairly damp when used. No water should be given, but a temperature moderately moist is decidedly favourable.

Lilium Harrisii.—The stock of this should by this time be well started and a night temperature of 50° to 55°, with a rise to 65° by day, given. The syringe ought to play an important part here, the growths being liberally sprayed over several times daily. Pot up at once Lilioms of the lanceifolium type, as they are apt to shrivel if kept too long out of the soil. Plunge the pots in ashes in a cold frame and place a slight sprinkling of the plunging material over the surface of the pot. Do not give any water at present.

HARDY FRUIT.

Nailing Wall Trees.—Buds of the Apricot are beginning to swell on south walls, and nailing of these should now be brought to a close as early as possible. Where protection is given it will be well to prepare the material for placing in position. Peach and Nectarine trees, both as regards pruning and nailing, must be left as late as possible, as the longer the wood is away from the wall the better the bloom.

KITCHEN GARDEN.

Broad Beans.—These will stand bad weather much better than Peas, and as they are not so likely to be damaged by birds and other vermin, it is often advisable to plant a few rows in the autumn. Where this is not done make a sowing of Early Mazagan now in shallow boxes filled with ordinary soil for transplanting towards the end of the month, or as soon as the weather is favourable. Raising a few hundred plants in this way is of great advantage in cold, wet districts, and as they transplant readily a more even crop is ensured.

FLOWER GARDEN.

Iris reticulata.—No matter whether grown in the open border or in pots this Iris is equally effective and always admired. The flowers are equal for richness to any spring-blooming Orchids, and they are sweetly scented also. If a few bulbs are placed in fancy coloured pots and the surface of the soil covered with Selaginella, they are most useful for standing on tables in the drawing-room, or even for table decoration. Iris reticulata also lasts fairly well when cut and placed in water, but a rather cool position should if possible be given it.

Snapdragons.—Experience ranging over many years on a stiff soil causes one to regard Snapdragons as very doubtful biennials, at least hardy ones, and I make it a rule to sow seed very early in the year, usually in February, in

pans or shallow boxes, and in a cool house, so that plenty of stout and firm plants are furnished to dibble out in the open ground at the end of April. If some become a little drawn the tops can be pinched out.

ORCHIDS.

With the lengthening days a new life seems apparent in most plants, and Orchids are no exception to the general rule. Yet it would be too risky to act simply on the assumption of a permanency of open growing weather because we have been passing through a period of comparatively warm and genial weather. Watering must still be done with the greatest care and the water used in moderation.

Miltonias.—Miltonia vexillaria and the beautiful hybrid M. bleuana grow freely in the intermediate house, and now that the young growths are well advanced and emitting new roots from the base any potting requirements that may be necessary should be attended to. Being surface-rooting subjects shallow pans are the most suitable receptacles for them. Drain these to one-third of their depth and pot the plants moderately firm in a mixture consisting of equal proportions of fibrous peat and chopped sphagnum moss, with a portion of Oak leaves, coarse sand and small crocks added to ensure porosity. Keep the base of the plants level with the rim of the pan and leave room at the surface for a layer of chopped sphagnum moss. The plants must be placed well up to the light in the intermediate house and fresh air admitted on every favourable occasion. The newly-potted plants will not require much water for the first two or three weeks.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

THE KITCHEN GARDEN.

ASPARAGUS FOR AMATEURS.

FREQUENTLY the amateur gets disheartened over the attempt to get good Asparagus, and my notes will, as far as possible, describe what may be termed simple methods, cost of production being considered. At the same time, I will note forcing and protection, and this done, the amateur who has room may have a six months' supply of this favourite vegetable. At this season the land should be prepared for the roots, and though this is the least interesting part of the work, and also the most laborious, it is an important one. The subject may be dealt with under three headings, viz., general culture, embracing the preparation of the land, sowing and planting; forcing; and the ordinary crop from the open ground.

GENERAL CULTURE.

It is often stated, and with a good deal of truth, that it is not necessary to go to such an outlay as regards labour and manure at the start, but so much depends upon the soil, heavy clay land costing most; but many amateurs have loamy or sandy soil, and although deep cultivation is best, when we see what good crops are grown in fields with half the labour, I think my note, as regards cost, will be understood.

Taking unsuitable land, or soil that is wet, clayey or heavy, this must be double dug now, keeping the top soil on the surface. Between now and March the amateur can greatly improve it by placing on the surface anything that will lighten it—burnt garden refuse, old Melon or Cucumber beds, wood ashes, leaf-soil, road scrapings from limestone roads, fine mortar rubble or broken plaster, and even burnt soil or marl. These forked in during March will give good results.

Another question now arises, viz., should the beds be flat or raised? I do not like raised beds at all, but in heavy land they are an advantage

as they are thereby drained, but in ordinary garden soil I advise growing on the flat, thus giving more space than can be afforded with raised beds. With heavy soil I prefer animal manure when making up the beds, and this should be applied liberally when digging, placing it between the first and second spit; later on, as the plants yield, food can be given in other ways, and this I will refer to more fully later on.

I have used the term double digging, a simple one to the ordinary gardener, but one that may require some explanation by the amateur. It means that the soil must be dug at least two spades deep. To do this begin at one end of the piece, take out a trench a spade deep and 3 feet or so in width and wheel this to the far end where the digging will finish. Then dig as deeply as possible the space cleared and on this place the next top spit, again dig the bottom, and follow on in the same way to the end. By this system the best or top soil is retained on the surface right through the work.

Light soil is easier to work, and here more manure is required; heavy loam added is also well repaid, but given ample food Asparagus does well in a sandy loam. An open position is much the best, having rows on the flat at least 2 feet apart, giving more room if it can be afforded. It will be seen that good Asparagus may be grown by ordinary means if the land is well cultivated at the start, and I have rather dwelt upon this as it is important.

SEED SOWING OR PLANTING.

I prefer planting to seed sowing, as time is saved; but if sowing is preferable, the same time applies, viz., late in March or early in April. Often seed is sown much too thickly in the row, with the result that a weakly growth follows. Thin sowing and severe thinning of seedlings as soon as large enough should be practised. Plants from seed will be three years before heads can be cut, and this is a long time to wait, that is why I advise plants one or two years old. I prefer the latter if planted quickly. Deep flat drills are drawn at the distance given above, the seedlings placed in, taking care to spread out the roots, and cover quickly with the fine top soil. Plants are secured at a small cost at the time named. In a dry spring it may be necessary to water, and I have in a dry summer given a mulch of litter over the surface of the beds. With good culture a few heads may be cut the next season from two year old plants.

It is important in exposed places to prevent the growths from being broken or twisted till they are quite matured, as from these the crowns for next season are being formed and supported, so that it is well to use some short bushy stakes or some twine and stakes along the rows. In my next notes I will deal with forcing, protection and the supply for the first three or four months in the year, and later on general culture, feeding and other details. As regards varieties, the amateur need not grow more than one or two at the most, I prefer Early Giant Agenteuil or Connover's Colossal. G. WYTHES.

(To be continued.)

A USEFUL SALAD PLANT IN SPRING.

The first three or four months in the year are the worst for maintaining the salad supply, and especially so after a succession of severe frosts which have destroyed all autumn-sown stock in the open ground. Endive up to this date has been available, but now this is over unless given glass protection. My note concerns a good substitute for Endive and Lettuce. The plant alluded to is Carter's Endive-leaved Lettuce, a very good salad plant and most valuable on account of its rapid growth. The leaves resemble Endive, being deeply serrated, and even in a young state very good for the salad bowl. With a frame or glass I have got useful cutting material in a very short time. Sown in boxes and cut over when quite young

it may be had fit for use under a month. It is also equally valuable for sowing on a warm border for first supplies. Several sowings should be made from February to May, the April and later sowings being made on good ground in the open. G. WYTHES.

AN AMATEUR'S TOMATO.

VEITCH'S new Dwarf Red Tomato is one which recommends itself as being specially suited for the amateur or anyone with limited convenience. Its habit is such that it needs no more than a stake 3 feet long to carry a full crop of fruit. On a well-grown plant the first truss of fruits is so near the pots as to be almost touching, and the trusses are so close to each other that the stem of the plant is covered from top to bottom. Not only is it a heavy cropper, but the fruit is handsome in appearance, solid and of splendid flavour. A batch of plants raised here in July last has been fruiting from October to the end of January, so that it has proved itself a valuable winter variety. I believe it will prove a good market sort, as the fruits will keep firm longer than any variety I know after being gathered. FROGMORE. E. HARRISS.

FLOWERING TREES.

(Continued from page 17.)

SNOWY MESPLUS (AMELANCHIER).

MOST of the Amelanchiers are shrubs, but *A. canadensis* attains the dimensions of a small tree, 12 feet or so high, clothed with racemes of white flowers in April, which, with the tender red of the young leaves, render it an effective subject in the garden. In the autumn the leaves change to a lovely bronze crimson tint before falling off. It is a native of North America, and is often met with under the names of *A. asiatica*, *A. Botrya-pium*, *A. sanguinea*, &c.

JUDAS TREE (CERCIS).

C. Siliquastrum (the Judas Tree) attains the dimensions of a small tree or large shrub 10 feet to 12 feet in height, and bears rose-pink, Pea-shaped flowers all over its bare stems in May. In addition to the flowers, the rounded, deep green leaves give it a distinct and handsome appearance when not in bloom.

THE THORN (CRATEGUS).

Most of the Thorns have a double value in the garden, as, in addition to their flowers, they bear brightly-coloured fruits in autumn. All of them flower in May or June, and a good selection is the following: *C. Azarolus* from South-East Europe, with white flowers and large fruits of a golden yellow colour; *C. Currierei*, with white flowers and Pear-shaped yellowish fruits hanging late in the year; *C. coccinea*, *C. Crus-galli* and *C. mollis* from North America, with large white flowers and bright scarlet berries; and *C. cordata* (the Washington Thorn) is a handsome tree with glossy leaves and clusters of white flowers followed by small orange red fruits. *C. orientalis* from Eastern Europe makes a handsome small tree, with white flowers followed by red fruits, and *C. pinnatifida* var. *major* (*C. Layi*) is a strong, handsome tree with large corymbs of pure white flowers and shining red fruits. The leaves of the latter turn to a striking bronze red hue in autumn. There are many varieties of the common Hawthorn, but the best are the single and double scarlets and the double white.

SNOWDROP TREE (HALESIA).

There are some five or six Halesias, but the best and hardiest is *H. tetraptera* (the Snowdrop Tree), which attains a height of 20 feet to 30 feet in this country, and forms a handsome sight in May when covered with its pure white, Snow-drop-like flowers. It is one of the most distinct

and handsome of flowering trees, but it is not at all common, though it was introduced into this country in 1756.

WYCH HAZEL (HAMAMELIS).

The best of the Wych Hazels is *H. arborea*, a native of Japan, which forms a small tree bearing deep yellow flowers studded all over the leafless stems in winter. The petals of the flowers are nearly 1 inch long, narrow and twisted, and set in small claret-coloured calyces. For winter effect there is no small tree to equal this, especially as frost does not affect the flowers to any appreciable extent.

LABURNUM.

The common Laburnum is a well-known and deservedly popular tree, but *L. alpinum* (the Scotch Laburnum) is not so often seen. This flowers about a fortnight later, as also does *L. a. var. grandiflorum*, *L. a. var. Parksii* and *L. a. var. Watereri*, the two latter being handsome trees bearing racemes of flowers upwards of 15 inches in length. *L. Adami* × (*L. vulgare* × *C. purpureus*) is a graft hybrid producing all yellow or all purple flowers, or the two colours intermingled on the same tree, and sometimes on the same raceme.

PRIVET (LIGUSTRUM).

The majority of the Privets are shrubs, but *L. lucidum* and *L. sinense*, both natives of China, form small trees or large shrubs 10 feet to 20 feet in height. The former is an upright-growing evergreen, with stout, glossy leaves upwards of 6 inches long and of proportionate width, and produce large terminal panicles of white flowers in July and August. *L. sinense* somewhat resembles the English Privet in foliage, but the growth is free and arching, and the pure white panicles of flowers are borne in such profusion in July as to almost hide the branches.

THE TULIP TREE (LIRIODENDRON).

This forms a large well-balanced tree, upwards of 80 feet in height, and bearing creamy white or pale yellow tulip-shaped flowers in June and July. The leaves are of a peculiar four-lobed shape, and change to a lovely golden hue in autumn.

MAGNOLIA.

The genus *Magnolia* contains some of our handsomest flowering trees, and it is a pity that some of them bloom so early in the spring, as they are liable to be cut by spring frosts. *M. conspicua* (the Yulan) forms a large spreading tree 20 feet or so high, and bears pure white cup-shaped flowers in April. *M. soulangeana* is a hybrid between *M. conspicua* and *M. obovata*, and blooms in April. The flowers are white with purple markings at the base. Other hybrids of the same parentage are *M. Alexandrina*, *M. spectabilis*, *M. rustica*, &c., all more or less resembling *M. soulangeana*. *M. Lennei* has the same parentage, but the flowers are large and deep purple in colour. *M. Fraseri*, a native of North America, bears creamy white scented flowers in May, and makes a handsome tree about 30 feet high. *M. glauca* (the Swamp Bay) is a small tree with dark green glossy leaves intensely glaucous on the undersides, and small white sweet-scented flowers opening from July to September.

PRUNUS (ALMONDS, PLUMS AND CHERRIES).

This family contains many beautiful trees, blooming during spring and early summer, the earliest to flower being *P. davidiana* (a Chinese Almond) which has pink flowers, and *P. d. var. alba*, a white-flowered variety of it. These bloom in February or March, and are followed by *P. Amygdalus* (the Almond) which is well known by its cloud of pink blossoms in early spring. *P. persica* (the Peach) is of little garden value, but its double pink and double white varieties are among the handsomest of our spring-flowering trees. *P. cerasifera* var. *atropurpurea* (*P. Pissardi*) is beautiful in April when covered

with its pure white flowers, its purple leaves later on giving it an added value for garden decoration. *P. pseudo-cerasus* (*Cerasus Watereri*) is a beautiful tree with double rose-pink flowers opening in May, and *P. serrulata* bearing light rose double flowers about the same time, should both have a place in every garden. *P. Mahaleb* var. *chrysocharpa* is a tree 20 feet or so in height, bearing short racemes of white Hawthorn-scented flowers; and *P. Padus* var. *fl. pl.*, is an upright-growing tree with long racemes of semi-double white flowers opening in May.

THE CRAB (PYRUS).

The *Malus* (Apple) section of *Pyrus* contains the most useful garden trees of the family, chief among them being *P. baccata* (the Siberian Crab), which bears rose-pink flowers in May; *P. floribunda*, a small and very popular tree with pink flowers; *P. f. var. atrosanguinea*, which is even better than the type with its deep rose-coloured blossoms; and *P. spectabilis*, with pink flowers opening in May. *P. Schiedeckeri* is of hybrid origin and comparatively new. As far as can be seen at present, it is a strong-growing *P. floribunda* with semi-double soft rose-coloured flowers borne from end to end of the branches in May.

FALSE ACACIA (ROBINIA).

The common *Robinia Pseudacacia* is a well-known large tree with its graceful leaves and racemes of white flowers, but there are several handsome varieties of it that are not planted so often as they deserve to be. The best of these are *aurea*, with yellow foliage and white flowers; *bella rosea* and *decaisneana*, with pretty rose-coloured racemes; *microphylla*, with small elegant foliage and white blossoms; and *semperflorens*, which blooms more or less all the summer. *R. neo-mexicana*, from the Southern United States, is a small well-shaped tree with rose-pink-coloured flowers, and *R. viscosa* (the Clammy Locust), a native of North America, bears racemes of rose-coloured flowers in July.

Bayshot, Surrey.

J. CLARK.

NEW PLANTS.

NEPHROLEPIS EXALTATA AMERPOHLLII.

DURING the past few years some very remarkable varieties of the above-named species have appeared, and the present plant is certainly not the least remarkable of the series, though it might claim, we think, to be the dwarfest of those at present known to commerce. The plant is of a neat, compact habit of growth, and is possessed of a plumose density and fineness of pinne suggestive somewhat of *Todea*. To compare it to other varieties of the same group, it would appear rather to resemble *N. e. todeoides* in miniature, the pale green colour of the fronds rendering it extremely elegant and pleasing. The fronds are about 1 foot in length, arching and tapering to a point, the exceeding dwarfness of the plant rendering it quite distinct from all its race. A most welcome addition to choice, easily-grown Ferns. It was shown before the Royal Horticultural Society by Messrs. H. B. May and Sons, Edmonton, on the 28th ult., when it received an award of merit.

NEW ORCHIDS.

CYPRIPEDIUM FAIRIEANUM COOKSON'S VARIETY No. 2.

THIS is a beautiful variety of the famous *C. fairieanum*. The plant shown was a small one in a 2½-inch pot and was carrying two flowers, one of which was not open. The flowers are more highly coloured than are those of the type, the very deep crimson markings on the dorsal sepals and petals being very pronounced. Shown by Mr. Norman Cookson, Oakwood,

Wylam-on-Tyne (gardener, Mr. H. J. Chapman). Award of merit.

CYMBIDIUM GATTONENSE.

THIS is a lovely plant of a fairly well-known genus, and is the result of crossing *C. lowianum* with *C. traceyanum*. The plant shown was a large healthy-looking specimen, carrying one raceme composed of six fully-developed flowers. These are of ordinary size, the sepals and petals being beautifully streaked with crimson, brown and yellow. The labellum is very conspicuous, this having a pale yellow ground colour heavily marked with bright rich crimson. The column is also noticeable, the colouring being the same as that of the labellum. Shown by Sir Jeremiah Colman, Bart., Gatton Park, Surrey (gardener, Mr. W. P. Bound). Award of merit.

CYPRIPEDIUM MR. F. SANDER.

ANOTHER beautiful addition to this popular genus. The plant shown was carrying one flower only, but this was very handsome indeed. The dorsal sepal is extra large, hooded, with a distinct white band running round the edge except at the base. The ground colour is green, and this is heavily dotted with good-sized circular spots of dull crimson. The petals are long, oar-shaped, hairy at the base, and of a dull crimson colour, except at the tips, where green predominates. The pouch or lip is of medium size and coloured dull crimson with a light gold edge. Shown by Mr. F. Wellesley, Westfield, Woking (gardener, Mr. W. Hopkins). Award of merit.

The above awards were made by the Orchid committee of the Royal Horticultural Society on the 28th ult.

RIVIERA NOTES.

MONTANOA BIPINNATIFIDA.—This bold habited composite has been in unusual beauty lately. An old and fully-developed specimen with six or eight strong stems starting from a woody root-stock is a noble object in the December garden. The foliage is so handsome that it was grown for years as a summer foliage plant under the name of *Polymania grandis*, and it is only in modern days that its value as a winter flower has been discovered. Its great sprays of white Daisy-like flowers, with rather irregular-shaped petals, have a grace of their own that is not excelled even by the stately *Dahlia Imperialis* in the month of November. It is a tribute to the perception of the Royal Horticultural Society's committee that they could grant a certificate of merit to necessarily small pot-grown plants, which could give but a very feeble idea of its beauty when fully developed.

Rosa bracteata (the double form).—Not long ago I saw in an old garden a bush of this almost-forgotten Rose with six or eight fully-expanded blooms. As this old and justly-neglected Rose has the reputation of never being able to expand its handsome buds on account of the curiously-folded petals, I shall be glad to hear if anyone else has ever seen it fully open. To my great surprise the flower is not double, but has a tuft of pale yellow stamens in the centre. The cupped petals, shaped like those of a Water Lily, incurve and nearly hide the stamens; but as the white of the petals is not pure, rather greenish white in tone, it is a curiosity rather than a beauty, and so I should not expect anybody to grow it now we have so many free-flowering winter Roses. I have no doubt that the great drought of last summer on this coast, followed by the heavy autumn rains, has caused this seldom-seen Rose to expand its flowers on the very fully-ripened growths.

The Rev. E. Arkwright's "*Telemby*" Sweet Peas.—The strain of winter-flowering Sweet Peas which Mr. Arkwright so kindly distributed last autumn is now flowering very freely and well at Bordighera in the garden at Selva Dolce,

and has given the greatest pleasure. By an accident those I have were not sown in time, and they are not yet in actual flower. They are much bolder and finer in growth than Mont Blanc and Earliest of All, which were our only winter Sweet Peas, so they are a real addition to the winter garden. The flowers are large in size and of many colours. I hope we shall hear of others who may have sown them, for they deserve all the praise Mr. Arkwright gave them. The first flowers were expanded in December before Christmas, and the succession of bloom promises to be continuous.

Rose Noella Nabonnand is the finest red climbing Rose for winter bloom that has yet been raised, and this season it has flowered continuously and finely for many weeks in mid-winter. As it is a comparatively new Rose it is not yet commonly grown, and needs more notices about its merits to arouse the attention it deserves.

E. H. WOODALL.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Information about Violets (K. R.).

If you desire the Violets for a town garden, such as a London garden, for example, the middle or end of March would be quite early enough for setting out the young plants. At that time you should obtain well-rooted examples in pots, and plant in deeply-dug, well-manured soil. At planting time soil of a sandy nature should be made firm by treading, and in this way avoid over-luxuriance. A north-western or western exposure would be best, and with light shade overhead Violets usually succeed. For frame culture later on the above method should be first adopted, growing the plants till September, and then lift and replant into the frame. The latter for winter flowering would be best if raised a little, and the Violet plants, then full of flower-buds, should be lifted and firmly planted in good soil. It is important that during the summer the runners should be kept in check, directing by these means all the energies of the plant to the production of crowns and flower-buds. The following are the best single varieties: *Amiral Avellan, Italia, La France, *Luxonne and Princess of Wales. La France is the darkest in colour, and this and Princess of Wales are very large. Those marked thus * possess the most pronounced fragrance.

Name of and information about a plant (Suburban).—The name of the specimen sent is *Alchemilla arvensis*. As it is only an annual it would hardly be suitable for planting between the flagstones of your path. You want something of a more permanent character, like *Sedum album*, *Thymus serpyllum*, *Arenaria balearica*, the dwarf Mossy Saxifrage or even *Campanula pusilla*. These are all low growing, and would do in such a position. If the border is shady, Lavender would hardly be a success, and it would be best to try annuals that like a little shade. Larkspurs of any sort would do, and a good show might be obtained with the numerous varieties now to be had from seedsmen. Other annuals suitable would include the Night-scented Stock (*Matthiola bicoloris*), Virginia Stock (*Malcolmia maritima*) dwarf Alyssum and the Forget-me-nots (*Myosotis alpestris* or *M. dissitiflora*).

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices : 20, Tavistock Street, Covent Garden, W.C.

THE SWEET PEA.

"Here are Sweet Peas on tip-toe for a flight."—Keats.

THIS beautiful and now variable hardy annual is found wild in Italy, near Naples, and also in Sicily. It seems to have come from these shores, *via* Holland, and not from Ceylon, as has been sometimes stated. It has been a popular favourite almost from the first year of its introduction.

So far as we know the late Mr. George Glenny, of "florist's flower" fame, did not invest the Sweet Pea with any of his arbitrary rules and regulations, as to form, size, or colouring. So much the better for the Sweet Pea, which has grown, like Topsy, into a thing of elegance and beauty, beloved and admired of all. A flower is not more beautiful for being as round as a shilling; in fact, much of the characteristic beauty of the Sweet Pea absolutely depends on its being of an irregular shape.

As to habit, this is as elegant as it well can be, and we certainly deprecate the very dwarf varieties, the flowers being borne on stalks too short for cutting, while they are so near the ground as to become soiled and splashed by heavy rains.

The Sweet Pea in all its many forms really belongs to one single species—*Lathyrus odoratus*—and there is no reliable evidence that hybridism has ever been resorted to in raising new varieties. This is curious, as one might have believed hybridism possible with *L. odoratus* and its annual first cousin *L. tingitanus*, even if not with *L. grandiflorus*, *L. latifolius* and other of the perennial species.

In 1860 a white variety, having a blue edge to the standard, was sent out, and at the time was said to be a hybrid between *L. odoratus* and *L. magellanicus*, the blue perennial, or "Lord Anson's Pea." The raiser was said at the time to have been Colonel Trevor Clarke, but there seems to be no authentic record of such hybridism, and if it really did take place the probabilities are that *L. sativus*, the annual blue-flowered species, was used, and not *L. magellanicus*, which, so far as we can learn, was not existent in English gardens at the time named. Even to-day it is quite a common thing to hear the annual *L. sativus* called in error "Lord Anson's Pea."

Seeing the enormous strides in size, colour and number of flowers on a stem, made by Mr. Eckford and others in England during the past twenty years, it is certainly not easy to prophesy in what new direction improvements are likely to take place in the future.

For many years Sweet Peas have been overflowing from cottage and villa gardens, until now there is scarcely a garden large or small where they are not grown. Their value for decorations indoors, as cut rather long in the stem and loosely and naturally arranged in narrow-necked vases, is now universally recognised, and at all our best floral exhibitions there are now classes for these fragrant blossoms, and they hold their own along with Roses, Carnations and other summer exhibition flowers.

The National Sweet Pea Society's exhibitions are always beautiful and interesting, and our raisers have of late years added many lovely varieties to those already in existence. We hope their beneficent work will continue. It is a good thing to have Sweet Peas everywhere—flowers as sweetly fragrant as the Rose itself. Several articles are given in the present number upon various phases of the flower, and the coloured plate represents a few of the newer and leading varieties.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

March 3.—Royal Horticultural Society, Committees meet, 12 noon.

March 5 and 6.—Royal Horticultural Society's Colonial Fruit Show.

March 9.—United Horticultural Benefit and Provident Society's Annual General Meeting.

March 11.—East Anglian Horticultural Club Meeting.

The Hampton Court Vine.—The great Vine, so old yet so young, is perhaps a more interesting object in winter than when clothed with its many thousands of leaves and carrying its hundreds of bunches of Grapes in summer. Just now it is in a state of rest, yet of recuperation. It has been pruned, regulated, tied up to its supports and is a striking object. To how many hundreds of feet—nay, probably to thousands—do its myriad branches run? They are of all lengths, but chiefly very long, though perhaps none more so than the half-dozen that, having broken out some 4 feet up the old quaint, gnarled, picturesque stem, have been run horizontally along the great house which now shelters

the veteran, which, in spite of its Royal associations, is still regarded by the thousands of visitors to it as the people's Vine. It cannot be too readily acknowledged that, to the great interest in the old Vine's welfare taken by the King and the authorities of Frogmore, it remains under the control of so eminent a gardener as Mr. Mackellar, and that its immediate interests and culture are in the hands of the veteran custodian, Mr. Jack, who naturally regards his charge with pride and its undoubted recuperation and renewed vitality with great satisfaction. Besides providing the old Vine with a new house, its roots have received both greater room and more generous fare, and so marked is this resuscitation, especially on the part of a Vine so aged, that Vine growers anywhere need not despair of the possibility of renewing the life and vigour of any Vine, however aged or exhausted. One unquestioned good which has followed on more generous treatment is that less has been demanded from it in the form of Grapes than was formerly the case. To seek for regeneration and yet to require the old Vine to carry heavy crops of bunches would be a suicidal policy. Happily, no such policy is required. But if fewer bunches be carried, not only are those produced now much finer in both bunch and berry, but, because of the exclusion of the myriads of visitors from the floor of the vinery, no dust is created, and the berries remain as clean as if in the private vineries elsewhere. Not long ago bunches weighing half a pound gave the average. Last year numerous bunches ranged from 1 lb. to 2½ lb. and carried berries of the finest quality; indeed, it is doubtful whether Black Hamburg Grapes anywhere give better flavour than do the Hampton Court bunches. Just now the vinery is being freely ventilated and kept as cool as possible. The fruit is rather wanted late than early. Aged as the Vine is, yet much of last year's wood shows thickness, solidity and maturity of which any gardener might be proud to have on young Vines.—A. D.

"Bottled torture."—Some importance has been attributed during the past week to what has been described in the daily press as an epidemic of "bottled torture," which it was said London had narrowly escaped by the energetic action of the Medical Officer of Health for the City. "The attention of the doctor," says the *Daily Telegraph*, "was recently called by the Assistant Medical Officer of the General Post Office to the serious results which followed the use of the material known by the above terrible name, which it was discovered was sold by a novelty dealer in the City for the purpose of practical joking. In one case the victim suffered from extreme irritation of the skin, which almost amounted to cellulitis, as the result of the application of this substance. Dr. Collingridge, in his last report, states that 'bottled torture' consists of the stinging hairs of the pod of a tropical plant, *Mucuna pruriens*. The pods are 4 inches or 5 inches long, shaped like the letter 'S,' and clothed with a thick coating of short, stiff bristles of a bright brown colour, the points of which are notched or finely serrated, and easily penetrate the skin, causing unbearable itching. The City dealer was at once informed of the danger of the use of the material, and immediately destroyed it; and the wholesale firm of novelty dealers who supplied it to him, and had no idea as to the purpose for which it was bought, at once discontinued its sale. Four retail dealers in other parts of London also destroyed their stores." The principal details of this story are ancient history. At the time when the stinging hairs of *Mucuna pruriens* were used in medicine as an anthelmintic, it used to be said that one of the first practical jokes played on the new medical or pharmaceutical student by those "in the know" was to let loose some of these stinging hairs, which are so fine as to be scarcely visible in their individual character, some of which, however, would never fail to penetrate the skin, usually on the back of the hands or between the fingers. Intolerable itching

resulted, the intensity of which was increased by rubbing, facts which I can verify from my own experience while handling the pods in the Kew Museum. As a drug the Cowhage or Cowitch, as it is sometimes called, has been known in European medicine since 1640. In Britain it was first introduced into the Edinburgh Pharmacopoeia in 1783, and into the London Pharmacopoeia in 1809, as an anthelmintic or vermifuge. The hairs with which the pods are densely clothed act mechanically on the intestinal worms, and were administered mixed with honey or treacle. At the present time they are very little used. The plant is a lofty annual climber, bearing dark purple papilionaceous flowers and golden brown pods somewhat like those of the Sweet Pea, and belonging to the same Natural Order. In India it is found all over the plains, and it also grows in the tropical regions of America and Africa.—JOHN R. JACKSON, *Claremont, Lympstone, Devon*.

"Eighth Report of the Woburn Experimental Fruit Farm."—This report, prepared by His Grace the Duke of Bedford, K.G., and Spencer W. Pickering, F.R.S., deals entirely with insecticides and fungicides, and many important facts are brought to light through its agency. Some of the most important experiments carried out were in connexion with mussel-scale, moss and lichen, and the Apple sucker (*Psylla mali*). In treating the mussel-scale, the emulsion soda wash, containing 6 per cent. solar distillate, 2 per cent. caustic soda, and ½ per cent. soft soap (for which is now substituted copper or iron sulphate with lime) proved most satisfactory. For the removal of moss and lichen from trees, a 10 per cent. solution of lime was not found an efficient substitute for a 2 per cent. solution of caustic soda. For the treatment of the Apple sucker, a 2 per cent. decoction of tobacco, sprayed on after the eggs are hatched out and before the blossoms expand, appears to be the most effective. The report is published by the Amalgamated Press, Limited, Carmelite House, London, E.C.

Black scab or warty disease of Potatoes.—In an interesting and instructive leaflet published by the Wye Agricultural College, Mr. E. Salmon, F.L.S., deals with this Potato disease fungus, known botanically as *Chrysophlyctis endobiotica* (Schilb.). It was introduced into England from the Continent in 1895 and is now known to occur in nine counties in England, Scotland and Wales. The disease may be readily identified by means of the gnarled, warty-like excrescences that are formed on the affected tubers. According to reports received by the author white varieties are more susceptible to the disease than the coloured sorts. The counties in which the disease has been noticed and recorded are Cheshire, Merionethshire, Nottinghamshire, Lancashire, Westmoreland, Cumberland, Stirlingshire, Clackmannan and Perthshire. The opinions quoted of such men as Professor M. C. Potter, Armstrong College, Newcastle; Mr. J. W. Eastham, College of Agriculture, Holmes Chapel; Dr. Borthwick of Edinburgh Botanic Gardens; and Mr. George Massee of Kew all tend to prove that the disease is a most insidious one, and point to the necessity of immediate steps being taken for its extermination. All who have had any experience with fungoid diseases of Potatoes will know only too well the rapidity with which they spread, hence it is with surprise and alarm that we read Mr. Salmon's statement that "although the Board (of Agriculture) knew of outbreaks of this disease in 1901, they have taken no steps to stamp it out or to prevent it spreading through the country." The disease is at present in its infancy, and all that is possible should be done to eradicate it ere it is too late. Potato growers already have enough diseases to combat without being saddled with another, which Mr. Salmon warningly states is likely to cause the same trouble and loss to Potato growers as the Finger-and-Toe disease does at present to growers of Turnips.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Vine weevil.—Cultivators of the Vine will be well advised to examine their borders and to keep a sharp look-out for the presence of this pest during the coming season. Information has reached me from various sources of the ravages caused by the larvæ of this weevil. Cyclamen, Begonias, and various other plants are also attacked by them. The larvæ feed principally on the roots, while the perfect insect seldom attacks other than the foliage.—M.

Gilla coronopifolia.—Mr. Fitzherbert is very interesting, as he always is, in his recent remarks upon this beautiful plant. I first got the seed in July, 1903, from an old garden in Rheims, and sowed it, by the gardener's instructions, at once. The seedlings bloomed well in 1904, and generally have done so since; but my own experience, and that of many friends to whom I have given seeds or plants, is that the earlier stages of growth are very slow and satisfactory and blooming a little uncertain. Devonshire has a magic climate, and in the experienced hands of Mr. Fitzherbert the plant is evidently mending its manners. Last year my plants, which had all been pinched, were magnificent, each having from a dozen to fourteen spikes of bloom about 4 feet high. Last year, in North-east Kent, we had no rain to speak of from May till the end of September, and with cold, sunless days there has been little or no bloom.—CHARLES PRENTIS, *Borden, Sittingbourne*.

Carnation cuttings.—In the paragraph on "How to Make Carnation Cuttings" (page 32) it is stated that "the proper length of a cutting is about 3 inches, though half an inch less is quite long enough." My experience of cuttings of 2½ inches or 3 inches long is that a large number are quite devoid of the essential firmness and stability that go to promote complete success. Anyone who will put a 2½-inch long cutting on a tape measure will find that he has but a very small one indeed, and when a cutting of that size is inserted an inch deep in the pot of soil but very little remains. Moreover, I am very sure that these small cuttings, however possible to the professional, are a source of much disappointment, and not a few failures, in the case of the amateur, who, to be on the safe side, as he imagines, follows such advice to the letter. I have seen such cuttings in the hands of capable propagators damp off wholesale, and the chances for so doing are distinctly favourable under ordinary systems of propagating. The advocates of small cuttings appear to quite overlook the fact that but a very small plant exists when this tiny cutting is rooted, and that a proportionately longer period of time is required by such to make a really good plant. As a matter of fact, a made cutting of not less than 4 inches, and far better if 5 inches, of many varieties is decidedly to be preferred, the measure to be taken from the tips of the heart leaves to the base. I would like to add a word of warning about inserting the cuttings singly in small pots, as recommended on page 33, paragraph 1. Very few amateurs are possessed of a superfluity of bottom-heat to be able to do this, and to not a few the simple expedient of two boxes—one deep and one shallow, the former 7 inches or 8 inches, the latter less than 2 inches—placed over the hot-water pipes and covered by a plain sheet of glass will make a perfect propagating box and one always at command. A little Cocoanut fibre in the bottom of the larger box for retaining moisture should be provided and kept moist. For the rest, fill the shallow box with pure clean washed river or pit sand and make firm. No mixture nor admixture of soils can compare with it, while its preparation is almost *nil*.—E. JENKINS.

Slugs on Maidenhair Ferns.—I should like to thank your correspondent F. Perkins for his kind information in your issue of the 11th ult. about the Maidenhair fronds. At his suggestion I placed pieces of Orange peel about my Ferns and have caught quantities of tiny white transparent slugs, who were evidently causing the trouble. No doubt many amateurs will value this useful hint.—L. F. T.

Cotoneaster angustifolia.—Two years ago I enquired from various amateurs and nurserymen in the South whether the above had produced berries. Mr. Manning's plant was the only one I could hear of as producing berries. A gentleman near Bath told me he had a few flowers, but no berries. In January, 1905, I planted several specimens here on a warm rocky slope, and at the same time in a garden on the Menai Straits. One of these, being planted against a warm south wall, could hardly have had a more favourable situation, but no flowers have ever formed. Is it possible that there are male and female plants? At Christmas a plant of *Cotoneaster thymifolia* flowered freely here.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed.*

Dividing Daffodil bulbs.—Mr. Watts (see THE GARDEN, page 39) says he does not follow me when I say the work of dividing Daffodil bulbs "may be done too late," &c. If your correspondent will again read my opening remarks on page 15, having reference to the root-fibres shown on the bulb in the sketch, in conjunction with the following paragraph, the meaning will be at once obvious. Such root-fibres as those shown were taken to be the new roots, inasmuch as in a large number of varieties the old roots perish and dry up naturally when the bulbs are out of the soil and for a time exposed to the air. In others, as some poeticus sorts, *incomparabilis*, &c., where a more wiry or fleshy semi-persistent character of root-fibre obtains, these root-fibres remain good for a much longer period—how long, however, will depend upon the manner of storing, the place of storage and other things. In a similar degree would these things influence the early or late issue of the young root-fibres from the bulb. Bulbs kept perfectly dry and in an airy place may go for months and display no great inclination to put forth new roots; indeed, I have at this moment, January 23, a few bulbs amply demonstrating this fact, while others of the same variety in a quite dry place, but in their thousands, gave signs at the end of September last of a desire to be in the soil again. It is all a question of environment. So far as the division of any bulb is concerned, much depends upon the variety. Such a bulb as that illustrated, however, with a little downward pressure of the thumb, would be instantly in three perfect parts, and far greater care would need to be exercised were it desired to retain it as shown in the sketch; the offsets would easily fall away if such bulbs were handled a few times. In mother bulbs of the Emperor or Empress type the outermost offsets, when the bulbs are a little dried, may be broken away with a slight hand pressure with perfect ease and absolute impunity, while an inner series of divisions erectly disposed may require (or not) the touch of a pointed knife on the underside of the connecting basal plate to bring about their separation. In such a case no possible harm could ensue to the young oncoming roots at that time, not only within the bulb, but protected in the most perfect manner possible by the gently receding base of the bulb itself. That both the embryo root-fibres, together with the germ of flowering and the leafage, do develop materially within the bulb during what is known by cultivators as the "dormant" period is beyond question, and to the writer this internal progress has been a source of unflinching interest during many years. In early July the germ of flowering may be just visible to the eye, while in October an inch-long flower-bud and green-tipped leaves are all disclosed if the bulb be cut in halves.—E. H. JENKINS, *Hampton Hill.*

THE FRUIT GARDEN.

GOOSEBERRY WHINHAM'S INDUSTRY.

IT is very doubtful whether, for general purposes, this well-known Gooseberry can be beaten. It has several points that tell largely in its favour, and if one were limited to growing only one variety of Gooseberry the choice would probably lay with Whinham's Industry. It belongs to the large fruited section, the berries being of good size, dull red, almost round, and slightly hairy. The flavour, too, is good, and as the fruit possesses a rather thick and tough skin, it travels well when ripe, thus rendering it an almost ideal variety for market purposes.

The hush has an upright habit, is very prickly and is a vigorous grower. It is, however, more shallow rooting than many varieties, and consequently is liable to suffer during extended

absolutely cleared of the enemy. To this opinion, however, we hold contrary views, gained not from hearsay but from actual experience. Gas-tar toned down with clay and water was the favourite prescription in bygone days, and we well remember the warm welcome that was accorded its inception as a positive remedy for bug on Vines many years ago. Many other compositions were prepared for coating the rods of Vines, all in turn giving more or less hope at the time of application and a corresponding disappointment as the season advanced. The application of tar paint was, to say the least of it, a most disagreeable task; but our hopes of success and our disgust of the presence of the insect was so strong that the offensiveness of the composition was not regarded as a serious impediment. Even the tar coatings were not proof against attack, for stray insects would invariably locate themselves in more or less obscure prominence and demand individual treatment. We prefer methylated spirit and petroleum as being equally destructive of insect-life



GOOSEBERRY WHINHAM'S INDUSTRY.

periods of drought, when some other sorts would not be so affected. This may, however, be avoided by giving the soil over the roots a good mulching of well-decayed manure or any other material that would be likely to check excessive evaporation. The variety is a very heavy cropper in most districts in the South of England, and the fruits are excellent both for preserves and dessert. As cuttings root very easily a stock can soon be secured, and anyone who is contemplating planting Gooseberries now or next season should certainly include a bush or two of this good all-round variety.

MEALY BUG ON VINES.

THE note dealing with this most loathsome of garden pests in THE GARDEN recently affords effective prescriptions if carried out with a determined spirit and continued, not in one season only, but as long as one stray bug remains in possession. The persistency of these creatures is proverbial; indeed, some gardeners are heard to say that an infested vine can rarely be

and less so to the Vine leaves. The merest touch of either suffices; indeed, sufficient ought not to be used to moisten the leaf, for death is assured by the smallest drop of spirit.

We employed gas-tar in the proportion of half a pint to a gallon of the prepared clay and water, all being reduced to the consistency of thin cream and kept well stirred to ensure of it being of equal strength. It is, of course, necessary that not only should the Vines be dealt with on drastic lines, but the roof, floor, walls, wires, &c., also should have scrupulous attention in detail, otherwise there will be much further trouble given. The wires, strainers, and eyelets are best painted with petroleum in a neat state, making sure that none falls on the Vine bark during the course of the work. It is often in such places that the bugs are found in hiding, even after the washing down of the roof has been completed.

Prior to the painting with the tar mixture loose bark which separates readily from the rod should be pulled off, laying a cloth or double mat beneath to catch any that fall with this residue, making sure that this is taken out promptly.

THE FLOWER GARDEN.

COLUMBINES AND THEIR CULTURE.

MODERN hybrid Columbines or Aquilegias are among the most graceful and attractive of all the flowers of the outdoor garden. Columbines of a sort we have always had, our forebears grew the quaintly named and quaintly-shaped flowers, every cottager in the country does so even now. But the difference in the flowers! If the old-time Aquilegia was worthy of the name of Columbine, then are the modern representatives of the race entitled to claim the whole harlequinade; the grace of Columbine herself, the shimmering changes of colour of harlequin, even the merriment of the clown are all suggested by the modern Aquilegia in the heyday of its flowering.

The florist, for once in a while, has here permitted Nature to lead him instead of attempting to shape her efforts with mathematical primness, and for this we are glad. True, he never could have conventionalised such an unconventional flower as the Columbine, but he might have clipped her elegant spurs, he might have encouraged doubling of the flowers and so much of what we now most prize would have been lost to us. The illustration shows how well his work has been done as regards the form of the flowers, of their delicate and marvellously beautiful colours mere black and white reproductions can convey no hint.

Fortunately for those to whom new varieties of plants have prohibitive prices, the Columbine in its improved forms can be readily raised from seed. A greenhouse is not necessary for the raising, although some cultivators sow seed in heat and thus forward the flowering period a little. This latter method is generally adopted when seed is saved from home-grown plants, as this is not ready until summer is well advanced. It should be sown as soon as ripe, and if the grower does not mind waiting a while for flowers he may well sow in light and sandy soil outdoors.

This is Nature's own method, and although it is the gardener's boast that he "doth mend Nature," it is extremely doubtful if he can mend her in the matter of raising hardy perennials from seed. Certainly many of them will grow if sown as soon as ripe in the open, whereas they fail to germinate in a cold frame in spring. But the latter is the more general way of sowing the Aquilegia, largely because nurserymen do not make a practice of offering seeds as they are harvested. March is the usual time for making a start, and a shallow, well-drained seed pan should be used. Soil composed of equal parts of loam, leaf-mould and coarse sand suits admirably, and the seed may also be mixed with a little sand to ensure its even distribution. Thin sowing is imperative, as is early pricking out, for the seedlings make far-reaching roots, and these are easily broken if allowed to ramify too much. A fairly deep box should be used for pricking out the seedlings; they should be set 3 inches apart and shaded

for a few days from bright sun. Planting in the open garden may be done at any time after May is out, but as the plants will not flower until the following year it is well to put them in a reserve bed and plant in their flowering quarters either in October or at the end of February. Site and situation are not very important matters, as the Aquilegia is by no means fastidious; I have found it form good clumps and make a pretty effect on an Ivy-covered bank facing north. It flourishes singularly well in heavy soil on the chalk, thousands of self-sown

being sent to Kew, it was decided by the authorities that its correct name was *Salvia dichroa*.

Nicholson's description of the plant is very misleading, for it gives its height as from 2 feet to 3 feet, whereas my plant, last year, attained a height of considerably over 9 feet, with a spread of 6 feet at the base. A large specimen, such as this, bearing many hundreds of long flower-spikes, is a beautiful sight when in full bloom, and is quite the glory of the garden in the month of July. The leaves are rather over

1 foot in length and are deeply cut, being roughly corrugated on the upper side and covered with hairs on the reverse. The largest bloom-spikes are fully 3 feet in length, and a length of about 9 inches of the blossoms is expanded at the same time.

The flowers at the base of the spike open first, and as these fade the upper ones expand, the blooms eventually enclosing to the extreme top of the spike, so that its flowering period is an extended one. The individual blossoms are lavender-purple in colour, the middle lobe of the lip being white. On cutting one of the longest flower-spikes, forty-eight expanded or partially-expanded blooms were found on it, while in all there were almost 180 flowers and buds.

This *Salvia* being a native of the Atlas Mountains, in North Africa, cannot be considered absolutely hardy; indeed, even here in Devon it is usually cut by the winter frost, but has never been killed although entirely unprotected. Towards the close of August the plant generally dies down to the ground level, sending up fresh growth in the late autumn.

This year, however, it did not die down quite to the ground, but threw up new growth from the bases of the old stems a few inches above the ground. These new growths have, however, been badly cut by the frost, of which we have up to the present experienced 7°. It is a very shy seed-bearer, the long flower-spikes with considerably over a hundred blooms, rarely perfecting more than half-a-dozen seeds in their capsules. This plant deserves to be more widely known than it is at present, its free-flowering and

stately habit making it an object worthy of inclusion in the foremost gardens in the country.

South Devon.

S. W. FITZHERBERT.

THE WINTER ACONITE.

This charming little plant is flowering rather late this season, owing to the severe weather we have experienced. Each spring as I watch its furred yellow buds rising from the damp, and often frozen, earth I wonder why it is not always found in gardens. Even the smallest plot of ground should have a few clumps of this pretty little plant. How delightful it is to see a broad mass of its golden yellow blooms glistening in the February sunshine. Because of its earliness the Winter Aconite is worthy of a place in the garden among other spring bulbs, but it produces the finest effect when naturalised in the turf under deciduous trees or in wild corners. In such situations it seeds itself freely, especially if the soil is not too cold. E. TESCHEMACHER.



THE SPURRED COLUMBINE: ONE OF THE MOST BEAUTIFUL FLOWERS FOR DECORATION.

seedlings being annually produced in my garden. At the same time it will grow very well in almost pure sand, also in the shade of a wood or in the open.

Should it be desired to increase any particular variety the plant should be dug up, carefully pulled to pieces with the hands and replanted in well-worked, sandy soil. This may be done in early spring or as soon as flowering is over. C.

SALVIA DICHROA.

This splendid *Salvia* is practically unknown in England, though in "Nicholson's Dictionary of Gardening" it is said to have been introduced into this country in 1871. Its rarity is proved by the fact that during the past thirty years there has not been a single mention of it in the volumes of THE GARDEN. My plant was originally given to me by Lord Walsingham as *Salvia tingitana*, but, upon a flower-spike and foliage

COLOURED PLATE.

PLATE 1343.

SOME GOOD SWEET PEAS.

AS Sweet Peas are so rapidly increasing in popularity, articles will, as occasion permits, appear in the pages of THE GARDEN. For the benefit of new readers, or any that may have missed them, we direct attention to the article on "The New Sweet Peas," by Mr. A. Malcolm of Duns, N.B., which appeared in the issue for November 2, 1907, and that on "How to Grow Sweet Peas," by Mr. Horace J. Wright, in the issue for January 4 last.

Owing to the rapid rate at which Sweet Pea novelties are introduced nowadays, it requires more than a casual effort on the part of the everyday cultivator to keep in touch with even the best of them; the worst he may well keep at a distance, provided some kind friend who has tried them will point them out. Most growers like to know what are the best dozen varieties, both for the garden and the show tent, and many experts will not hesitate to select a dozen for both purposes.

Evelyn Byatt.—This is probably the best standard orange-coloured variety on the market with the exception of St. George. It was, I believe, first exhibited in 1905, when it received the distinction of an award of merit, an award that it has since proved to be well placed. It has frequently been described as an improved Gorgeous, the colour being a much brighter orange than that of the last-named variety. The standard is very rich orange, the wings a sort of rosy salmon with a lighter keel. A point in its favour is that it does not burn in the sun so badly as most other varieties of this colour, hence it is a favourite with many for garden decoration. The flowers are rather small and it is not often that it produces four on a stem.

Henry Eckford.—But for its unfortunate habit of burning in anything like strong sunshine, this might easily be termed the prettiest Sweet Pea yet raised, the colour being peculiarly soft and pleasing. However, so delicate is its texture that it is almost worthless for the decoration of a sunny garden. By planting in the shade, or by protecting the plants during the sunniest part of the day, flowers of the most exquisite colour may be obtained, and they are well worth the trouble involved. Without some precaution of this sort the flowers are often scorched by a hot sun to a biscuit colour, or streaked with light whitish patches. As an exhibition flower Henry Eckford was unfortunate in encountering

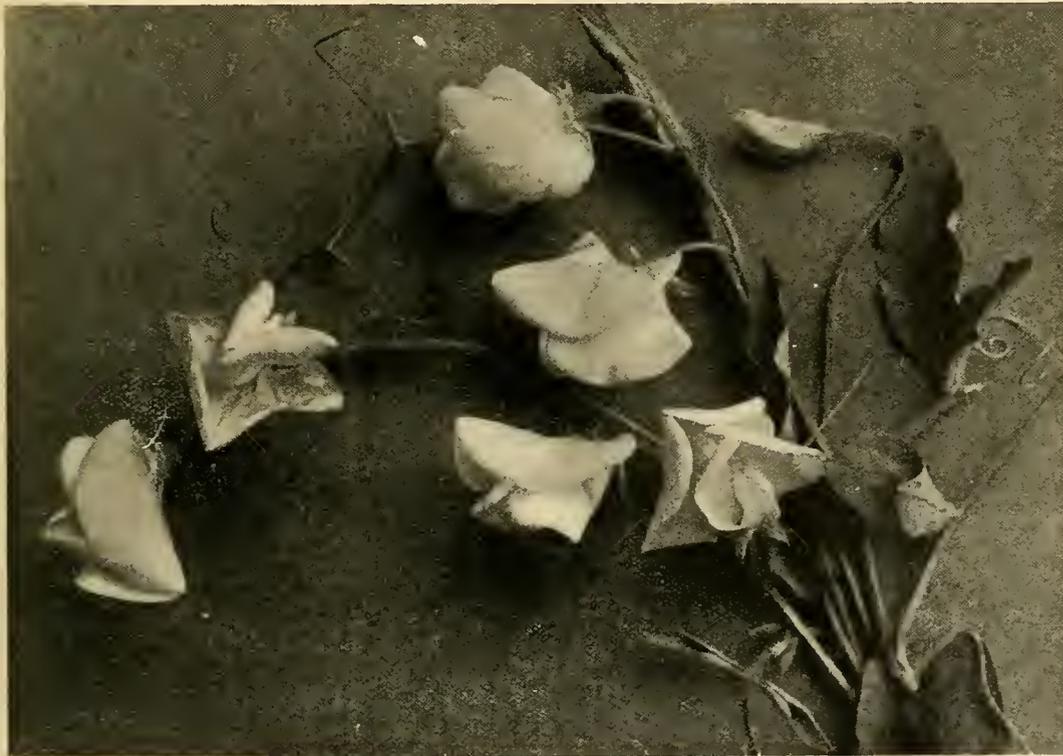
and it cannot, at least at present, be left out of the best twelve or even the best six sorts. It does not burn in the sun as badly as does Henry Eckford; in fact, it has been grown in the full sun in light soil, and also in heavier soil on a hillside, without scorching. The thing to avoid with all these delicate orange shades is a low-lying situation, where the morning dew is retained until the sun gets enough power to injure them.

Miss Willmott.—This is a much older variety than either of the preceding, but, though eclipsed by them on the show-board, it is by no means done with as a garden Sweet Pea. As a matter of fact, it is still the market growers' standby in its colour, and is still one of the most popular varieties in commerce. With good culture it will produce four large flowers on a stem, and none of its rivals are credited with doing more. In some strains of seed a giant form is produced, and this is capable of holding its own with any Sweet Pea yet raised. Probably this variety burns less than any of the orange shades, and it may still be considered the best of its colour for the garden.

Audrey Crier.—In the opinion of many this is the finest Spencer Sweet Pea yet raised, and the fact that it gained the silver medal of the National Sweet Pea Society as the best variety of its year speaks volumes in its favour. It has, however, an unfortunate reputation for fixity, or rather for the want of fixity, and anyone who tries it for the first time this year would be well advised to prepare for disappointments. At its best it is a variety that commands instant attention, and when it can be guaranteed to come true from seed it will take its place in the very front rank of exhibition varieties. In the garden it is very showy, but has a slight tendency to scorch in the full sun. Though in the hands of many cultivators during the past two years, it may really be looked upon as a 1908 variety, since it has only been offered in quantity for the first time this year.

Enchantress.—This charming variety came under the ban of the National Sweet Pea Society last year as being too much like Countess Spencer and one or two other varieties, and the strong family likeness must be admitted. But while Enchantress is quite the equal of Countess Spencer in everything that has made that variety so popular, it occasionally gives flowers far superior to anything that the Countess is capable of; they are very large and several shades deeper in colour than those of Countess Spencer, and could their production be depended upon Enchantress would occupy a much higher position than it does at present. The sporting proclivities of Countess Spencer are notorious, and unless a strain guaranteed to come true can be obtained far better grow Enchantress. It is a splendid garden variety, as well as being eminently suitable for exhibition, and most of the long, strong stems carry four large flowers.

Frank Dolby.—This grand Sweet Pea was a novelty of last year and proved to be one of the best fixed new varieties on the market. The colour may be described as a lovely pale lavender, much the same as that of Lady Griseld Hamilton, but the flowers are much larger and possess a fine waved standard. This waviness is not shown at all well in the coloured plate. The plants are very vigorous and the flowers come in most instances four on a stem, the latter being very long and stout. It is a grand variety, both



SWEET PEAS. (Reproduced from a photograph sent by a reader.)

Such selection must, however, be a purely arbitrary one, and only an index of personal opinion, for probably no two experts could be found who would agree as to all the varieties which should make up the dozen. The twelve varieties depicted on the accompanying coloured plate are not, therefore, put forward as the best dozen, either for the garden or for exhibition; but every one is in the very front rank in its colour, and it would be difficult to find another twelve to beat them. With the exception of St. George most are comparative veterans—that is as Sweet Peas go—so that the bulk of them are inexpensive.

such a rival as Helen Lewis on its *debut*, for the latter has undoubtedly kept it off many show-boards.

Helen Lewis.—Since its somewhat sensational introduction this has reigned as queen among the orange shades, and an interesting fight for supremacy may be looked to between it and St. George. Originally known as Orange Countess, Helen Lewis has also been unfortunate in its treatment by some of the trade growers, at least three distinct stocks, two of them very inferior, having been placed on the market. Despite this, the variety occupies the highest possible position among exhibition Sweet Peas,

for exhibition and garden decoration, its colour and graceful outline appealing to most people. Some seem to think that Mrs. Charles Foster will supersede it, but this will not happen until the latter has become more fixed.

Dorothy Eckford.—Ever since its introduction this variety has reigned supreme as queen of the whites, and though its supremacy is at last threatened Dorothy is still far from being deposed. Its opponents' chief claims to favour are based upon the possession of a waved standard instead of the plain one that Dorothy sports, but neither Nora Unwin nor Etta Dyke has yet beaten it for purity and density of colour—if such a term be allowable in speaking of a white flower—and it is doubtful if the new white Spencer from America will be more successful. With extra good culture Dorothy Eckford will yield a proportion of four-flowered sprays, and nothing better than these need be desired. As a garden variety it is probably the most generally useful of all Sweet Peas.

John Ingman or George Herbert. These two varieties are already bracketed by the National Sweet Pea Society as being too much alike, and there is not the least doubt in the minds of many good judges that they are absolutely synonymous. Certain it is that either has been shown as the other at some of the leading exhibitions in the land, and that without being detected; in fact, one may place the two in the hands of an expert and defy him to tell one from the other. John Ingman has become somewhat more notorious than George Herbert, simply because it has shown a greater tendency to sport, but the purchaser can buy either in the assurance that he is getting the same thing, that is, if he buys of a reputable dealer. By buying from a Mushroom firm it is possible to get a variety with a quite plain standard, whereas that of the real Simon Pure is delightfully waved.

Mrs. Collier.—This variety is the best representative of a little fable with which Sweet Pea growers amuse and deceive themselves. They fain would have a yellow Sweet Pea, therefore they call a cream a yellow, and put forward Mrs. Collier as the best realisation of their dreams. That it is the best of the so-called yellows that have been tried by the general public is not gainsaid, but that it is very far indeed from being a true yellow a glance at the illustration will show. There are several strains of it on the market, some of which have a tendency to produce an altogether unfair percentage of two-flowered sprays; but there are other strains which will give a fair proportion of fours, and thus it is again a case of the best market being also the cheapest. At least three varieties are put forward as superior yellows this year, viz., Clara Curtis, Devonshire Cream and James Grieve, to say nothing of the American primrose Spencer, so that it looks as if the reign of Mrs. Collier is likely soon to end.

Black Knight.—This is an exhibitor's variety, pure and simple, for it produces quite a negligible effect in the garden, and finds little favour as a cut flower. It, however, makes a

decided change in the colour scheme of the Sweet Pea, and for that reason is worth growing. It is king in its class, having kept that position in spite of the challenge that the newer Black Michael threw out, and it scarcely seems likely that any of this year's novelties will supplant it, though at least one is expected to do so; Black Knight should still be included in every good-sized collection.

Queen Alexandra.—Last on the list here, but foremost in both the garden and the



A RARE SAGE (SALVIA DICHROA) IN DEVONSHIRE. (See page 76.)

show tent, is the variety that bears the name of our revered Queen. Judging from the extreme brilliancy of its colour it is just the flower that one would expect to burn in the sun, but it has an unblemished sunny weather reputation, and is one of the brightest of all garden decorative Sweet Peas. This year sees the advent of two new scarlets—and there are others in reserve—but whether they will oust the present favourite from pride of place time alone can tell; they will have to be extra good to do so, that much is certain.

E. J. CASTLE.

THE NATIONAL SWEET PEA SOCIETY'S TRIALS AT READING.

THERE is no gainsaying the fact that the trials of standard varieties and novelties of Sweet Peas conducted by Mr. Charles Foster at the University College Gardens, Reading, last summer for the National Sweet Pea Society constituted the very best work that this popular and go-ahead society has ever done, and every true lover of this fragrant and beautiful annual will hail with satisfaction the statement that similar trials are to be conducted at the same place and under the same supervision again this year.

The thing that struck one most on the occasion of the visit of the members of the society was the uniform stage of development and the complete absence of disease. To get 310 groups of Sweet Peas practically all in their best flowering stage on a given date is a feat worthy of the supervisor, but to get them all to this stage without a trace of any fungoid disease in a wet season like that of last summer is still more wonderful, and proved beyond doubt that the society had secured the right man to conduct these trials.

Of the 310 groups a few were duplicates, i.e., there were two or more groups of a variety, and some of them were unnamed seedlings. Of these eighty-three were badly mixed, fifty-seven being named varieties and the remainder seedlings, some of them being so much mixed as to render it exceedingly difficult to determine which was supposed to be the variety. Some very good things were noticed among these mixtures, and providing they are fixed many of them will provide welcome additions to existing stocks. As one would naturally expect, the waved standard varieties were the worst so far as unfixity was concerned, the majority of the mixed groups being of this type. Many of the pink varieties of this section were also too much alike, and it is satisfactory to note that the society has now published a list of too-much-alike varieties.

The groups of named varieties that were noted as being quite true numbered 126, some of these, however, being duplicates. In the unnamed seedlings some of the groups were true, but only one of these could be considered of exceptional merit, and this was very near an existing named variety. St. George, the silver medal variety, was in grand condition, and undoubtedly fully deserves the honour bestowed upon it. Eckford's strain of Helen Pierce was the only variety considered worthy of a first-class certificate, and this beautiful Sweet Pea is beyond doubt the best received from America.

The fact that the greater part of the expenses entailed in conducting these experiments were provided by voluntary contributions indicates fairly clearly a determination on the part of raisers and introducers of novelties to do all that is humanely possible to prevent these getting on the market until at least a very large percentage of a variety can be relied upon to come true.

F. W. H.

ORCHIDS.

A GOOD WINTER - FLOWERING ORCHID.

(*LÆLIA ANCEPS*.)

LÆLIA ANCEPS and its varieties are very beautiful winter-flowering Orchids, and the white varieties, namely, *L. a. alba*, *Stella*, *Dawsoni*, *sanderiana*, *Hilli*, *Williamsii* and *Schröderæ* are most useful for decorative purposes during the dull period of the year. They are comparatively easy plants to cultivate, and flower satisfactorily every year when once their requirements are thoroughly understood and met. In most cases they will now have finished flowering for the season, and it is advisable to clean each plant thoroughly, as during this period they are often attacked with a soft white scale which will do serious injury to the resting buds unless exterminated. The proper time to repot or top-dress them is when new roots are being emitted from the last made pseudo-bulb. This usually takes place during the month of February.

SOIL AND POTTING.

The most suitable soil in which to grow them is probably *Osmunda* fibre cut into pieces about the size of an hen's egg, with some sphagnum moss worked in the surface during the process of potting. It is not necessary to pot up all the old back bulbs, if two or three are left behind the bud that will be quite sufficient. These back bulbs, if stock is required, should be potted firmly in well-drained pots, with a surfacing of sphagnum moss, and placed in a warm house and kept in a moist condition. They will soon commence to make new growth, and as soon as these appear they should be potted in the compost that is used for the old plants. Use pans without side holes for the plants that require repotting, press the soil firmly between and around the roots, and work in some bunches of living sphagnum on the surface, which should be just below the level of the rim of the pan. Do not disturb the old plants unless it is quite necessary; simply pick out some of the old material with a pointed stick from between the roots and replace it with fresh compost.

TREATMENT AFTER POTTING.

When the plants are newly potted much discretion is needed in watering the plants. If the soil is kept too wet the young roots, instead of penetrating the compost, will turn black at the tips, and the growth of the plants will be checked in consequence. All that is needed until the plants become established is sufficient root moisture to prevent shrivelling. When the young growths are making headway the supply of water should be gradually increased, and when the plants are in full growth a copious supply must be given. A night temperature of 55° to 60° is suitable, and they should be grown in full sun with abundance of atmospheric moisture and a free circulation of air. **W. H. PAGE.**

SWEET PEA "STREAK" DISEASE.

WHAT is this fell disease that has made its appearance among this beautiful annual during the last two or three seasons? A great deal of doubt seems to exist as to what it really is; but something must be done to check its ravages if Sweet Peas are to be cultivated as extensively as their many merits demand. I first noticed it two years ago, and last summer lost a row some 25 yards long through its agency. Portions of the plants examined microscopically revealed no

tangible traces of disease, and all efforts to check it were unavailing. The plants were exceedingly healthy until about a fortnight after flowering commenced, when the disease, or whatever it is, made its appearance. There can be no mistaking it when it does come, the first indications being a distortion of the top portion of the plant and the flowers coming streaked. After a few days the blooms refuse to more than partly open, and, finally, the buds drop off and the whole plant becomes more or less distorted and covered with brown streaks along the main stems.

Preventive and repressive measures taken were spraying with sulphide of potassium, Bordeaux mixture, dusting with flowers of sulphur and lime, and watering with nitrate of soda solution, the last named being resorted to as a stimulant to help, if possible, the plants to grow out of the attack. But, as previously stated, these efforts were quite useless, the plants sickening and dying off at the rate of several a day. I ought to have stated that cutting back

THE ROSE GARDEN.

TRELLISES FOR PROTECTION OF TENDER ROSES.

IN gardens that are not naturally sheltered it becomes necessary, if we would grow some Tea Roses of the choice but tender varieties, to protect them in some way against the cruel east and north winds, and it is quite possible to do this now without much artificial aid. The charming *wichuraiana* Roses adapt themselves so readily to any sort of training that we may quickly form natural screens with these Roses alone. A slight framework of stakes or Bamboo canes is all that would be required, because in two or three years the plants could be made almost to support themselves. A few Oak posts let into the ground at intervals of 8 feet or 10 feet and about two strands of stout wire stretched between would be another simple arrangement.



A BEAUTIFUL ORCHID (*LÆLIA ANCEPS*).

the plants as soon as the distorted tops were noticed was also done, but without any benefit resulting.

Twenty-five sorts, a yard of each, were lost in this way in about four weeks, standard varieties and novelties alike succumbing. I have heard it suggested that eelworm is responsible, and the disease has been described as *Peronospora vicie*. There may be some truth in the former, but the disease is quite distinct from *Peronospora*. Reports received from widely apart localities as to the ravages caused by this disease last summer prove that it is spreading rapidly, and at present growers seem quite unable to fight it with success. Most likely the National Sweet Pea Society will take it in hand during the coming season if it presents itself, which undoubtedly it will do; but whatever is done must be done promptly if we are to save this lovely flower from destruction. Possibly some reader has discovered a remedy; if so, a description will be welcomed by many lovers of the Sweet Pea. **F. W. HARVEY.**

Now as to planting. Procure two year old own root plants if possible of such sorts as *Jersey Beauty*, *Gardenia*, *Alberic Barbier*, *Elisa Robichon*, *Edmund Proust*, *Lady Gay*, *Hiawatha*, *Dorothy Perkins* and *Réné André*, and plant them about 5 feet apart. The plants would have growths of about 4 feet to 5 feet long. These should not be cut back, but just trained horizontally or nearly so on to the sticks or wires.

If a taller screen is desired, train the Roses upright and allow them to reach the top and then fall over. For this purpose *Dorothy Perkins* would be splendid, and *Sweetheart* is another excellent sort especially for its foliage. Perhaps choicer Roses would be preferred from the Tea and Hybrid Tea sections; if so, a close-fitting trellis would be best, one that a basket-maker would provide. Such a trellis could be covered with Roses of semi-climbing growth, such as *Grüss an Teplitz*, *Gustave Regis*, *Gloire des Rosomanes*, *Frau Karl Druschki*, *Corallina* and the like.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

HARDY FRUIT.—Although the period for planting is getting late, I have just prepared quarters for making the last planting of Raspberries. The youngest canes, *i.e.*, those of last season's development, are those that should be selected and planted in soil that has been deeply dug and well manured. Cut back the canes after planting to within a few inches of the soil, as this promotes strong growths subsequently. Gooseberry and Currant trees should have their pruning completed without delay. As a protection from injury by birds I have always found that a solution of lime and soot is an excellent expedient. My fruit tree borders are now receiving a top-dressing with decayed manure and good soil.

Hardy Flower Garden.—Herbaceous perennials may be divided. I prefer the late winter and early spring for this work better than any other time. Do not divide the old clumps carelessly, but take infinite pains to avoid damage to the plants. Many subjects will break up quite easily. A strong, sharp knife is very useful for this work, although I have seen plants chopped up into pieces of various sizes by the aid of a spade, but this method is not commendable. Early Sweet Peas may be assured by making a sowing forthwith. I always select a warm quarter of the garden where protection from north and east winds can be provided; these plants invariably do well then. Plant Anemones and roots of



1.—PLANT OF DWARF ARUM LILY.

Ranunculua at this period; they do well in good open soil that has been enriched with well-decayed stable manure. Fork into the surface soil of the hardy flower border a good top-dressing of decayed manure.

The Greenhouse.—Tuberous-rooted Begonias should now be started into growth. I find that good and distinct colours of these plants give much satisfaction. The tubers may be encouraged into growth by placing them half their depth in a light and sandy compost in shallow boxes. Keep the soil just nicely moist. Fuchsias and

Geraniums may be cut back at this season. From past experience I find that both these subjects do not object to being cut back hard; they invariably break away strongly afterwards. The beautiful *Agapanthus umbellatus* should be dealt with now. My rule is to repot well-rooted plants, using soil composed of two parts loam and one part leaf-mould, with sand in sufficient quantity to keep the soil open. Decayed manure may be used in place of leaf-mould if the latter is difficult to obtain. Young shoots forming at the base of flower-buds of Azaleas should be picked off; if allowed to remain they draw upon the resources of the buds and prevent them from fully developing. I am just potting up a batch of Tuberoses (*The Pearl*), and am placing three tubers in each pot 6 inches in diameter. In adjusting them in position, the crown of each should be just above the soil, the latter comprising loam of a light and sandy character and leaf-mould in equal proportions.

Chrysanthemums.—This should be a busy period with these plants. I am now lifting and dividing the old plants of the outdoor border sorts; these in many instances break up quite easily. The divided pieces may be planted forthwith where they are to flower next autumn. Plant firmly, observing a distance between the plants of from 2 feet to 3 feet. Insert cuttings of the decorative *Chrysanthemums* as they can be acquired. Use light and sandy soil, and insert the cuttings around the inside edge of pots or in shallow boxes. Place these in the greenhouse, where they should root within a month. Young plants should be stood in frames to keep them sturdy, taking care, however, to afford protection against severe frosts.

Roses.—When the weather is favourable plant Roses without delay. The sooner planting is completed the better. A few new varieties and other interesting sorts I am planting in specially-prepared quarters. I never attempt to plant Roses unless the ground is free from frost. Do not be unduly anxious to prune Rosea, this work being best left another week or two. A few plants that I am growing in pots in the cool greenhouse are beginning to grow away nicely; these I am now watering more freely, and also syringing with tepid water on fine days. This I shall continue to do until the blooms expand.

Window Gardening.—The pretty white and blue Campanulas, so useful for basket-work, may be increased by means of cuttings. Young growths should be selected, and these inserted in soil of a light and sandy nature. Use pots of a convenient size. I make a small propagating frame by using a box 6 inches to 8 inches deep, covering this with sheets of glass and placing the box in a sunny window. *Genistae* and other spring-flowering plants may be stimulated by occasional waterings with manure water or weak doses of sulphate of ammonia. The Chinese *Primulae* as they go out of flower should be thrown away, as they are useless afterwards. *Hyacinths*, *Tulips*, *Narcissi* and other bulbous subjects that are making free growth should be brought to the light of the window without delay. See that the soil is kept moist.

The Vegetable Garden.—Plant early Potatoes forthwith. For this early planting I select the warmest border in the vegetable garden and plant when free from frost. Shallots may be still planted 6 inches to 9 inches apart in the rows, and in rows about 1 foot or rather more apart. Early Peas may be sown as soon as opportunity affords. Rhubarb is now giving

evidence of growth. That in the open may be forced by placing tubs, boxes, or any similar contrivance in an inverted position over the crowns, and the boxes covered in turn with long



2.—THE SAME PLANT AFTER FLOWERING.

stable litter. Other plants for later supplies should be mulched with decayed manure. I am just making a planting of *Seakale* and preparing quarters for *Horseradish*, which I am proceeding to plant forthwith.—D. B. C.

INCREASING THE ARUM LILY. □

THE Arum Lily, better known to botanists as *Richardia africana*, is one of the most popular of our greenhouse plants. This plant is also known as the Lily of the Nile, having been introduced into Europe from South Africa so long ago as 1687. It is a plant of comparatively easy culture when proper conditions are provided for it under glass. There are other species of this attractive plant, notably *R. elliotiana*, a plant producing lovely yellow flowers and having spotted leaves; *R. Pentlandi*, another yellow sort with green leaves; *R. albo-maculata*, white; and *R. hastata*, yellow and green. *R. africana* has given us one or two dwarf forms, each of which has smaller white flowers and dwarfer growth than that of the original. The plant figured here is a comparatively new dwarf white distributed by Mr. W. J. Godfrey of Exmouth a few years ago, and is regarded by many as an improvement on the original form. Fig. 1 represents a plant just coming into flower, with the flower-spathe partially developed, and as soon as the display is finished, in order to increase the number of plants, they will be divided in the manner described below.

DIVIDING THE PLANTS.

The treatment of plants of the different species varies somewhat. For instance, the African sort, *R. africana*, and its smaller allies, generally speaking, are not divided until May, while those of the other species are better when divided and potted up in February. The variety illustrated here has been grown in a cool greenhouse all along, but, when accommodation in this glass

structure is inconvenient, the plants may be placed in a hot frame, or ordinary cold frame when all danger of frost is past. Assuming there is plenty of room in the cool greenhouse subsequent to the flowering period, we prefer to keep the plants there. Fig. 2 represents a plant turned out of its pot ready for division. It will be observed that it is well rooted, and will derive considerable benefit either by being transferred to a pot of larger size or by division of the roots for increasing the supply of plants. If growers prefer to repot the plants intact, it will be better to place those now growing in 6-inch pots into others 8 inches in diameter. Larger plants that are in 8-inch pots may be transferred to 10-inch pots, in which case they should ultimately make really noble specimens. Division is very easily done, and is achieved by simply using pressure with the thumbs and fingers, inserting the tips of the former well down into the crown of the plant. Each individual growth may be separated in this way. The character of the growths will be found to vary, some being much stronger than others.

Fig. 3 will serve to illustrate the character of the divided pieces. The plant in Fig. 2 has given us two strong pieces similar to the centre one in Fig. 3, as well as the two smaller pieces. These should be potted up singly into pots of a convenient size, this being determined by the quantity of roots adhering. In this instance the largest divided portion needed a 6-inch pot, the next a 5-inch pot, and the two smaller pieces



3.—A PLANT DIVIDED.

lift the plants and place them in pots, using soil of the kind already described. Subsequently place the plants in a cool greenhouse for a few weeks, later on giving them rather warmer quarters. Never let the plants suffer for want of water, and as the flower-spathes are developed apply liquid manure repeatedly.

For early supplies of bloom plants should be grown entirely in pots. After gradually hardening them off in the early summer they should be transferred to pots of larger size, subsequently plunging these in the open garden where they are to remain during the summer months.

HOW TO PRUNE GOOSEBERRIES.

ALMOST every beginner in gardening will have a few bushes of this fine summer fruit in his or her garden, and with the advent of March comes the time for pruning, the work being left until then so that the operator may ascertain to what extent the birds have taken the buds and prune accordingly, first of all removing those shoots that have been rendered budless by these pests. At one time it was usual to prune for spurs, much the same as is now done with Red and White Currants, but this system has now fallen almost entirely into desuetude, the plan now adopted being to cut out all old worn-out shoots and prune back those formed last year to a plump bud situated on well-ripened wood.

Of course enough of the inner growths must be removed to render the centre of the bush open, and every shoot that is left should be far enough away from its neighbour to allow of the clenched fist being passed freely between them. Possibly the term "well-ripened" wood may need some explanation to beginners. If we examine a last year's shoot of a Gooseberry bush it is almost certain that we shall find at least several inches of wood at the top that is, to some extent, soft and pithy, and this is the portion that is not well ripened and must therefore be removed. Some varieties of Gooseberry, such as Warrington, have a pendulous habit, the ends of the growths reaching to the ground and even rooting there. In pruning these cut the shoots so that the portions remaining are clear of the soil by at least 6 inches, and always cut to a bud that is pointing in an upward direction. This may seem a waste of good material, but soiled Gooseberries, even when green, are of little use, and when ripe they are quite worthless. If cuttings are required, some of the best shoots may be utilised for this purpose, making them 12 inches long and taking out all the buds, except four or five at the top.

Insert them firmly, half their depth, in moderately light soil. This work is, however, much more successful if done during November. Collect and burn all prunings as soon as the work is finished, as the spines, if left lying about, render summer work among the bushes dangerous.

HOW TO GROW SINGLE DAHLIAS FROM SEED.

IN ONE season plants may be raised from seeds, which will bear flowers in great abundance. Not only are the plants of great value as border subjects, but the flowers are much prized for cutting for the filling of vases in the dwelling rooms. About twenty years ago I had a great deal to do with the raising and growing of single-flowered Dahlias, mainly for the supply of cut blooms for table decoration in the autumn. This work was carried out most extensively, and very few other kinds of flowers at that part of the year were as valuable. But since that period a wonderful advance has been made by hybridists in the raising of new and improved varieties, the colours of which are exquisite. The single Cactus Dahlia has now come to the front, and is a decided acquisition. From a single packet of seeds many and various are the colours of the flowers on the resultant plants. Every amateur who possesses ordinarily good garden soil can grow these Dahlias. He should

Sow the Seeds at Once.—Pots are better than boxes for raising the seedlings in. Procure some 6-inch pots and fill them three parts with good sandy loam and leaf-soil in equal proportions, and sow the seeds 1 inch apart, covering them a quarter of an inch deep. Place the seed vessels near hot-water pipes in a glass structure, or plunge them to their rims in a mild hot-bed. The seeds quickly germinate under these circumstances, and the seedlings must be judiciously exposed to the full light in order to obtain a sturdy stock. Put the young plants separately into small pots as soon as they have developed a pair of rough leaves, and harden them in a cool frame prior to planting in the open.

Plants in the Open Border.—Any open, sunny position in the garden will be suitable; but as the plants will continue to bear blooms late in the year it would be advisable to select a place near a sheltering wall or fence, or put out the plants in a block in a border where a temporary shelter may be erected over them when frosts come. All that is necessary to be done during the summer-time is to supply the roots with water in dry weather, and to stake and tie up the branches. AVON.



4.—STRONG DIVISIONS POTTED UP.

pots 3 inches in diameter. Fig. 4 and Fig. 5 represent the divided pieces potted up. The two larger pieces should make fine strong plants at an early date, but the smaller pieces will take much longer to evolve growths that will flower satisfactorily. For the repotting above referred to, use a compost made up of three parts good loam, one of well-rotted manure or good leaf-mould, and a fair quantity of coarse silver sand or road grit, all well mixed together. Always use clean pots and crocks, and see that the drainage is well arranged before filling in the soil.

PLANTING IN THE OPEN.

The original form of *R. africana*, as we have already suggested, should be divided in the middle of May and planted forthwith in the open garden. Give the divided portions a space 1 foot apart in rows about 2 feet asunder. In light soil deeply dig the ground, take out a trench as for Celery, and plant in this. The plant is a great lover of moisture, and needs the quarters prepared so that full advantage may be taken of the copious applications of water that must be applied during the summer months. In the late summer or early autumn, preferably September,



5.—WEAK DIVISIONS POTTED UP.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

MALMAISON CARNATIONS.—Pot up now into the pots in which they are to bloom all the young stock; use good fibrous loam, leaf-soil, sharp silver sand and some Veltha at the same strength as the makers recommend. See that the pots are clean and well drained, and press the soil fairly firm. Give very little water till the roots have got hold of the new soil. Keep in a cool and airy house. Top-dress larger or older plants with some well-approved manure. Wood's is an excellent preparation, and, as the plants attain growth, a little feeding will be beneficial every week; little and often should be the rule. Stake and tie those throwing up flowers.

Border Carnations.—These should now be placed into the pots in which they are to flower; three plants in a 6-inch pot are advisable. These may be placed in a cool house or in airy frames. There are some excellent varieties among these, and colours which are much admired and prized after the majority of the Malmaisons are over.

Winter-flowering Carnations.—Those struck last month should now be potted singly and kept in a growing temperature, and those potted up in December will soon require to go into a 4½-inch size. Keep the growth free from aphid and thrip by syringing with weak insecticides occasionally. There are numerous varieties of these to select from.

Bedding Plants of the Geranium (Pelargonium) section should now be potted up singly and the points pinched out, so that they will make good bushy plants. Place them in a growing temperature and close to the glass. Put Lobelias, double and single, into heat and propagate as soon as sufficient growth has been made to get cuttings. They will strike very well in sand, when they should be put in boxes in some light soil, keeping them near the glass to prevent a drawn growth.

Dahlias and Begonias may be started if cuttings are required. Do not put them in strong heat to weaken; rather start early and keep just warm enough to induce growth, when some very strong cuttings will soon be obtainable. These will give more satisfaction than weak puny plants, and, as a word of caution, do not get forward more plants than can be accommodated properly. Hippeastrums will now be throwing up their flowers and should be given a little more warmth and be top-dressed. Soot water should also be given every now and again; this improves the foliage.

CONSERVATORY.

This should be gay at the present time. Keep the climbers well regulated and tied in such a way that they look as though they have not been tied. *Cobæa scandens* and *Taxonia*s require a good deal of thinning, otherwise they will exclude the light to the detriment of other plants and also from the windows of the dwelling-rooms. Many climbers will now want top-dressing. Camellias should have copious supplies of manure water.

KITCHEN GARDEN.

General Work.—Early-sown Lettuce should be thinned out, and if necessary place the thinnings in other boxes for a succession. Plant more Potatoes in frames, also French Beans and Asparagus. All these little dainties are required and are expected. Keep up a good supply of Rhubarb, Chicory, Dandelion and Seakale. Sow Mustard and Cress twice weekly. Look over the autumn-sown Lettuce and repair

gaps if any, so that the spare seed-beds may be dug up. The same remark applies to Cabbage. More Mint and Tarragon should be placed in pots or boxes and in heat. Look over the stock of Cauliflower, and if there are many blanks sow at once in boxes or frames, with just sufficient heat in cold weather to keep frost away.

FRUIT HOUSES.

Peaches and Nectarines.—The process of disbudding will now require daily attention. Do not resort to too drastic methods. Good disbudding is the making of the trees, and also future crops. There is generally too many growths left, and these ultimately have to be cut away.

Figs.—These should now be tied, stopped and trained. Stop strong leads unless any vacant spaces require filling. Do not leave the shoots too close together. Well-exposed, short-jointed wood always bears the best fruits. Give plenty of moisture to large plants in small pots, and when the fruits are swelling give a top-dressing of cow manure and now and again some Le Fruitier.

Vines.—Continue to disbud and tie down as advised in last calendar, and take care that no plants interfere with the well-being of the Vines. See that the Muscat house border is moist now that the house is closed, and on fine days syringe the rods left and right with tepid water.

STOVE PLANTS AND PALMS.

Plants that require shifting into larger pots may be treated during the next week or two. Use good sweet soil, and if a plant is potted to stay in the pot a considerable time, good soil and good drainage are essential. Propagate anything useful—*Panicum*, *Isolepis*, *Gardenia*, *Ixoras*, *Crotons*, *Dracænas*, *Nepenthes*, &c. If propagated now good plants can be had for use in summer. Any small Palms that want potting on may be done now. Do not give too much root-room, only what is absolutely necessary; 3-inch, 4½-inch, 6-inch and 9½-inch pots are those more useful for house decorations. Palms if well managed can be kept in small pots a long time by the aid of stimulants skillfully administered.

W. A. COOK.

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FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

PITCHER PLANTS.—Few plants are more interesting in a warm stove than *Nepenthes* or Pitcher Plants, and they are easily grown. Of course, they require attention to get perfect Pitchers, but in a warm stove they thrive well with the treatment given other fine foliage plants. At one time these plants were costly, but they are now very reasonable, and are readily increased. Now is the best time to make a start, and the best way is to grow them in baskets, as then they get the copious syringing so necessary in their culture. If grown in pots, which I do not advise, there must be ample drainage and the collar of the plant be raised well above the rim. I prefer shifting the plants every year to get healthy foliage. The soil for these plants cannot be too open. Turfy peat with the soil shaken out and some lumps of charcoal with potsherds are the principal materials, adding fresh sphagnum moss free from slugs to the upper portion. After potting they should be kept close and syringed three or four times a day, according to the weather. The temperature should not be allowed to fall below 65° at night, with 10° higher by day, with ample shade.

FRUITS UNDER GLASS.

Strawberries in Pots.—The earliest plants of such varieties as *La Grosse Sucrée* or *Vicomtesse Héricart de Thury* will now be swelling their fruits. Give liberal treatment as regards both the temperature and watering. It is always

important to gain as many days as one can, hence a few of the most forward ones can possibly be given a position upon a shelf in a vinery, early Melon pit or plant stove. Upon the first appearance of colouring guard against over-feeding, so as not to deteriorate the flavour. Continue to introduce into a growing temperature, steadily at first, fresh relays of plants, bearing in mind that a medium number at more frequent intervals is better than a larger quantity with a long time between the supplies.

HARDY FRUIT.

Raspberries.—Where these have not already received attention they should be taken in hand when all danger of severe frost is past. If grown in clumps, five canes will be sufficient to reserve for each, and these should be the best-ripened ones. Examine the stakes to see if they are sound; they are very liable to snap off close to the ground.

KITCHEN GARDEN.

Rhubarb.—It is now time to see about making fresh plantations, as the crowns of unprotected stools show signs of moving. The plant is a gross feeder, and does not suffer in any way from the roots being brought into direct contact with manure, provided this is not in too raw a state, so a rich pasture should be given both by digging in a good quantity of manure and by mulching after planting is finished. Three crowns will be sufficient to form a good stool, and these should be taken from the old plants with as many roots as possible. All growth must be allowed to remain on the plant for the first year at least, as this will tend to produce strong crowns.

FLOWER GARDEN.

Bedding Pelargoniums.—Where the staging arrangements of the houses available for working on a stock of bedding plants are good, the system of potting off the latter singly in small pots is the most satisfactory. This should now be carried out, dealing first with the strong-growing, green-leaved forms and then the weaker variegated ones. In some cases, however, pots are not so satisfactory as boxes. This is especially the case where the only houses at disposal are vineries and fruit houses without staging. Give the plants, after boxing or potting, a little extra warmth, such as may be found in a vinery recently started.

Roses.—Where protection has been lavishly applied the bulk of it had better be removed now. It is one thing to protect during weather of exceptional severity, and quite another to still afford the same when only normal cold exists. In the latter case we encourage premature growth, and this is almost certain to suffer later on. Even if the young growths do not exhibit signs of frost, the resulting blooms generally receive sufficient check to cause them to open into any but perfect specimens. T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

SWEET PEAS FOR TABLE DECORATIONS.

OF the numerous hardy flowers it is doubtful whether there is any subject that will compare with Sweet Peas for all forms of the floral decorator's art. What other hardy flower is there that has the combined good qualities of sweet fragrance and infinite variety of colour that is now represented in Sweet Peas of an up-to-date collection? Added to the foregoing charms, there is the pleasing character of the newer forms as represented in the waved or crinkled standards of Countess Spencer and its large and interesting progeny. So pleasingly diverse is this subject as a whole that only one conclusion regarding its

merits can be arrived at, and that is, that it is incomparable for decorative uses in a cut state. There may be other hardy subjects of a more showy character, such as the Shirley Poppies for instance; but extremely beautiful though they may be, they lose considerably in consequence of their want of fragrance and their comparatively short-lived experience.

When generously treated the Sweet Pea invariably responds most liberally with blossoms of good quality for several months. Although there are persons who are disposed to deery the demand for blooms of high quality for decorative uses, there can surely be but one opinion as to the relative value of good blooms and those of poor quality. Sweet Peas of high quality should be used for the adornment of our homes whenever possible, and those who desire to excel in this department should make a careful selection of varieties, so that the best and most distinct may always be available, and these in a wide range of colours. While we appreciate the indispensable character of self-coloured sorts, it should not be forgotten that there are several good bicolors and many beautifully shaded and tinted varieties that must be regarded as invaluable where these flowers are used pretty freely and where constant change in the character of the decorations is desired.

It should be remembered that there are Sweet Peas of certain distinct and pleasing tones of colour that are ideal for displays in the daytime, when the natural light enables them to charm us with the beauty of their character and grace. These same colours under artificial light are useless, and for decorations in the evening should be avoided. For this reason Sweet Peas of mauve and lavender colours and those of kindred shades should be used exclusively for decorations in the daylight. The richer colours, such as crimson, orange, salmon, scarlet, magenta, rose and carmine are ideal for decorations under artificial light, and they may, of course, be used for displays during the daytime also.

Generally speaking, the best effects are obtained by grouping flowers of one colour together. In this way we may have constant change in our colour schemes. Vases, bowls and table decorations arranged with Sweet Peas invariably make a beautiful display when confined to blooms of one colour. Seldom do we meet with pleasing contrasts or really interesting harmonies of colour in Sweet Peas. We have seen cream-coloured flowers contrasted with those of an orange or scarlet colour and the effect was fairly good. We have also seen the cream-coloured flowers associated with those of some of the mauve and lavender tones of colour somewhat effectively. Also some of the colours that are closely allied have been used in conjunction most effectively, and in this connexion it is a good rule to associate three or four tones of colour in proper sequence in order to make a really pretty display.

There is a tendency in most indoor decorations to crowd the Sweet Peas somewhat unduly, and in this way the beauty of the arrangement is spoiled. Each individual flower should be disposed in such a way that its stateliness and the beauty of its form may be truly exhibited, and this is only possible when the Sweet Peas are lightly arranged so that each spray of blossoms speaks for itself.

Foliage of the Sweet Pea is the best embellishment for all arrangements of Sweet Peas, flowers and little of this is really needed. There is a weakness with many exhibitors at our shows to use in association with the Sweet Peas Gypsophila (both annual and perennial sorts) somewhat freely. We have seen fairly good displays of this kind, but we much prefer to see the Sweet Peas alone when blooms of good quality can be obtained. Maidenhair and other Ferns are sometimes interspersed among the Sweet Pea blooms, but seldom is the effect pleasing or artistic, and the trailing fronds and growths of the different forms of the Asparagus are used for creating a so-called finish, but not always with satisfactory

results. If foliage other than the Sweet Pea be used, we prefer that of a hardy kind, using such material as the Hornbeam, the Thorns and similar subjects, which may be gathered in abundance from our hedgerows, and always with pleasing tones of buff and coppery colours, to say nothing of the dainty greenery seen in such material. Grasses may be employed most effectively if not used too freely. To simplify this matter of arranging the flowers pleasingly follow the very simple rules suggested above, and by avoiding the elaborate creations so often met with at the shows bring into effect something simple, bright and artistic. D. B. CRANE.

HARDY LADY'S SLIPPERS

(CYPRIPEDIUM.)

(Continued from page 29.)

CYPRIPEDIUM MACRANTHON is a rare plant from the East. The flowers resemble those of *C. spectabile* in outline. The leaves and stems are comparatively slender and about a foot high. The flowers are generally borne in twos, and the petals, which are unusually broad, are somewhat hooded, having the appearance of being attached to the lip, which is spherical, less than an inch in diameter, and the expanded flower spans 4 inches across. The petals are purplish, variously marbled a darker shade, and the slipper varies from pale pink with crimson veining to a rich deep purple. It succeeds under conditions recommended for *C. californicum*.

C. montanum, known also as *C. occidentale*, is a pretty plant, quite easy to grow, and as effective as any of its group. Its stems are about a foot high and bear several flowers, the petals of which are twisted, purplish, and occasionally marbled at their bases. The slipper is white, shaped like that of *C. pubescens*, veined with pink externally and lined internally, about an inch in extreme length, but narrower than any others in proportion to its length. The flowers are pleasingly fragrant and very lasting, while the plants succeed in any ordinary loam. I have grown it well in places where Lily of the Valley thrives, and it is charming associated with Ferns in the cooler parts of rockeries. *C. montanum* does not appreciate peat, leaf-soil or much moisture, requiring nothing but the treatment one would give to *C. Calceolus*. This species makes huge clumps in a wild state, and I have had specimens with thirty to forty flowering crowns on one plant.

C. parviflorum is a moisture-loving plant, preferring the cool banks of waterways and a root-run of peat and leaf-soil. It does not thrive in loam. The stems are about a foot high and they bear several flowers of dainty shape and bright colouring, the sepals and petals being of a ruddy brown and elegantly twisted; the slippers are golden yellow, spotted rosy carmine on the inside and elegantly poised so that the interior may be seen from above. The flowers are 4 inches to 5 inches across, but they do not appear so large, as the petals are narrow and drooping, and the slipper is contracted at the top, narrowing gradually to a sharp tip. The plant is not difficult to grow in the right place, but it is hopeless attempting its cultivation in dry, wind-swept gardens.

C. pubescens is a stately plant quite 2 feet high, bearing broad sheathing leaves of considerable substance and hairiness. The flowers are thrown high above the foliage and are somewhat nodding, the petals and sepals drooping, much twisted, coloured brown with yellowish veining and mottling. The slipper is yellow and very large, measuring more than 2 inches in length in some cases and quite half as broad, the petals falling on either side. One may regard this as the finest of the yellow-slippered group. The plant may be well grown in peat and leaf-soil on the banks of waterways in cool and sheltered places. The roots are very long, and the prolonged

growing point indicates association with sphagnum moss or similar growth in a wild state, and it is remarkable that plants partially submerged thrive best.

C. spectabile (the Moccasin Flower) is a vigorous plant with stout stems, hairy leaves and rounded flowers in twos, the petals of which are pale rose, the upper one hooded, the "wing" petals narrow and widely divergent. The lip is a rounded pouch coloured pale pink, rose or deep purple in various specimens and quite an inch across. It succeeds under treatment advised for *C. parviflorum* and pubescens. This plant is becoming very scarce in its native habitats, hence every effort should be put forth to keep existing plants in good condition. An annual mulch of leaf-soil or manure and peat is of use in winter, the plant's direction of growth being towards the surface. M.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

A BEAUTIFUL VARIETY OF BEGONIA GLOIRE DE LORRAINE.

We have received from Mr. H. Dudderidge, the Dorset Nurseries, Blandford, a handful of blooms of a splendid form of *Begonia Gloire de Lorraine*. Concerning it, our correspondent writes: "This sported from the old variety about three years since. I worked up a stock of it and sent it out last year under the name of The King. The flowers are double the size of the old variety, and of a deeper and richer shade of pink." These remarks are fully borne out by the specimens sent, and such a superior form as this should ere long quite supersede the type. At the same time, we have seen other sports showing a great improvement on *Gloire de Lorraine* itself, but their relative merits could only be determined by actual comparison. Still, the great beauty of the flowers sent made a considerable impression on us, and we anticipate a great future for it.

AN APPLE GROWN IN 1906.

Mr. J. Everard, The Mount Gardens, Wadhurst, Sussex, writes as follows: "I am sending for your table an Apple grown in 1906, and gathered in October of that year. The same fruit you made a note of in THE GARDEN for July 20, 1907, 'Editor's Table.' The other Apples are known locally as Wadhurst Pippin. The trees of this variety bore a fair crop last year, when all the others were practically failures."

[A remarkable Apple, named by our correspondent Easter Crab. Although somewhat shrivelled, it is quite sound, and looks like keeping for some time yet.—ED.]

NARCISSUS GOLDEN SPUR.

An anonymous correspondent sends us flowers of this old but beautiful Daffodil. Their letter reads as follows: "I am sending you a few flowers of *Narcissus Golden Spur* for your table, and I hope they will be acceptable. They have been grown in a 5-inch pot and have had rather warm treatment during the past three weeks, as they were required in a hurry for a special purpose. I consider this to be still the best of the trumpet section for early pot work. As you will see the flowers are of excellent size and substance."

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Growing Sweet Peas on a border facing north (J. M.).—You omit to state the width of your border, which is important. Providing it is 4 feet wide and that the Ivy on the paled fence is thin enough to allow some light to filter through we think you could successfully grow Sweet Peas on the border, especially if the summer is a very hot and sunny one. You must, of course, cut the roots of the Ivy within 1 foot of the fence, else they will take the food from the soil that is intended for the Sweet Peas. Plants raised in pots would be best; failing these do not sow seeds in such a position until the end of the third week in March.

About planting Lilies (Rus in Urbe). We advise you to plant your Lilies in clumps, placing three bulbs 1 foot apart, so as to form a triangle. *L. tigrinum splendens* would do well in an open space among shrubs, providing the latter were not more than 3 feet 6 inches high. The slight shade provided by the shrubs would prove beneficial. *L. speciosum rubrum* is a comparatively dwarf-growing variety and would do well in your border. When planting dig out a hole 6 inches deep, place an inch thick layer of sand in the bottom and stand the bulbs on this. Then place more sand round and over the bulbs and fill up with soil. Any manure used should not come into actual contact with the bulbs. We have seen both these Lilies doing well in London gardens.

Probable cause of Sweet Pea buds dropping (Pan).—As your plants were growing strongly and were quite healthy it is evident that disease was not the cause of the buds dropping. This trouble was very prevalent last season and was almost certainly a result of the very dull and wet weather. The fact that your soil is of a heavy retentive nature would make matters worse. It may be, too, that you fed the plants too frequently and heavily, but on this point you give no particulars. You have done quite right in draining the site, and if you well trench it and mix with the upper 12 inches any material such as road scrapings, burnt soil, wood ashes, old mortar rubbish and old hot-bed manure this will greatly improve it. Given more favourable weather this summer and provided you do not overfeed your plants you should have better results.

Plants for border (Captain E. F. O.).—We think the following perennials will be suitable: *Adonis vernalis*, *A. amurensis*, *Achillea alpina*, *Megasea cordifolia purpurea*, *Polemonium Richardsonii*, *Onosma taurica*, *Lychnis Viscaria rubra pl.*, *Hepaticas* in variety, *Primula Sieboldii* in variety, *Inula glandulosa*, *Incarvillea Delavayi*, *Gaum Hedreichii*, *G. minimum*, *Gypsophilla paniculata fl. pl.*, *Helentium pumilum*, *H. cupreum*, *Pyrethrum Pericles*, *P. Hamlet*, *P. James Kelway*, *P. Mrs. Bateman Brown*, *Dodecatheon Meadia*, *D. Jeffreyanum*, *Scabiosa caucasica* and *c. alba*, *Rudbeckia Newmanii*, *Eryngium olivarianum*, *Aster amellus Riverslea*, *A. Perry's Favourite*, *Campanula muralis*, *C. G. P. Wilson*, *C. carpatica Riverslea*, *C. Hendersonii*, *Aster subcaeruleus*, *Hybrid Columbianae*, *Erigeron speciosus*, *Achillea mongolica*, *Aster aeris*, *Stokesia Cyanca piceox*, *Heuchera sanguinea*, *H. Rosamunda*, *Tiarella cordifolia*, *Delphinium Belladonna*,

Thalictrum aquilegifolium and *T. a. purpureum*. Annuals: *Godetias*, *Antirrhinums*, *Linum grandiflorum*, *Chrysanthemum coronarium*, *C. carinatum* vars., *Dianthus Heddewigel*, *Nemophila insignis*, *Eschscholtzia* in variety and *Candytuft*.

Improving the soil in a herbaceous border (B. M., Farringdon).—The soil in your border can be improved by mixing with it old hot-bed or other well-decayed manure, road scrapings, wood ashes, burnt earth or sand. Spread each or all on the surface and fork them in between the plants. Leaf-soil, too, if available, would greatly assist in rendering the soil more workable.

Sweet Williams gone wrong (Lady H.).—Your Sweet William plants seem to have suffered from the attack of a fungus, a species of *Septoria*, and from frost. There is no cure for the former, but spraying with sulphide of potassium, a quarter of an ounce to a gallon of water, will prevent it from spreading. I should destroy all the most diseased plants and spray the others three times, with intervals of a week.—G. S. S.

TREES AND SHRUBS.

Plants in shade under trees (Liberty).—Very few plants will prove satisfactory under the shade of trees, and none that belong to what must be regarded as the summer-flowering class are likely to succeed. Both the major and minor Periwinkles are extremely useful for furnishing the ground underneath trees, and the Ivy, in its different varieties, as well as *Etonymus radicans variegata* are among the best of plants for the purpose. Other subjects that do fairly well if the shade is not too dense are *Berberis Aquifolium*, *Aucubas*, *St. John's Wort (Hypericum calycinum)*, *Gaultheria Shallon*, *Butcher's Broom* and *Cotoneaster microphylla*.

A pleached alley (A. M. B.).—As the Hornbeam trees are young there should be no difficulty in bending over the tops to the required height. This must be done as soon as possible, certainly before the young leaves appear. The trees opposite one another should be bent over at the same time, and tied in such a manner that they will eventually form a perfect canopy. Occasional attention in the matter is needed throughout the year, as a few shoots are always apt to get out of bounds. We do not know of any book dealing with this special subject.

Trees and shrubs for a wood (W. B.).—The number of trees and shrubs likely to thrive under the conditions named are decidedly limited in number, but we think the following will suit your purpose: *Berberis Aquifolium* and *B. vulgaris*, *Cotoneasters* of sorts, especially *C. microphylla*, *Butcher's Broom*, *Bladder Senna (Colutea arborescens)*, *Hawthorn (Crataegus Oxyacantha)*, *Ivies*, *St. John's Wort (Hypericum calycinum)*, *Periwinkles*, *Blackthorn* or *Sloe*, *Brooms*, *Rosa rugosa*, *Symphoricarpos racemosus* (Snowberry), *Caragana arborescens*, *Cornus alba* (Dogwood), *Lycium europaeum*, *Rhus Cotinus*, *Robinia Pseud-acacia* in variety and the double-flowered *Furze*. Of flowering plants to take the place of those named by you, we know places where the *Bluebell* flourishes in dry woods, and think you would find that satisfactory as well as the *Winter Aconite*. The *Solomon's Seal* also does well in shade. In fairly sunny glades the *Marigolds* and *Eschscholtzias* will supply a welcome bit of colour, and will flower all the better if the soil is dry. The *British Woodruff* is another subject likely to give satisfaction.

THE GREENHOUSE.

Raising perpetual-flowering Carnations from seed (J. D.).—The present is an excellent time for sowing the seeds. Use clean $\frac{1}{4}$ -inch pots, thoroughly draining them, and use soil composed of two parts good loam, half part sand and half part burnt garden refuse or soil. Sift the mixture through a fine-meshed sieve, then half fill the pots with the rough material and finish off to within three-quarters of an inch of the brim with the fine portion, making the whole reasonably firm. Scatter the seeds on this thinly and then cover them with about a quarter of an inch of fine soil, pressing this slightly down, giving a watering with a fine rosed can. Cover each pot with a pane of glass, or place a sheet of brown paper over several, and stand them in a temperature of 48° to 55°. When the seedlings appear, remove the glass or paper promptly and place the pots near the glass. As soon as they are large enough to handle pot each seedling into a $\frac{1}{2}$ -inch pot and then treat as you would rooted cuttings. The main point to note is to avoid coddling; plenty of fresh air is what all Carnations delight in.

Ivy-leaved Geraniums gone wrong (T. H.).—There is no sign of any fungus on your Ivy-leaved Geraniums. From the appearance of the leaves I should imagine that they have been kept in too damp and close an atmosphere.—G. S. S.

Greenhouse plants attacked by caterpillars (E. R. H. W.).—From your description I imagine that your plants are attacked in the summer by the caterpillars of the small white butterfly (*Pieris rapae*); but there are so many green caterpillars that it is impossible to name them accurately without seeing them. Please send a few specimens next summer, and I will gladly name them.—G. S. S.

Lilies in fibre for church work (W.).—If, as we surmise, the scarlet-flowered forms would be required for the great festivals of Whitsun and Christmas, we may say at once that we fear there is no Lily to answer your purpose. The scarlet colour most freely employed at Christmas-time is the *Poinsettia*, and the scarlet double-flowered *Perlagonium* at Whitsuntide. It would not be practicable to grow either of these in the fibre. There are reddish-flowered forms—shades between crimson and carmine with purple-red in minor degree—in the varieties of *Lilium speciosum*, but these would hardly meet the case. A good scarlet-flowered Lily is *L. pomponium verum*, which would require forcing for the earlier-named festival, but it is not one we can recommend for the purpose. Your ideal variety, the white *Madonna*, is unique, and the only other white varieties suitable are the well-known *Easter Bermuda Lily*, *L. longiflorum* variety and *L. speciosum Kratzeri*. Either of these would be valuable for your purpose, but the taller growth of the latter, 3 feet or more, would hardly find sufficient support in the fibre to bring it to perfection. The other Lily is about 2 feet in height, and, forced in a moist, warm temperature, may respond fairly well to the suggested treatment. The time of planting would depend upon the amount of artificial heat at your disposal and when the plants were required for use. For *Easter work* the bulbs would need planting in September, and from Christmas onwards forced along rather sharply. For the harvest festival season, say, September, dormant bulbs planted in March and April would answer if grown on naturally. In those instances where the plants require a long season of growth, a good soil mixture is the best. The *Madonna Lily*, flowering naturally in July, would need growing in a brisk forcing temperature to flower it at Whitsuntide, and the bulbs should be planted in autumn. For *Easter*, with little or no forcing, tall scarlet Tulips would be available, and these could be well grown in the fibre. With an earlier start, the red-flowered varieties of the *Darwin Tulip* would bloom, but these are not of the true scarlet shade of colour.

FRUIT GARDEN.

Pruning newly-planted young bush Apple trees (Rustic).—We advise you to prune these at once. First remove any very thin inside shoots, then cut the laterals back to within two or three buds of their bases, taking care, of course, to leave any that are required to form main branches or leaders to fill up blank spaces. Any such shoots, and also the existing leaders, should be pruned back two-thirds of their present length, so that one-third only is left. This will induce them to break away strongly in the spring. In pruning these, take care to cut to a plump wood bud that is pointing as near as possible in the direction the future shoot is required.

Pruning Gooseberry bushes (Redlands).—If you have not had your Gooseberry bushes pruned this winter, and we hope not, then all you have to do is to shorten back their long shoots of last season just one-third their length, that is, leaving 20 inches of shoots in each case, also cutting back to two buds all inner or weaker shoots breaking from the main branches. Your pruner of last spring seems not to have known that Gooseberry bushes bear most of their fruit on the shoots made the previous year. If the long shoots on yours be well ripened or hard, and you leave two-thirds of their length on each, you should have a fine crop of berries next summer. Their hard pruning last spring naturally forced them to make strong shoots, not, in consequence, producing fruit.

KITCHEN GARDEN.

Applying salt to Asparagus beds (H. T.).—We presume that each bed is 18 yards by 2 yards, and for each a good dressing would be 1 lb. of common salt or $\frac{1}{2}$ lb. per square yard. The time to apply this is April, but we do not advise it unless the soil is of a fairly porous nature. On heavy, retentive ground, which in itself is unsuitable for Asparagus, salt would probably do more harm than good. Salt is one of the easiest things to procure, and any grocer worthy of his salt would supply you with as much as you require.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

BEAUTIFUL ANNUALS FOR BEDS & BORDERS.

HOW TO GROW THEM.

RECENT years have seen a great advance in the popularity of annual flowers of all sorts, and this is largely due to the attention that they have received from the nurserymen or raisers; but they are still very far from having their merits properly recognised, excepting that queen of annuals, the Sweet Pea. That all are as beautiful and adaptable as the Sweet Pea cannot be truthfully urged, but it can be certainly said that a garden may be made extremely attractive for many months of the year by the use of annuals alone.

Nor is this wealth of floral beauty confined to the individual who possesses a greenhouse, for there is a wide choice of quite hardy annuals, while all of those which are called half-hardy or semi-tender can be raised in the open garden quite easily. It is true that it is necessary to wait for comparatively warm weather before sowing of the latter can be safely undertaken outdoors, and this delay in sowing means a delay in flowering, but not by any means a delay that will prevent the plants from blooming well the first season. With the fine and mild autumns which we now get so regularly, this very lateness of flowering is an advantage, for plants last much longer in the comparatively cool conditions of autumn, and one must not overlook the fact that one of the chief legitimate grievances against annuals is their rather brief flowering season.

The shortness of the flowering season is, however, grossly exaggerated in many cases, for there are, at least, some annuals which last in bloom as long as any flower found in the garden. If any one doubts the accuracy of this statement let him carefully raise and put out plants of the dwarf Alyssum called Thorburn's Bouquet, and they will be found to be covered with bloom from the time that they are about as large as a crown piece until a really severe frost puts an end to them. In sheltered places it is not unusual to find this plant in flower at Christmas. Cultural matters have far more to do with the longevity of annuals than many folks suppose, and the capabilities of a well tended bed or border will often surprise even the expert gardener.

HOW TO RAISE HALF-HARDY ANNUALS.

Shallow pans are best for raising these. They should be washed clean and dried before using, a dirty or wet pan often being responsible for disasters at pricking out time. After arranging a layer of drainage material in the bottom of each pan, it should be filled to within an inch of

the brim with light, sandy soil; loam and leaf-mould in equal parts, and half a part of coarse sand make a good mixture for raising seedlings. All the fine seeds should be mixed with silver sand before sowing, as this enables an equal distribution to be made; such seeds will need no further covering, but they may be pressed into the soil with the bottom of another pan. When large enough to handle, the seed should always be placed in position in the pans, giving each seed from half an inch to 1 inch of space, according to its size and also the size of its seed leaves. A layer of half sand and half soil should be scattered over all large seeds to a depth of not more than half an inch.

Sowing finished, cover each pan with a pane of glass to check evaporation, or stand the pans on top of each other, first, however, gently immersing the pans in a tub of tepid water. Stand them in a warm, moist corner of the greenhouse, and examine them daily after they have been sown a week to see if any of the seeds are showing signs of life. As soon as the first few green shoots break through the soil remove the upper pans from off those below; if glass is used, it should be removed almost as early, as it is not wise to weaken the young plants by keeping them too confined. Gradually accustom them to the full light and plenty of air, and before they commence to crowd each other, prick them off into other pans or boxes. A light soil should still be used, and a layer of sand on the surface of the soil given to the more tender sorts, such as the Ten-week Stock, Portulacas, Petunias and others which have a tendency to rot off at the soil line. As a general rule, 2 inches between the young plants should be allowed at the pricking-off stage.

Shading must follow pricking off, and the syringe will be found useful in assisting re-establishment, but it must be used very gently and so that its spray falls in a fine shower. When the plants are able to hold up their heads without shading, gradually inure them to cooler quarters, and eventually place them in a cold frame, where they should receive more and more air until they are planted out at the end of May.

TWELVE BEAUTIFUL HALF-HARDY ANNUALS.

Arctotis grandis, white with blue disc, 2 feet; Asters Ostrich Plume and Ray; Brachycome iberidifolia (Swan River Daisy), various colours, 12 inches; Martynia fragrans, purple, as handsome as a Gloxinia, 18 inches; Nemesia Strumosa Suttonii, the large-flowered strain, various colours 15 inches; Nicotiana Sandera, various colours, 3 feet; Hibiscus Manihot, sulphur with a large dark eye, a beauty, 18 inches; Layia

elegans, yellow and white, 12 inches; *Portulaca grandiflora Thellusonii*, orange scarlet, a plant for a hot dry place where nothing else will grow; *Phlox Drummondii*, many colours, 9 inches to 18 inches; *Salpiglossis grandiflora*, various colours, very attractive, 2 feet; and *Venidium calendulaceum*, orange and yellow, one of the very best, 1 foot. The above only give a brief idea of the numbers of these lovely flowers.

FORCED DAFFODILS.

AMONG the large number of beautiful and varied exhibits before the Royal Horticultural Society on the 11th inst. there was a small group of some eleven varieties of Daffodils at the end of Messrs. Barr and Sons' stage. They were interesting in many ways.

Naturally, first to the specialist, who is only human after all, and is always glad to welcome the return of his favourites to the floral world. Certainly a great enthusiast did say to me, "Quite out of character," and rather held up his head in disdain. He was in a measure right, because they were not up to what they would have been had they been grown under natural conditions in the open; but it is a gain to a vast number of flower-lovers to be able to get them so early in the year. Hence, secondly, the general public must have been interested, because it showed them what it was possible to produce under good conditions of forcing. The little collection was a varied one. They were able to see not only Golden Spur, but others of quite a different type, notably: *Artemis*, a medium-sized incomparabilis, with a white, well-formed perianth and spreading yellow cup, after the style of Princess Mary; *Magpie*, a butterfly-looking Leedsii, with a reflexed white perianth of good substance and a yellow cup; *Outpost*, a fine early big trumpet with Emperor colouring, but more like *Glory of Leiden* in shape; and *Gold Cup*, a very beautiful yellow self of quite a Tenby shape, but altogether a larger flower. These two last are undoubtedly fine things, and some day, if they show themselves to be of good growth and increase well, may come into the market; at present, I believe, the stocks are not for sale.

Thirdly, the flower-growers had an object-lesson as to the direction in which they might grow something to give the flower-buyers a little variety. The shows of the Royal Horticultural Society have rightly a distinctly financial side. Without the stimulus of acquiring money much that is accomplished would be left undone. If this little collection did nothing more, it must have made those who force early Daffodils think.

The following is a list of the varieties exhibited: *Outpost* (described above); *Magpie* (described above); *Coronatus*, an all yellow *Outpost*, trumpet shortish, perianth broad and spreading; *Princess Ida*, forced it comes practically white; *Santa Maria*, a large yellow trumpet self, distinguished by its narrow twisted perianth; *Golden Spur*, large yellow self; *Gold Cup* (described above); *Excelsior*, a yellow self, with a very deep shade in the trumpet; *Cabeceiras*, a sort of bicolor, the narrow perianth is so very light in colour; *Maximus*, a deep yellow self; and *Artemis* (described above).

JOSEPH JACOB.

FORTHCOMING EVENTS.

March 3.—Royal Horticultural Society's Exhibition of Flowers and Fruit, Vincent Square, Westminster, 1 p.m. to 6 p.m. Lecture at three o'clock on "Bulbous Plants in New Zealand," by Mr. E. White.

March 5 and 6.—Royal Horticultural Society's Colonial Fruit Show.

March 9.—United Horticultural Benefit and Provident Society's Annual General Meeting.

March 11.—East Anglian Horticultural Club Meeting.

NOTES OF THE WEEK.

Royal Horticultural Society's Book of Arrangements for 1908.

This publication is issued annually by the society, and proves exceedingly useful, as it contains particulars of the various meetings and exhibitions to be held by the society during the year. On March 31 the Royal Dutch Bulb Growers' Society of Haarlem offer cash prizes for forced Hyacinths, to be shown at the society's meeting. April 14 will be Daffodil day, a 7-guinea silver vase being offered by Messrs. Barr and Sons. May 26, 27 and 28 are the dates of the Temple Show, which is to be held as usual in the Inner Temple Gardens, Thames Embankment. Fellows only will be admitted on the second day from 7 a.m. till noon, this being a new rule made so that Fellows may enjoy a "private" view of the show. The public will be admitted by purchased tickets on May 26, from 12 noon to 7 p.m.; on May 27 from 12 noon to 7 p.m.; and on May 28 from 9 a.m. to 6 p.m. The Veitchian Cup is again offered to amateurs. The great summer show is to be held as usual in the beautiful grounds of Holland House, Kensington, on July 7 and 8. The Sherwood Cup is offered at this show for twenty-four bunches of Roses, with their own foliage, shown in vases by amateurs. The exhibition of British-grown fruits is to be held at Westminster on October 15 and 16, and at noon on the second day Miss Edith Bradley will give a demonstration in fruit bottling.

Commercial botany.—The busy centres of commerce, such as the great docks of London, Liverpool and Bristol, or the commercial salerooms in the City of London, would appear to be scarcely the places where a gardener or any lover of plants would find much to interest them in their own particular line; but that there is a closer connexion between a garden and a commercial saleroom than one at first imagines is fully realised when we remember the intimate relations and co-operation that exists between the Royal Gardens at Kew and the centres of British and Colonial commerce. It often occurs that some product unknown to the commercial man finds its way to the produce broker, and is put upon the market for the purpose of testing its value; but a knowledge of its botanical source and relationship with other well-known plant products considerably helps to determine its properties and value, and for the botanical determination of the plant producing the new product the aid of Kew is frequently requisitioned. Quite recently, at one of the drug auctions in Mincing Lane, one bag of about 11lb. weight of seeds, quite unknown to many frequenters, were offered for sale; they proved to be those of the Cedron tree (*Simaba Cedron*), belonging to the Natural Order Simarubaceae and native of New Granada. The genus *Simaba* is comprised of about fourteen species, all of them trees or shrubs of South America. Very few of them have been introduced, but the species in question was sent to Kew so long ago as 1846, and is probably the only one in cultivation. It is a small tree about 15 feet to 20 feet high, bearing racemes of flowers from 3 feet to 4 feet long and fruits about the size of a swan's egg. One seed alone is developed, having the appearance of a very large Almond. The interest in the plant lies in the seeds, to which remarkable properties have been attributed, both for the cure of snake-bites by the natives and as a remedy in fevers, owing to its intensely bitter taste, which, as is well known, is the distinguishing character of the Order, the Quassia being the most familiar example among gardeners. In 1850 the Cedron was first brought to notice in this country as a medicine, and in 1884 it was again recommended as a febrifuge and for the cure of toothache. As a remedy for the bites of snakes, scorpions, centipedes, &c., its use by the Indians dates from time immemorial, and for this purpose a small portion of the seed mixed with water is

applied to the wound, and about two grains scraped into brandy is given internally. It was not stated whether the seeds offered for sale on January 16 were quite dried, or whether they retained any vitality so that they might be utilised for raising plants.—JOHN R. JACKSON, *Claremont, Lympstone, Devon.*

The protection of flowers.—A Bill to be brought before Parliament shortly provides that any person stealing, destroying, or damaging with intent to steal any plant, root, fruit, flower, or vegetable product having a market value and growing in any cultivated or enclosed land or in the hedge or bank bounding any such land shall be guilty of larceny. Hitherto only gardens and such places have been protected from the plant-stealer. A clause is included in the Bill to protect persons from prosecution for plucking wild fruits and flowers growing by the roadside.

A new Potato.—As all vegetable growers know, the Potato weakens, and new varieties are necessary at times. Wythes' Bountiful, sent out by Messrs. Cutbush, Highgate, may with advantage be given a trial by those who esteem Potatoes of the best quality. This was raised with other seedlings some years ago by Mr. Wythes and was considered of such good quality that it was kept for stock. It has a rough-skinned flattish or pebble-shaped tuber, and when cooked is white and floury. It is early and a free grower. In the trials by the Royal Horticultural Society it was given three crosses for crop and quality. Last season the tubers were free from disease.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Variegated Kales.—While the variations in form of leaf as well as colour found in curled Kales are to the plant physiologist interesting, the various variegated forms, though when seen under favourable conditions are pretty, have no edible value, and if employed in flower garden decoration seem to be sadly out of place. There have been in curled Kales marked and very excellent improvements during the past twenty years, as the trial on a large scale at Wisley in 1906 evidenced. Then both of tall and dwari, green and purple tinted, the forms seen were of great excellence and many of considerable massiveness, enhancing their value for ordinary edible purposes materially. There were in that trial a few of the variegated or fancy coloured strains, but even in so open and comparatively smokeless district as Wisley is, when the breadth was seen by the vegetable committee of the Royal Horticultural Society these forms obtained no admiration; indeed, they seemed to be very much out of place. Of what may be regarded as members of ordinary garden vegetables, efforts in the past to utilise them in flower gardens for so-called decorative purposes have been limited to Beets and Kales. These efforts, however, have had little success. Certainly, were these products seen in any flower garden now, they would cause smiles of contemptuous derision to rise on the faces of critics. When the late venerated Dean Hole once declared that passing from a florid parterre flower garden to the vegetable garden he gladly rested his eyes on the cool leafage of Parsley, he was but emphasising his dislike of crude burning colouration as once seen and still may be seen in flower gardens where such crude arrangements prevail. But such gaudy tints were not obtained from ordinary variegated vegetables. Still less is the far more subdued yet much more pleasing flower garden decoration of to-day.—A. D.

Manuring Roses.—In THE GARDEN of the 8th inst. I see that your contributor "Q." states that "6 inches or 9 inches of manure" forces Roses on only to have them nipped by late

frosts. If he dresses two beds, one with 6 inches or 9 inches of manure (wish I could give mine as much), the other bed lightly dressed, I think he will find that the lightly-dressed bed starts into growth first.—SYDNEY MARTIN.

Dessert Apples for the Cotswolds.—To those who have not already included Allington Pippin in their collection, I can very strongly recommend them to do so. I planted maidens of this Apple the year it was first offered to the public. The second year after planting these trees bore heavily and have continued to do so ever since. When I first tasted this grand Apple I must confess that I was rather disappointed with its flavour. This, however, has greatly improved as the trees have become older and have cropped so freely. I cannot honestly say that it is as good as one of its parents, viz., Cox's Orange Pippin, but to-day those we have in the fruit-room are quite the best-flavoured Apples left; in fact, it is delicious, and in my opinion should not be eaten before this date. It will keep for another two months, and even longer than this, in a proper fruit store. I think this variety should be worked on the seedling Apple stock in order to give it vigour. There will be no question about its cropping freely and regularly. Thinning the Apples will well repay the trouble; in fact, it is a necessity if good-sized fruit is desired. "H. R." also mentions James Grieve as a good early sort, which it certainly is. I do not know a better, and such a prolific bearer too.—T. A.

Scab in Potatoes.—In the issue of THE GARDEN of the 25th ult., there appears an article respecting scab in Potatoes. As I used to be troubled in that way, perhaps a few remarks on how I dealt with the disease may not come amiss, more especially as my remedy comes under the category of those substances mentioned in the article as being likely to be the cause. I always give a good dressing of lime in the drills immediately before placing the sets. If this remedy does not prevent scab, I am absolutely convinced that it does not cause it. I have used quick-lime in the drills, and on taking up the tubers found them completely covered with lime with no ill results. I have recommended lime to my neighbours, who, without exception, have found it a most safe cure. I may be wrong in my remedy, but here is the result since using the same: Thirteen first prizes and one second in fifteen entries, no other classes being open to me. A representative of a well-known Scotch firm, referring to my exhibits last year, said: "I would not have believed that such Potatoes could be grown in England; I have never seen better staged and very few as good."—S. G. S.

Promise of spring.—I have a Hyacinth in an open bed in my garden that came into bloom on the 28th ult. It is not very tall yet, but the flower (single) is quite perfect and as large as when flowering in April. As the thermometer, a few feet from where it grows, registered 18° of frost for two nights not three weeks ago, and the flower-bed has no protection, the flower-stalk must have progressed rapidly. The bulb was planted early in October.—G. R. EGERTON, *Sussex*.

Grape Appley Towers.—With regard to this fine Grape, though I quite endorse all that your correspondent "E. H." writes in its favour, yet writing from my own experience of nearly ten years with this variety, I should hesitate to recommend it to an amateur, for two

main reasons—first, being such a vigorous grower, it requires much more room than any Grape I know; second, the laterals are the most brittle I have ever handled, the very greatest care and patience being required when tying them down. Even at midday on a bright sunny day, when Vine laterals are usually the most pliable, I have always found those of Appley Towers very stubborn. These are two points which I think every amateur has to give attention to when considering the question of Grape growing.—J. J., *Bryanston*.

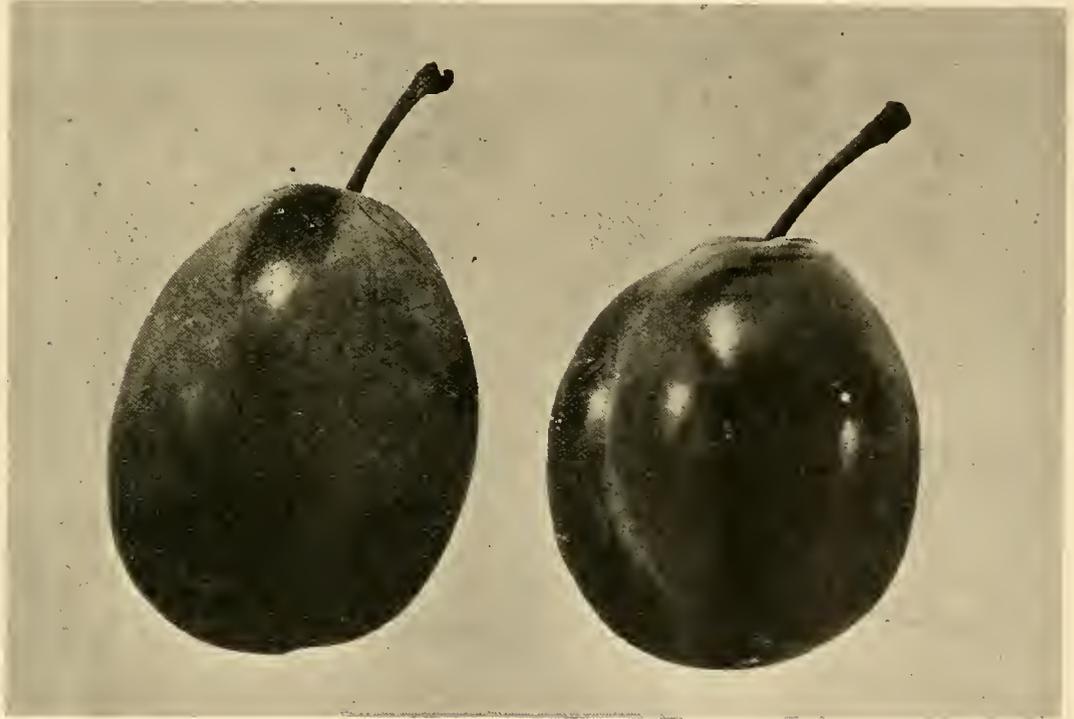
Introduction of the Malmalson Carnation.—In answer to the query in THE GARDEN of the 1st inst. respecting the introduction into this country of the Malmalson Carnation, I write to say that in the year 1877 it was only to be found in the houses of the Bentinck family or their immediate friends, and I was always told by members of that family that some of them (I do not remember which) had brought it from Holland here. They thoroughly understood the art of growing it to perfection. They said that it required a cool greenhouse, and their

THE FRUIT GARDEN.

PLUM PONDS SEEDLING.

THIS is one of the largest Plums grown, and on that account it is a favourite with both market growers and amateurs. In the southern parts of the country I have often seen it growing under the name of Fonthill Plum, and bearing remarkable crops; it is also known in some places as Pond's Purple. It is a cooking variety, is in season during September, and is much liked in the kitchen for its brisk flavour and good cooking qualities, for preserving and compotes. The fruits are oval, very large, with yellowish green flesh which adheres to the stone. When carefully gathered they keep good for some time if not too ripe. The tree is a good bearer and of rather spreading growth. Grown as a standard in a well drained or warm soil the fruits colour beautifully.

There are other varieties, such as Magnum Bonum, that are nearly as large, but I do not



A GOOD KEEPING PLUM: POND'S SEEDLING.

habit was to cut the blooms before they were quite out, bring them into the house and put them in water in a warm room. Then after a day or two the blooms would expand into an enormous size. Of late years I have never seen them so fine.—R. W.

Carnation Winsor.—Your correspondent "E. J.," on page 50, raises a question as to the correct spelling of the name of this Carnation; but perhaps he will tell us whether it is named after a man or woman, or after a town or district. In the former case it is quite probable that it is correct to spell it without the letter d; but if it is named after a town, village or district, which itself would in all probability be named after our own royal town of Windsor, then surely we are justified in spelling it thus. This mutilation of the English language by Americans reminds one of the schoolboy who proceeded to show his father how to plough, although the latter had been at ploughing more or less for well nigh half a century.—ANGLIAN.

think they equal Pond's Seedling in cropping, and the variety illustrated is one of the very best croppers we have. Some of the larger Plums are somewhat shy bearers, so that this variety is more valuable when grown for market. In Scotland I have seen some splendid crops of Pond's Seedling grown on south-west and west walls, and the fruits were enormous and of splendid colour. In most parts of the kingdom this variety makes a good standard, but should not be too much crowded. At the same time, if grown in a very exposed or windy place the fruits, owing to their size, suffer. I have grown it as a eordon, but do not advise it grown thus, as the hard stopping to keep the trees in shape checks the growth too much. Dwarf bushes give splendid results. G. WYTHES.

THE OLD GREEN GAGE PLUM.

The writer of the article on page 30 of THE GARDEN appears to have formed a very bad opinion of the cropping qualities of this Plum.

Standards and large bushes are more prolific in market gardens than in private ones. The soil contains less humus, consequently the growth is not so gross and more fruitful. Again, bullfinches and other bud-eating birds are all but exterminated where fruit is grown largely. I would also add that it is only rarely that a perfectly ripened fruit can be gathered from a standard or bush tree even in these southern counties. Before they reach that stage they are usually cracked and wasp eaten. Cracking is not so common when the crop is heavy, but the fruit lacks flavour.

Good crops of dessert fruit can be obtained with almost certainty if trees are trained against a wall facing to any point but north and pruned and trained in a certain manner. Spur-pruning as usually followed is useless. The wall space must be sufficient to allow the tree to extend 9 feet in each direction, and this is none too much. Trees that are more restricted need constant-root pruning and are never so satisfactory.

Drainage is usually provided when a garden is made, but if the ground is wet and heavy it may be supplemented by digging a trench 2 feet deep from the site of the tree to the nearest pipe drain, and if 6 inches of broken brick is placed in the bottom of the trench the water will percolate through it to the drain. The soil should be at least 18 inches deep, and if it grows ordinary vegetables well no other preparation is needed than digging it to its full depth in dry weather and mixing a barrowload of wood ashes and the same of mortar rubble (a bushel of lime may be substituted if the rubble is unobtainable) to every 4 square yards. Plant the trees rather high, and if growth is too gross lift every three years, adding more lime to the soil. It is, however, in

PRUNING AND TRAINING

that the greatest mistakes are commonly made. Gage Plums, and especially the Green Gage, will all flower profusely when spur-pruned, but seldom swell their fruits, which drop off at an early stage. Trees covered with blossom each spring, but bearing little or no fruit, are to be seen in many of the best gardens where spur-pruning is rigidly practised. I have for many years adopted a different method. In July all coarse shoots are cut out and a number of short, thin, wiry growths laid in. When pruning in winter these are retained as nearly as possible at their full length. All three year old wood not needed as main branches is cut out. The following summer the wiry shoots form numerous short fruiting spurs. If well ripened these invariably produce flowers which set freely, and the crop requires to be thinned. Thus the growths laid in 1906 would have formed spurs in 1907, and would fruit this summer and be cut out in the winter following. They are never "spur-pruned," the spurs referred to being merely clusters of buds on short stems.

To transform an ordinary "spur-pruned" tree to this system is difficult, but well worth doing; they can be made to carry good crops sooner than newly-planted trees. Begin by cutting off about half the spurs in winter and laying in the young growths next summer as advised above, removing the older spurs, especially at the top of the tree, as these require light and air in July. Some of the trees in my charge were treated in this manner in 1896 and have borne good crops each season since. It is generally rather awkward work, as the best growths are produced almost at right angles from the face of the tree, and if not carefully trained make ugly bends or snap off.

As soon as ripening commences the fruit must be protected from rain or it will crack. This we do by the use of long lights sloped against the wall, or by securing a narrow sheet of tarpaulin to the top of the wall and fastening the other selvage to a wire stretched about halfway down on 5-inch stakes 2 inches from the wall. Under such protection perfect dessert fruit may be picked for a considerable period.

J. COMBER.

Nymans Gardens, Handcross, Sussex.

THE FLOWER GARDEN

A GLADIOLUS MYSTERY.

SINCE the day when I first saw the splendid collection of Gladioli owned by Mr. W. C. Bull of Ramsgate I have been an ardent admirer of these magnificent flowers, and have grown a selection of named sorts with great success from year to year. Last spring, however, destruction threatened several of the choicest and gave me a very uneasy time. The corms



GLADIOLUS STEM ATTACKED BY A CATERPILLAR.

were started indoors and planted out at the end of March when in strong growth, a plan I have always found to answer admirably. Last spring, however, soon after planting out, I noticed immense, almost semi-circular portions were disappearing from the more tender part of the plant near the ground. The illustration shows an attacked plant with portions eaten out at the side and near the apex. At first I thought the damage must be credited to a particularly voracious slug or snail, but the absence of slime on the plants, the peculiar shape of the wounds and condition of their edges soon convinced me that I had another foe. Ordinary search availed nothing, so I had recourse to a small hand-fork, and on the first plant unearthed I found the unwelcome visitor shown in the illustration. It was lying full length on the corm of the Gladiolus, but curled itself into a circle when disturbed.

As far as my entomological knowledge allows I made this out to be the caterpillar of the great yellow underwing moth. It was fully 1½ inches long, brown in colour, with reddish markings along its side and back. These caterpillars are in the ground all the winter, but do not seem to feed until spring brings new and succulent growth into being. When fully fed they bury

themselves in the soil, turn to reddish chrysalids, and finally emerge as moths about July. The moths are very conspicuous by reason of their orange yellow hind wings, contrasting so vividly with the brown fore wings. They are very fond of Doeks, and may be frequently caught feeding on them. With regard to the caterpillars, there is nothing to be done but hunting them near their food plants, of which they have many. At the first sign of attack the soil near the affected plant should be stirred with a hand-fork, which will expose the pest. Its despatch may be left to the discretion of the finder. C. J.

AN OLD-FASHIONED BORDER PLANT (HONESTY).

THE honesty of which we hear the most is that which some misguided individual—who evidently never had tried "both ways"—stated, once on a time, to be the best policy. Now, although this sort thrives amazingly in gardens, it is not the one shown in the accompanying illustration, and therefore not to be dealt with now. The Honesty illustrated is just as popular as the other sort, and may also be found in several shades. Of these the purple or rose colour is the oldest and most common, the white the newer and most generally useful. Together they make a very happy combination, and are ideal plants for the spring decoration of the waste spot or wild garden. They grow a good 3 feet high, flower freely and over a long period, and are even more beautiful in death than in life, as most people who have seen the bright silver seed vessels in winter decorations will admit.

The possession of these silvery seed vessels—or rather the central integument which divides the seed vessel into two—gives the plant several of its names. Two of the most popular of these are Money Plant and Money-in-both-pockets, while the scientific name of *Lunaria* is given because of the resemblance of the silvery pods to the full moon. The possession of these silvery discs may even account for the name of Honesty; they somewhat suggest shillings, and the plant may have been regarded as the emblem of honesty in keeping so much good cash in reserve for its owner.

To leave the problematical and come to the practical. The Honesty is an annual or biennial—according to what sort of a botanist one is—and needs to be renewed from seeds every year. These should be sown outdoors in June or July, in a reserve border, and given the treatment usually accorded to other biennials, such as Canterbury Bells and Foxgloves. They may be planted in autumn or spring, but the earlier the better, as they flower in April and onwards. They do very well in damp shade, but are far from being particular as to either soil or situation.

TWO FINE GLADIOLI.

Of all the bulbous family the Gladiolus is, perhaps, second only to the Lily, and usually remarkably cheap in comparison with the position it holds. Therefore, those who are disciples of this most handsome race will not grudge the few extra pence necessary to the purchase of the two named below. Those who are accustomed only to the ordinary varieties in cultivation, beautiful though even these are, have no conception of the majestic beauty thirty or forty corms of *Princeps* or *America* can bestow on any suitable spot in the garden. In common with all the family, it pays to well enrich the soil before planting and also to start the corms in 5-inch pots in a celd frame prior to planting out. Transfer them to their positions in April. When growing strongly, and before the weather gets hot, mulch them heavily with half-decayed manure, and in due course they will paint for you a picture such as few plants can equal and more than compensate the few details of culture. They also force readily provided heat be spared till the flower-spikes can be felt. GEORGE AITKENS.

THE ROSE GARDEN.

NOTES ON THE WILD ROSES (SPECIES).

ROSA LUTEA.—Under this heading are grouped the four or five Roses that are generally known as the Austrian Briars. The Austrian Briar proper is a single yellow Rose, a native of Germany and Austria, that was introduced by Gerard into England so long ago as 1596. Its counterpart, the Austrian Copper, seems to have reached us somewhat later, but undoubtedly they were among the first of the wild Roses not indigenous to the soil to be cultivated in England. The double form of the yellow Austrian Briar, known as Harrisonii, was raised by a Mr. Harrison in 1830. Then we have the semi-double yellow Persian Rose that reached Europe in 1838 by the aid of Sir G. Willock. That is a native Persian Rose, but whether the native Rose is really a single or semi-double (which latter I should think most unlikely) I have never been able to discover.

Some of the varieties of *Rosa spinosissima* always seem to me to have a good deal of affinity to *lutea*, yet *spinosissima* and *lutea* have always been treated as distinct species—*Altaica* and *Nan-thina*, for instance, varieties of the former and so classed by most authorities, especially the latter, is so much like the Austrian Briar that in the winter season it is not easy to distinguish between them; but to return to *Rosa lutea*. If one's Rose garden is outside the radius of the smoke of a big city so that there is plenty of fresh air, all these varieties of *lutea* are easy to grow. Here on my light chalky subsoil they flourish exceedingly—they are evidently lime lovers—left severely alone, except occasionally bending over a long shoot, they are quite free-flowering, and few Roses are more welcome. They are early flowering and there are no other Roses like them. A well-flowered bush of the Copper Briar that has not suffered from frost, at its best, is one of the most beautiful sights of a June garden. Is there a purer yellow Rose than *Harrisonii*? The single yellow Austrian is beautiful, but do not attempt to smell it or you will regret it. Hardy, but susceptible to the late April and May frosts, the species and its varieties should be in every garden. The hybridist is turning his attention to *Rosa lutea* at last with success. No doubt many of the old rosarians tried less successfully in the past, but we are now beginning to find out the secret, and we may look forward not without hope to yellow Carolines, *La Frances* (the indirect product of *Rosa lutea*), *Soleil d'Or*, *Gottfried Keller*, *Parkfeuer* and the *Lyon Rose*. So we progress; slowly, it is true, but none the less surely.

Rosa wichuraiana.—A species of Japanese origin—of quite recent introduction, 1887, I think, is the date generally given—but no doubt a native of China—that great birthplace of the world's flora. I doubt much if any single species has in so short a time created such a change in the Rose world as *wichuraiana*. The type, with

its delicately scented pure white flowers that blooms when all other species are over (I cut several flowering sprays of this Rose last Christmas morning), with its beautiful foliage that lasts through frost and snow till the spring comes to renew it, is distinct from all other Roses in its method of growth, and is seen at its best hanging down over a flint wall or creeping over rockwork, but so rapid is its growth that but a short time elapses before it completely covers the ground all round it. It is the Rose substitute for Ivy. It is not more than ten years ago since we received the first *wichuraiana* hybrid, and although they must run to nearly hundreds now, I think only the fringe of the possibilities of this cross has been touched. And if this is so with regard to *wichuraiana*, why may it not be so with regard to the other species that await the skilled hand of the hybridist? It seems to me that most of our Roses have come to us through four or five distinct channels. Are we going to avail ourselves of the others? It is a



AN OLD-FASHIONED BORDER PLANT: HONESTY.

big subject, and a most interesting one. If these notes on such of the species as have come under my ken in my garden should be the means of inducing others to grow them, I shall be more than satisfied, and shall always be willing to give any information in my power respecting them. Such rapid progress has been made among Roses during the past ten or fifteen years that the many beautiful colours and exquisite shapes now appeal to all classes.

Purley.

HERBERT E. MOLYNEUX.

TREES AND SHRUBS.

A BEAUTIFUL PLANT IN WINTER.

(*CELASTRUS ARTICULATUS*, THUNB.)

ASPECIAL value attaches to any plant capable of supplying colour or contrast in the outdoor garden during the winter months, when nearly all vegetable life is dormant and but few flowers are to be seen. In this connexion plants having brightly-coloured fruit are particularly valuable, but as these in many instances are inconspicuous when in bloom, they are often overlooked in favour of those having showy flowers produced during the spring and summer months.

The subject of the present note is one of the showiest plants in the arboretum at Kew during winter, and deserves to be more widely known and planted than it is at present. A hardy deciduous twining shrub, *Celastrus articulatus* is widely distributed through Northern and Central China and Northern Japan. It grows rapidly, in cultivation attaining a height of some 10 feet to 15 feet, producing long, straggling growths several feet in length during one season. The bark of the young wood is light brown or ashy grey, covered with prominent lenticels. The leaves are somewhat variable in shape, usually obovate, but sometimes orbicular or oval; they are narrowed at the base to a short, broad petiole, and the margin is coarsely serrate. The small greenish yellow flowers, produced in axillary three-flowered clusters, appear when the leaves are about half grown. They are followed by globose fruits, greenish yellow in colour, becoming bright yellow when mature. After ripening the fruit splits into three shell-like portions with crisped margins, which reflex, forming a three-lobed cup, in the centre of which is a bright red aril, which encloses the seeds. A similarly constructed fruit is that of the common Spindle Tree (*Euonymus europæus*), to which *Celastrus* is closely related.

The fruit is produced in great quantity along the short lateral growths of the current season, and remain on the plant well into the winter. Little cultivation is needed beyond thinning out the old growths and encouraging the production of fruit-bearing wood. The plant should be placed near some rough poles, roots of trees or an unsightly fence and allowed to grow with unrestricted freedom to obtain the best effect.

H. SPOONER.

THE LILACS.

(Continued from page 64.)

ONE caution to purchasers of Lilacs is to always stipulate that the plants are on their own roots, otherwise suckers from the stock are always a nuisance, and unless carefully attended to they will often overpower the scion. Even on its own roots there is a natural tendency for the Lilac to produce suckers, and if the plants are intended to flower well, these suckers must be rigidly cut away, as if this is not done they will grow in a particularly rank fashion. Should any of the bushes run up too tall for the position occupied by them, they may be cut back hard immediately after flowering. By so doing the display of

flowers may, the first season after this drastic treatment, be lessened, but afterwards the plant will be much improved.

One more purpose for which the Lilac in its several varieties is particularly adapted is for forcing into bloom, and thus playing a part in the embellishment of the greenhouse long before their brethren out of doors are in flower.

S. persica (the Persian Lilac).—This, the smallest and most graceful of all the Lilacs, is an exceedingly beautiful flowering shrub. It is seen to great advantage as a single specimen, under which conditions it forms a rounded bush from 4 feet to 8 feet in height, with slender gracefully-disposed branches clothed with leaves, varying in length from three-quarters of an inch to 1½ inches, while they are usually less than half an inch wide. The flowers are in the type of a lilac-purple colour, but in the variety *alba* they are almost white. A singular form is that known as *laciniata* and *pinnata*, in which the leaves are cut into several narrow lobes. In flower it is a counterpart of the type. The Persian Lilac would appear to have been cultivated in this country soon after the common sort, and, like that, to have quickly become a favourite.

S. chinensis (Rouen Lilac).—An unsatisfactory name for a most beautiful Lilac, as it has never been proved to be a native of China. It has also been called *Syringa dubia* and *S. rothomagensis* and the various popular names of Rouen Lilac, Siberian Lilac and Lilac Varin. The generally accepted idea of its origin is that it is a hybrid between the common and Persian forms, and certainly its general habit would suggest that such was the case. It had its origin in the Botanic Garden, Rouen, in 1795, when M. Varin was director, hence the last mentioned popular name. It combines in a valuable manner the prominent characteristics of the two species mentioned previously, having the graceful habit of the Persian and the vigour, though in a lesser degree, of the common sort. It will reach a height of 10 feet to 12 feet or more, and in May the flower panicles, which exceed in size those of *S. vulgaris*, are at their best. There is a form of this known as *rubra*, in which the blossoms are a good deal richer in colour than those of the type. The above are the sorts that would be, even by the uninitiated, recognised as Lilacs, but there are in addition several other species of *Syringa*, some of which in general appearance show a considerable leaning towards the Privet family.

S. japonica is the best of this section, and when in bloom it is certainly a striking shrub. In Japan it is said to attain the stature of a tree, but in this country it is more the size of the common Lilac. The flowers are individually small, but borne in large branching panicles, so that they make a goodly show. They are in colour white, or nearly so, and being at their best in June and July, when all their brethren are past, greatly enhances their value. The other members of this Privet-like group are

S. amurensis, a native of Mandshuria, and *S. pekinensis* from China.

S. Emodi (Himalayan Lilac).—This is altogether of sturdier growth than the common form,

and has large leaves and terminal panicles of white or pale purple flowers. Even at its best it is not equal to the better-known species, but it is valuable from the fact of its late flowering. A very fine variety of this is *rosea*, raised from seeds sent from Northern China. In this the leaves, flower-panicles and individual blooms are all larger than those of the type. Wherever possible, it should certainly be grown in preference to the ordinary form. This is sometimes met with, particularly in French nurseries, as *S. Bretschneideri*, so named in honour of its discoverer.

S. Josikua (Hungarian Lilac).—Somewhat of the growth and general appearance of *S. Emodi*, but less showy, while it blooms in May when we have such a wealth of flowers among shrubs in general. A fine variety of the Hungarian Lilac



SEEDLING ERINUS ON ROCK GARDEN STEPS.

was given an award of merit by the Royal Horticultural Society on June 11 last. The panicles of flowers are large and pyramidal shaped, while the individual blooms are of a rich reddish rose colour. This variety was, I believe, raised by M. Victor Lemoine of Nancy, but it is not yet readily obtainable from nurseries. Though much more might be written concerning Lilacs in general, this should serve to direct renewed attention to their merits, and many will, no doubt, be planted during the present winter. They are comparatively easy to grow, and at all times the shrubs present at least a tidy appearance. When in flower the graceful inflorescences render them objects of great beauty, and the delightful fragrance of many of them finds favour with most people.

THE ROCK GARDEN.

ALPINE FLOWERS FROM SEED.

MANY interesting and beautiful alpine plants are readily raised from seeds, and as these can generally be procured in spring from seedsmen and others, a few suggestions on their cultivation may prove of service to those attempting this work for the first time. Generally speaking, home-grown seeds give the least trouble, for this reason, that alpine, which are difficult to germinate if held over till spring, do so readily if we have seed collected as soon as ripe and sown in autumn. If, however, we

procure seed of those varieties characterised by having a hard outer seed-coat and find them slow and irregular in germinating, then it is well to retain the seed-pots until the following year, as it not infrequently happens that some vegetate the second year.

THE BEST TIME TO SOW ALPINES is early autumn and early spring, or, to be more exact, the middle of August and the beginning of March. In the former case it is rarely advisable to prick out from the seed-pots that year; far better to grow cool in a frost-proof house and shift whenever there is some appreciable growth in spring, as these hardy plants bear standing in the seed-pots far better than the majority of hand-raised seedlings; those sown in spring will transplant as soon as they are strong enough.

SOIL.

As already indicated, some alpine may take two years to germinate, consequently we must guard against the soil turning sour during this period. The pots used must be clean and drained one-third of their depth: those measuring 3½ inches and 4½ inches diameter are useful sizes, the smaller being employed for rare seeds. A suitable compost consists of two parts loam, one part leaf-soil and one part sharp silver sand. Pass through a half-inch riddle for filling the pots and through a fine sieve for finishing the seed-bed and also for covering the seed. Having prepared the desired quantity of pots ready for sowing, my practice for all rare seeds, and which may be extended with advantage for all alpine, is to stand the pots in a tub or tank and flood with boiling water, sufficient to come within half-an-inch of the top of the pots. By this means all

insect and vegetable life is destroyed, and one has the assurance when the seed germinates that it is only such as was sown. Having stood the pots in the water for an hour they are then withdrawn and allowed to drain and cool, after which the seed is sown.

A GOOD POSITION FOR THE SEED-POTS

is a greenhouse or frame, where frost is excluded. On no account should they be subjected to any appreciable degree of artificial heat, and, provided the pots are standing on a coal-ash bottom or cool stage and covered tight with small glass squares, no further watering will be required until germination takes place. For those species marked thus (*) in the appended list, as soon as the seedlings are visible, tilt the cover glass of

H. P.

the pot a quarter of an inch to admit air, and gradually increase the ventilation by removing the cover glass as the seed-leaves expand, and affording air to the structure in which the pots are placed. At this stage a suitable position for the seed-pots will be an unheated frame well exposed to the sun; fill the frame to within 9 inches of the lights with ashes or similar material. Plunge the seed-pots to the rim and cover at night with the lights, but air freely on all favourable occasions throughout the day.

Water is best given by standing the pots to the rim in a tank or tub until saturated. On no account must the seedlings be flooded, and the pots may be well on the dry side before repeating the operation. Unless sown too thickly (which should always be avoided) it is not advisable to transplant alpinines too early; those already indicated and which are generally employed in quantity may conveniently be transplanted to well-drained boxes, using a light potting soil similar to that for bedding Verbenas and Lobelias. Water should be withheld for a day, then give sufficient to thoroughly moisten the soil. Grown on in a cold frame, under which treatment they are healthy and strong, they are then ready for transplanting into any light sunny position in the open garden during the month of June.

Those plants marked by a dagger (†) in the list include some alpinines which are of extremely slow growth, consequently pots are recommended for these at all stages until large enough for permanent planting. The soil varies for several; the majority succeed in that having chalk or limestone as an ingredient (old mortar rubble is an excellent substitute), the exceptions being *Pterocallis*, *Ramondia*, *Aquilegia glandulosa* and *Dianthus glacialis*. The soil should be slightly rougher, to which some crushed sandstone or limestone, as advised, should be added. What is known as "thimble" pots are large enough for single plants at this stage, and after potting these are returned and plunged in the frame as before. By the middle of June no covering is required for either the seed-pots or transplanted seedlings, except to ward off heavy rains, and from this date an east or west aspect meets the requirements of the plants.

By the first autumn those marked by an asterisk are carefully lifted and planted in their permanent quarters, and as all of these flower the first year following that in which they are sown, and continue to increase in strength and beauty each succeeding year, there is scarcely another class of plant which yields so rich a return for the initial labour and expenditure. A few of the others named will be large enough for permanent planting, and will flower sparingly the first season; but these are best planted during spring, about the month of March, care and attention being given them until well established. All of those mentioned should be ready for the final planting when two years old. Alpinines raised from seed are suitable for filling vacancies on the rock garden, and can scarcely be excelled for the purpose of planting new or existing wall gardens.

ALPINES READILY INCREASED FROM SEED.

**Aubrietia*, **Alyssum*, **Arenaria montana* and *A. balearica*, †*Androsace sarmentosa* and *A. Chumbyi*, †*Anemone Pulsatilla* and others, †*Ethionema grandiflorum*, †*Aquilegia glandulosa*, **Campanulas* (dwarf sorts), **Dianthus cæsia*, *fragrans*, *plumarius*, &c., †*D. neglectus* and *glacialis*, **Draba Aizoon*, **Edelweiss*, **Eri-geron*, **Erius*, **Erysimum*, **Gypsophila*, **Helianthemums*, **Hypericum reptans* and *kalmiana*, †*H. repens* and *coris*, **Iberis*, **Linaria*, †*Linum narbonense*, †*Lithospermum graminifolium*, †*Ononis*, †*Onosma alba roseum*, †*Phyteuma*, †*Pterocallis pyrenaica* (not *P. comosum*), **Papaver*, **Pentstemon heterophylla*, **Saponaria splendens*, **Sedums*, **Silene alpestris* and *Schafta*, †*Ramondia* and †*Saxifraga longifolia*. *Cyclamen*, *Cytisus*, *Genista*, *Gentians*, *Primulas* and *Smilacina* will often take a full year to germinate.

Wasmgate Gardens, Louth.

T. SMITH.

THE GREENHOUSE.

HOW TO GROW THE TRUMPET FLOWER.

MANY gardeners and nearly all amateurs fail to produce good flowering specimens of the Trumpet Flower (*Tecoma Smithii*), yet if a few well-defined rules are adhered to its culture is simple enough, and good flowering plants of it should be the rule rather than the exception. Flowering as it does in the late autumn and early winter months, the orange-coloured flowers and ornamental foliage provide a welcome change at this period.

It is time now to prune the old plants fairly hard and place them in a warm house so as to induce them to make shoots for cuttings. A slight syringing once or twice daily will considerably help the formation of these. When about 3 inches long detach the young shoots with a very slight heel of young wood, and insert them into well-drained pots filled with sandy soil, either one into a thumb pot or several round the edge of a 3-inch pot. Stand these, or, better

whenever it is required, and liquid manure of a weak character may be given at intervals. Over-feeding must, however, be strictly guarded against, as gross growth is not desired.

At the end of the summer the plants are taken into a cool airy greenhouse to flower, giving them a position where plenty of light can reach them. After flowering gradually withhold water, and so induce the plants to rest for the winter. During the resting period very little water is required, and the plants may be stood closely together in a corner out of the way. A variant of the above system is to turn the old plants out of their pots now, remove some of the old soil, and repot them into pots of a similar size. Cut the main shoot or shoots well back, and then when they break leave four or five of the best placed shoots to grow on. Treat in the same way as advised for young plants, taking care to remove side shoots as promptly as possible. Young plants, however, are usually the most satisfactory.

SERICOGRAPHIS GHIESBREGHTIANA.

This old favourite was extensively grown some years ago, but it is now rarely seen. Though coming from Mexico and usually treated as a



THE WELSH ALPINE POPPIES IN ROUGH STEPS.

still, plunge them in Coconut fibre, in a close propagating case with a bottom temperature of about 65° to 70°, where the cuttings will soon emit roots. When rooted, remove the pots from the case and gradually harden off the young plants, keeping them near the glass so that sturdy growth may result. After the young plants have been subjected to cooler conditions for a week or two they must be potted off singly into well-drained 3-inch pots, using soil composed of three parts good fibrous loam, one part well-rotted manure, and one part sand. Stand these close to the glass in a temperature of about 50°, and allow them to grow on until the pots are filled with roots, when the final potting must be given.

For this use pots 6 inches or 8 inches in diameter, using the same mixture as advised above, with the addition of a 6-inch potful of bone-meal to each bushel of soil. Good drainage must be provided and the soil must be made firm, much the same as it is for *Chrysanthemums*. At the end of June, providing the plants have become well established, they ought to be stood outdoors to enable the wood to become well ripened. All side shoots must be removed as soon as seen, this and the ripening of the wood being two very important factors in the flowering of this plant. Give water

stove plant it succeeds best when fully exposed during summer and autumn, but should be taken indoors before the nights get cold. It may be readily propagated from cuttings taken from the strongest shoots early in the year. The cuttings will root freely in any light sandy soil. Three or four may be put into each pot, and when ready potted on without dividing them. The early struck plants may be stopped once, and those put in later grown on without any stopping. A rather light sandy soil should be used for potting, and during the early stages grow the plants on in heat, but after they have made a good growth they will do better in a cold pit, the lights of which should be taken off during favourable weather. Towards the end of August or early in September take them indoors under shade and warmth. They will make excellent growth, but will fail to flower. Warmth should be given as soon as the nights begin to get cold; they should begin to flower about October, and will continue to do so until Christmas or perhaps later. The bright crimson flowers are produced from the axils of the leaves. Even when not in flower the fresh green foliage is attractive. I may add that this useful plant is now included with the *Jacobinas*.

A. H.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

WINDOW GARDENING. — My old Fuchsia plants have just been cut back in order to induce them to break away again strongly. The Fern-case, too, has just been gone over, removing old leaves and replanting where the plants are past their best. The surface soil



1.—AN OLD PLANT POTTED UP FROM THE BED LAST AUTUMN.

has been stirred and a top-dressing of good soil added. I have watered Cacti for the first time this season, knowing the plants will derive considerable benefit therefrom. The flowering plants are already making the windows gay. To improve their appearance and to give them a much-needed stimulus I have just watered them with weak liquid manure.

Cold Frames. — Overlooking the subjects in cold frames is our constant care. The close condition in which they have been kept for a long time past has caused the leaves and plants to damp off. These should be removed promptly, otherwise they may contaminate others. I make a rule to give each individual subject personal attention, and on every mild day air is now admitted freely by slightly tilting the frame-light. Wipe the glass free from sooty and other dirty matter, as this contributes much to the well-being of the plants. Carnations in frames are beginning to give evidence of new growth. I am removing decaying foliage and stirring the surface soil. Plants in small pots that are well rooted I am placing in larger pots, giving them good soil and potting firmly. Bulbous-rooted subjects, such as Hyacinths, Tulips and Narcissi, should be removed from the plunging material, where they have been developing their roots for some time past.

Vegetable Garden.—This is a busy period, and much in the way of seed sowing and planting must be done forthwith. The second early Potatoes must be planted for succession where they may have fairly warm, sheltered quarters. I have just made a sowing of Parsnips, choosing quarters that were well trenched and where Celery was planted last season. Sow the seed 1 inch deep in drills 15 inches asunder. In warm situations, where protection from cold winds can be provided, I am now making my first sowing of Radishes and Lettuces. It is quite an easy matter to make quarters for these by building artificial screens. Seakale may be planted now with the sure prospect of success. My method is to dibble the sets in the prepared quarters in rows 2 feet apart, allowing a space between each set of about 1 foot. Cover these with about an inch of soil, and when growth commences remove all shoots but the strongest.

Hardy Flower Garden.—When the weather is open and the garden soil nice and friable, the conditions are ideal for planting operations. I am now dealing with most hardy plants, and in this category I include such subjects as Phloxes, Delphiniums, Pansies, Sweet Williams, Canterbury Bells, Pinks, Carnations, Hollyhocks, Pæonies and quite a host of similar hardy plants. No garden should be without a good border of these useful, easily-grown plants. I always give each subject plenty of room, so that as the ample growths develop there shall be space for it to do itself justice. Plant the taller-growing subjects at the back of the border. Sweet Peas may be sown at this time. Sow the seed thinly; some friends of mine prefer to set their Sweet Pea seeds individually, 6 inches apart, and the results amply justify the extra trouble taken. Sow in clumps 3 feet to 4 feet apart, and, if many clumps are to be grown, in one part of the garden. The rows of clumps must be at least 4 feet asunder. Cover the seed with about 2 inches of soil.

Greenhouse and Conservatory.—In warm greenhouses where bottom-heat can be obtained, seeds of the more tender-flowering subjects should be sown forthwith. I make a sowing at this time of Verbenas, Petunias, Celosias, Torenia and the pretty Rhodanthe, using a light and sandy compost, and with a bottom-heat of from 65° to 70° these subjects may be raised quite easily. Pots, seed-pans and shallow boxes may be used at the will or convenience of the raiser, each with equal success.

Roses.—Complete the planting of Roses without delay. I prefer to finish this work before this period, if possible, as the plants will soon be called upon to make growth from which the blooms are to be obtained. For the best effect in the garden I have planted many of the better ramblers and Penzance Briars, to say nothing of the pretty Polyantha Roses.—D. B.

PROPAGATING FIBROUS-ROOTED BEGONIAS.

This class of Begonias is perhaps not so well known as the tuberous-rooted type. For summer bedding and greenhouse decoration they are equally beautiful. Individually the flowers look quite small by the side of the best tuberous varieties, but this is more than recompensed by there being twelve to twenty times the number of flowers on a plant. As they possess no bulb or tuber they require a little water during the winter months. At present the plants require a fair amount of water, as they are making new growth, from which we must obtain cuttings.

Taking and Inserting Cuttings.—On the plants lifted and potted up last autumn from the beds, or those retained which flowered in the greenhouse last summer, plenty of cuttings should now be available. The plant illustrated is an example. From this a number of cuttings can be obtained, after which, if kept moderately dry for a week or two, the plant as shown at Fig. 2 will make fresh growths, and be available as a pot plant or for bedding. The making of the cuttings requires a little explanation in addition to the knowledge afforded by Fig. 3. The base of the cutting must be a node (the point from which the leaves grow on the stem) or it may have a slight heel by cutting off a very small portion of the older stem from which it is growing. Sand is a suitable medium for rooting the cuttings, or light sandy soil may be used. Pots that will hold four or five cuttings, similar to the one illustrated, or shallow wooden boxes may be used. The cuttings root readily in a frame or hand-light at the warm end of the greenhouse.

Potting up the Rooted Cuttings.—In about a month from the time of inserting the cuttings they will be ready for potting off singly in small pots, or if large potfuls are desired three cuttings may be placed together in a 4-inch (large sixty size) pot. Use soil composed of equal parts loam and leaf-mould; adding plenty of sand. Peat is not essential for fibrous-rooted Begonias, but if available it will be beneficial to use a little



2.—THE SAME PLANT WITH CUTTINGS REMOVED.

with the potting soil. Return the newly-potted plants to the frame or hand-light for a week, leaving a little air on, which may be increased each day. A slight spraying with a syringe or fine rose water-pot will be helpful, and shading from bright sunlight can be afforded by means of tissue paper. When removed from the frame a light shelf in the greenhouse will suit the plants.

Potting on the Plants.—Select a few of the best plants of each variety for growing in the greenhouse during the summer. Those that were potted up singly into small pots may be shifted

into 5-inch (forty-eight size) pots, and those three in a pot will be better in 6-inch (thirty-two) pots. The previous soil recommended will suit the plants for this potting if a little well-decayed manure is added. Plants to be grown in beds and borders can be potted into a size larger pots than they are in at present, that is, single plants from 2½-inch pots into 4-inch pots, three plants from 4-inch pots into 5-inch pots. Previous to planting them outside they should be grown in a frame for a few weeks, the lights being left off altogether for the last ten days or a fortnight.

Varieties.—Three of the best and most free-flowering varieties are *semperflorens alba*, white under glass, outside tinted with pink; *rosea*, rose-pink; and *Mrs. Bertram Currie*, red flowers and

remove the paper and place the boxes near the glass, a sturdy growth being what we now require. Henceforth watering must be very carefully done, giving it when required early in the morning, so that the leaves of the young seedlings quickly dry. Pans or pots may also be used for sowing the seeds in.

Treatment of the Plants.—When the seedlings possess two or three true leaves they must be pricked off into other 4-inch deep boxes, draining them and using soil as advised for seed sowing, except that the leaf-soil

or manure should be used in a more flaky condition. Before pricking out the seedlings, make the soil moderately firm, and give it a quarter-inch thick surfacing of clean sand. Place each plant 3 inches from its neighbour, taking care to press the soil well round the roots. Water in with a rosed can and place in a warm, rather close greenhouse or frame for a week or so until they have taken to the new soil, when commence to gradually inure them to more airy conditions. Water with caution;

excessive watering and bad ventilation are frequently the cause of young plants going off with a black ring round the stem just below the leaves. By the end of April the plants ought to have been gradually hardened so that they occupy cold frames, taking the lights off during fine days, and simply protect from frosts at night. At the end of the third week in May the plants can, in most localities, go into their permanent quarters,



4.—CUTTINGS INSERTED IN A POT AND ONE ROOTED READY FOR POTTING INTO A 2-INCH POT.



3.—ON THE LEFT IS THE CUTTING AS TAKEN FROM THE PLANT; ON THE RIGHT, ONE PREPARED FOR INSERTION.

rich bronze red foliage. Among double varieties one of the best is *Triumph of Lorraine*, with rosy red flowers and deep bronze-coloured foliage.

RAISING ASTERS FROM SEEDS.

It is exceedingly doubtful whether any half-hardy annual is so popular as the varieties of the so-called Aster that is known to the botanist as *Callistephus*. Although many attempts have been made to detract from their merits by possibly interested persons, there is no disputing the fact that, when well grown, the many beautiful varieties now on the market take a lot of beating, considered either from a garden or house decorative point of view. As with every other plant that we grow, good cultivation must exist from the beginning, and for the first batch of plants a sowing must soon be made.

Sowing the Seeds.—This first sowing must be made under glass, and where a hot-bed exists this is the best place to raise the seedlings. Secure some 3-inch deep boxes, bore or burn some holes in the bottom, and cover these with pieces of broken pots. The soil for sowing the seeds in must be of a rather light nature, one consisting of two parts good loam, one part leaf soil or thoroughly decayed manure, and one part sand suiting admirably. Pass this through a quarter-inch mesh sieve, then place a layer of the rough material over the crocks in the bottom of the box and fill up with the fine soil. This, when pressed moderately firmly, should come to within three-quarters of an inch of the top of the box. All is now ready for the reception of the seeds, and these must be scattered thinly, half an inch apart being none too much. Cover with a quarter of an inch layer of fine soil, give a light finishing with clean sand, and press just tight enough to fix it with the bottom of a clean pot or pan. If these directions are properly carried out, it will be seen that the soil is roughly half an inch below the top of the box, this space being left for watering. Give a good soaking through a fine-roset can, cover each box with a sheet of brown paper, and stand in the greenhouse or hot-bed frame. As soon as the seedlings appear promptly

planting the large sorts 15 inches apart each way, and the dwarf varieties 12 inches apart. The beds should be well dug and manured before planting. If the seedlings have been treated as advised they will be fine sturdy plants, each possessing a mass of roots, and can be planted out without any serious check occurring. Sowings may be made under glass at intervals of three weeks from the end of February until the middle of April, and from then until the middle of May seed may be sown in the open where the plants are to flower, taking care to thin the seedlings early. The plants from the outdoor sowings will flower well late in the season when the others are over.

Asters in Pots.—It frequently happens that during the late summer and autumn months the beginner's greenhouse presents a bare appearance, and flowering plants of any sort would be welcome to brighten it up. This is where the Aster, especially the dwarf, bushy branching strain, comes in useful. When the flowers are just beginning to open tread the soil down firmly round a desired number of the best shaped plants, and then give it a thorough watering if at all dry. Leave it for twenty-four hours, then with a spade cut round each plant a few inches from the stem, lift and transfer to a pot of suitable size. Make the soil firm, water well, and then stand the plants in a shady, rather close corner of the greenhouse for a week or so when the plants can go on the stage, shading them from bright sunshine. Some cultivators prefer to grow on the young plants entirely in pots, and where time and space abound this method is to be commended. In this case, instead of pricking the seedlings out into boxes, each would be potted into a thimble pot, and eventually potted on in other sizes until pots 4½ inches or 6 inches in diameter were reached, these being large enough for the plants to flower in.



5.—THE RESULT OF POTTING ON THE ABOVE ROOTED CUTTING.

Some Good Varieties or Types.—Perhaps the most general favourite is the *Ostrich Plume Aster*, a beautiful double or semi-double type, 18 inches high, the feathery petals and branching habit rendering it one of the most useful Asters we have. It may be had in several colours. *Comet* is another graceful type, the reflexed petals reminding one of Japanese *Chrysanthemums*, 18 inches. *Victoria* is a well-known 18-inch high type, the petals of which curve outwards. The French *Pæony-flowered* type is beautiful and distinct, the petals curving inwards similar to an incurved *Chrysanthemum*. The original strain reaches a height of 2 feet, but a dwarf type may now be obtained that only grows half as high. *Sutton's Little Gem* is a charming dwarf type, specially suitable for pots. It, like the others mentioned, can be had in several colours. Single Asters are also charming, especially those that have twisted petals. The *Ray* type finds favour with some people, as they stand dry weather well. The flowers are semi-double, the long, straight petals radiating from a bright yellow centre or disc.

THE TOWN GARDEN.

INTRODUCTORY.—Man is a gregarious animal, and he flocks to the towns as naturally as the wasps to the treacle jar; he is also a gardening animal, and wherever he is and whenever he is there the innate, inherent love of gardening must assert itself. Recognising these two facts, and being desirous of pleasing every section of his readers, the Editor has commissioned the writer—as one who has done it and knows how it is done—to give a few brief hints every week to enable every reader to have a garden which shall blossom like the Rose.

The Soil.—At the very outset, and, indeed, all through the chapter, I would emphatically assert that the soil is at the bottom of all good gardening. There are various ways of looking at this statement. Some may treat it as a joke; some may regard it as a truism; some as a sound, common-sense dictum. The latter is the sense in which it is now put forward, and it is incontrovertibly true, to the last spadeful of mould, the last clod of earth, the last grain of sand in the garden. With good soil and plenty of it, you can grow everything; with poor soil and plenty of it you can grow a lot; with poor soil and little of it you can grow weeds and weary—and precious little besides.

But here, at the very start, we unlucky town gardeners get our first set-back in the handicap; it may be to scratch; it may be a few inches nearer to the limit man, according as our soil is poor and plentiful or poor and scarce. However, there is this beautiful thought underlying the question of town garden soil, and it is worth dwelling upon, viz., there is always room for improvement. There is no need for the town gardener to stand, Alexander-like, and sigh for fresh worlds to conquer; they are here, literally and absolutely at his feet, and my advice to him is to go in and win. A healthy spirit of enquiry is good to foster at the outset, and a spade and fork should be called in to help. Armed with these, proceed as far in the direction of Australia as the land will allow; it may be 6 inches; it may be 2 feet; if it is only 6 inches, make it 2 feet; if it is 2 feet make it 3 feet—always strive for a little more than you have got. Remove all empty tins, broken glass, stones and brick-bats encountered by the way, and put them in a heap; they may come in very useful later on for paths, &c.

In digging down 2 feet or 3 feet at this season, keep the bottom soil always at the bottom, but break it up with the fork. On this place a 6-inch layer of the best manure the nearest mews can supply; this should be rather old manure at this season, but not so old as to have become hoary, as is common with many manures that have lain long in heap. This layer of manure should have a 6-inch layer of the adjoining soil thrown on to it, followed by an intimate mixing of the two with the fork. Six inches more manure, 6 inches more of soil admixed, and the top 6 inches of soil is returned to cover all, unmanured and unbroken, simply inverted or turned over as it leaves the spade or fork. This deep trenching will open up store-houses of plant food that have previously been locked, and the difference, especially during a dry summer, between plants grown on soil that has only been dug 9 inches deep and those on other that has been trenched 24 inches deep will be very marked. The roots of most plants will penetrate the soil to a much greater depth than is generally supposed, providing the substratum is broken up sufficiently to enable them to do so. That is all for now; but it leaves a bed of soil which by late spring or early summer will grow anything or everything—that is, with a skilful grower to lend a hand at times.

Next week I hope to say something about the lawn, with special reference to cats, chickens and earthworms. E. J. CASTLE.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

FORCING ROSES.—Continue to force these and keep the plants free from aphid by syringing with some suitable insecticide. Remove the plants from a warm to a cooler house as the buds show prominently; they become a better colour and last longer. Place under cover some more of the rambler section; these force slowly very well, and are useful for the conservatory and house decoration. Keep the plants well supplied with stimulants if the pots are well filled with roots. Put in to force also Deutzias, Lilacs, Azaleas and Rhododendrons; syringe them well twice a day.

Ferns should now be inspected, and those that have been resting may be potted up and started afresh. The Nephrolepis may go into strong baskets. Most of these, being strong growers, must be given good substantial soil and when well rooted copious supplies of water and liquid manure, also an occasional dose of soot water. Large plants should be top-dressed, and also see that the drainage is clear, otherwise the soil would soon become waterlogged and sour. I have found that Adiantum farleyense succeeds best in good fibrous loam and dry cow manure, with plenty of sharp sand. A stove temperature is also required, and shade must be given when the sun is very bright. Pull the blinds down immediately the sun is likely to reach them to prevent the young fronds getting scalded.

FRUIT INDOORS.

Cucumbers and Melons.—Old Cucumber plants should be pulled up as soon as the new ones are ready; the new ones are so much better. Sow seed for a succession frequently all through the season. Plant out Melons as soon as they are ready, and allow 18 inches from plant to plant and grow in the cordou system. Secure a good set before allowing any to swell.

KITCHEN GARDEN.

Prepare the Ground and plant out autumn-sown Onions. Carter's Record, Ailsa Craig and Reading all respond to this treatment, as well as the Tripolis. Give a good dusting of soot over the plot, which should be heavily manured. Good Onions cannot be grown without rich culture. In raising the plants place a fork under them so that they can be drawn out without injuring the roots, and finish planting by making the plants firm.

Shallots, Garlic and Artichokes should be planted now. Rhubarb plantations may now be made and large pans or tubs placed over some roots and then hot manure. Make a sowing of Brussels Sprouts seeds in a cold frame; these will make an early plantation. Further sowings of Broad Beans and Peas should be made, and a sowing of Spinach.

PLEASURE GROUNDS AND FLOWER GARDEN.

Get on with planting as fast as possible in suitable weather, and do not allow plants to remain uncovered when transplanting, otherwise the little fibrous roots soon feel the effects. In all cases where necessary stake and tie. If this is neglected much injury may be done in a short time. Examine all old ties and labels, and where necessary replace them.

Conifers may be planted and removed. Make the soil firm about the roots by ramming, and it is well to afford a little fine rich soil to extra choice plants at the time of planting, as the small roots catch hold of this very quickly and soon make progress.

Herbaceous Borders that require renovating should be seen to at once. Where plants have

outgrown the space allotted they should be restricted by taking up the whole clump and replanting. Select the outside pieces which are the most vigorous, and secure fresh labels if necessary. New ones can be painted or written or printed when wet or frosty days occur.

Lawns.—Keep these neat and tidy by sweeping and rolling. A top-dressing may be afforded if the grass is poor or mossy. Wood ashes, soot and bone-meal make a very good stimulant. Any turf-laying should be done now.

HARDY FRUIT.

Push forward the pruning and tying and training of all fruit trees, and on frosty mornings wheel manure on to the borders. To cordon trees on the Quince give a top-dressing of bone-meal, kainit and basic slag. Keep a sharp look out for small birds; it is best to put black cotton on the bushes and nets on the walls.

American Blight.—This should be kept at bay by going over all the affected branches with a hard paint-brush and some methylated spirit or petroleum emulsion. Well brush the insecticide in to thoroughly exterminate the pest. This should be done several times during the growing season.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

TUBEROSES.—Many fail in growing the Tuberoses successfully, and this may be traced to two causes. One is supplying water to the roots before growth begins, and the second to the attempt to grow the plants in too cool a temperature without the help of bottom-heat. The soil should be moderately moist when potting, and then water will not be needed. To start them into growth a genial bottom-heat is required, with a top temperature of 65°. When they begin to grow begin watering, and by the time the flower-spikes appear they will take it freely, and may also have occasional doses of liquid manure. Before potting, break off all offsets from the tubers, pot firmly and place them well down in the soil, leaving about 1 inch of the neck showing above the surface. One tuber is sufficient for a 5-inch pot, two for a 6-inch and three for a 7-inch pot. The first-named size I find the most useful.

Euphorbia jacquiniiflora.—This useful plant often gives some trouble to the propagator. The earliest opportunity should be taken to secure the first batch of cuttings. Plants from which the bloom was cut at Christmas will now be starting into growth, provided they have been kept in the store. The young shoots should be cut off close to the old wood, and a little dry sand applied to stop the bleeding; they may be put in singly into small pots or three together into a 3-inch size. Peat, loam and sand in equal parts may be used. The cuttings should not get withered during the process of making, and they should have the warmest part of the propagating pot. If kept quite close, with a moist atmosphere, they will not require any watering for the first three or four days. Too much moisture at the base of the cuttings before they have properly callused is sure to cause them to rot off.

ORCHIDS.

Dendrobiums.—Continue to bring on successional plants of Dendrobiums, and if any insects are suspected sponge the plants before being placed in heat. Any that finished up their growth late and are consequently not very well ripened must be brought on slowly at first, for if introduced at once to heat and moisture greatly in excess of what they have been resting in, the stems will frequently grow at the nodes instead of flowering.

KITCHEN GARDEN.

Sweds to be Sown.—We have come to the season when the seed of several vegetables should

be put in; among them will be Brussels Sprouts. To have these early and in the best condition the plants require a long season of growth, therefore one or two of the best varieties should be sown early. As it will not be possible to do so out of doors yet with success, the first batch of plants should be raised under glass on a gentle hot-bed. As soon as the seedlings appear, allow plenty of air and prick them off into cold frames as soon as they are ready to handle, making the soil firm, which will promote sturdy growth. In the meantime an open position should be selected and prepared for them, and to ensure the plants growing freely through a season of drought, a good deep tilth should be provided with the addition of a good dressing of decayed manure.

FRUIT UNDER GLASS.

Early Peach House.—Here the fruit will be swelling apace, and if the crop is heavy, rub off some of the badly placed fruits and those on the under side of the branches. Syringing with tepid water twice daily will hasten the swelling of the fruit and also assist to keep the foliage clean. Ascertain the condition of the border, and if water is needed give a thorough soaking at a temperature of 85°. Old and established trees may have liquid or an artificial manure each time water is required, but younger trees that are full of vigour will be best without it until the Peaches have stoned.

FLOWER GARDEN.

Hardy Plants in Pots.—These will now be on the move, and will require attention in the way of seeing that the pots are on a good bed of ashes to keep the worms away. The bottoms of pots and sides of frames can be also examined for slugs. Although there may be nothing that cannot claim in its way to be hardy, some things will probably be all the better for a little protection in the event of frost, notably *Monstretias*, the young leaves of which are apt to be crippled, and it is as well to avoid this if early flowers are required.

Daffodils.—In looking through the many varieties of Daffodils now in flower, one is struck by the excellent display, too, that is furnished by a trifling outlay, and requiring very little labour. As in the case of many other flowers, the purchase of new and rare varieties is expensive, but it is not necessary to go in for them if a fine bank of colour in a little variety is all that is required.

Polyanthuses in Pots are coming fast in flower. Like the Daffodils, they are capital plants for the present season where the supply of glass is limited, and they last in flower a long time.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

NEW ORCHIDS.

CYMBIDIUM LADY COLMAN.

This handsome addition to the Cymbidiums is stated to be the result of a cross between *C. eburneo-lowianum* and *C. traceyanum*. The plant shown was carrying two racemes of flowers composed of four and five blooms respectively. These are large, the sepals and petals being of a uniform primrose ground colour, with dull crimson narrow streakings. The labellum is of medium size, finely recurved, the colour being deep bright crimson blotches on a white ground. The column, which is rather conspicuous, is dull carmine, with short deeper carmine or crimson streaks. Shown by Sir J. Colman, Bart., Gatton Park, Surrey. Award of merit.

DIA-CATTLEYA COLMANÆ.

This is a new bi-generic hybrid between *Diaerium bicornatum* and *Cattleya intermedia nivea*. The habit of the plant and the shape of the flower are those of both parents. The latter is pure white, with the exception of a faint primrose marking on the labellum. The plant shown was

carrying one raceme composed of one fully opened flower and three buds. Shown by Sir Jeremiah Colman, Bart., Gatton Park. Award of merit.

LYCASTE SKINNERI ORION.

This is a lovely variety of the well-known *Lycaste Skinneri*. The plant shown possessed only one flower, this being of large size. The sepals are large, ovate and of a light old rose colour. The petals are medium in size, the colour being pale carmine except at the tips, which are white. The ground colour is also faintly streaked with white. The labellum is creamy white, with a yellow cushion at the base. Shown by J. Bradshaw, Esq., The Grange, Southgate. Award of merit.

SOPHRO-CATTLEYA ANTIOCHUS RUBRA.

A lovely addition to this already beautiful bi-generic race of Orchids. The plant shown had only one flower, but this was a lovely specimen. The sepals are lance-shaped and rather long, the colour being rich crimson-purple. The petals are of the same colour, but much broader, the edges being slightly crenated. The labellum is long, rather narrow, with beautifully crenated margins. The colour is very rich velvety crimson, with clear, narrow, golden markings at the base. Shown by Messrs. Charlesworth and Co., Heaton, Bradford. Award of merit.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.*

FLOWER GARDEN.

Information about Dahlia tubers (*Ed. R. Dahlie*).—As you do not wish to increase your stock, the simplest plan will be to leave the old roots as they are for the present. It is not necessary to cut away the old tubers; indeed, it would be very unwise to remove them all. If you have a greenhouse, or even a cold frame, we advise you to pot each clump into a large pot at the end of March, using soil composed of two parts loam and one part leaf-soil or well-decayed manure, and then place them in the greenhouse or frame, taking care that frost does not reach them. When the shoots appear remove all except the two strongest. Keep near the glass and plant outdoors at the end of May or early in June. If the tubers are very large you may cut some away so that you can get them into pots that are not too cumbersome. If you have no glass at your disposal, you may plant the clumps in the open early in May, removing the shoots as advised for those in pots and protecting those left should late frosts threaten.

Carrying out a bedding design in Stocks and Asters (*Milfield*).—The design is bold and excellent, but your scheme of planting is scarcely satisfactory. You already have far too many colours, and colours, too, which do not blend at all well. In these circumstances it would be wise to keep blue *Lobelia* out of the design entirely; neither is your suggestion of mixing the colours in Nos. 2, 3, 4, 5, 10, 11, 12 and 13 commendable. You would

obtain a far more satisfactory effect by leaving out all the blue, purple, rose and carmine Stocks, and keeping the whole design to pink, white and yellow Stocks; the *Nemesias* would not clash with this arrangement. Here is an alternative planting: 1, white Stocks; 2, 3, 4, 5, pink Stocks; 10, 11, 12, 13, yellow Stocks; 6, 7, 8, 9, carmine-pink Stocks; these latter are added to give brilliancy. In this arrangement use *Nemesias* to edge all the beds, excepting 10, 11, 12 and 13, which edge with dwarf white *Alyssum Thornburn's Bouquet*; this can be raised out of doors. Either leave out the *Asters* entirely or use a bright pink one for filling 6, 7, 8 and 9; do not use them in the same beds as Stocks, as the flowers do not associate at all nicely.

Twelve early-flowering Chrysanthemums for a London Garden (*Rus in Urbe*).

—You may grow the early-flowering *Chrysanthemums* in your London garden quite easily, with the sure prospect of obtaining a bright and cheerful display from the plants during the autumn months. Your chief aim should be to procure sturdy plants at the end of April or beginning of May. If possible, give the plants a nice warm, sunny position, as in these quarters they do well. A dozen Japanese varieties that will make a small garden bright and gay are the following: *Nina Bliok*, scarlet-bronze; *Goacher's Crimson*, rich crimson; *Roi des Blancs*, pure white; *Polly*, bronze; *Fée Japonais*, creamy primrose; *Claret*, bright claret; *Rosie*, terra-cotta-bronze; *Horace Martin*, yellow; *White Massé*, white; *Improved Massé*, rosy mauve; *Harrie*, bronze, tinted crimson; and *Pride of Keston*, reddish rose. *Pompons* are beautiful for the garden, having small compact flowers, which are borne in profusion on dwarf, branching plants. We recommend the three following sorts: *Orange Pet*, bronze; *Mr. Selly*, pale rose pink; and *Reggie*, cream.

Campanula pyramidalis roots growing (*E. H.*).—The fact that *Campanula pyramidalis* (as well as many other species) can be increased by means of root-cuttings has been known to professional propagators for many years, but it is little used, as these *Campanulas* are so readily raised from seeds, and seedlings grow more vigorously than plants obtained from root-cuttings.

Treatment of Box edging (*Beaconsfield*).—The only thing you can do to the Box edging is to take it up, pull it to pieces, and replant during the showery weather next April. Before replanting, take care that the ground is well dug, and, if necessary, some manure should be incorporated with it. The plant you send a portion of is the Winter Sweet (*Chimonanthus fragrans*). For information about *Mistletoe* please see reply to "H. N. H." in this issue.

Six single-flowered Chrysanthemums for decorative uses (*Strathmore*).—We recommend the following single-flowered varieties as suitable for November and December displays: *Edith Pagram*, rich pink; *Irene Cragg*, pure white, with yellow disc; *Bronze Edith Pagram*, bright reddish bronze; *Mary Richardson*, reddish salmon; *Miss Mary Anderson*, white, suffused rose; and *Mrs. Fergusson*, a pink sport from the last-named.

Snowdrops attacked by mould (*H. W. F.*). Your Snowdrops are attacked by the Snowdrop white mould or mildew (*Botrytis galantina*). It belongs to the same genus as the fungus which attacks the common White Lily. I am afraid that there is no remedy, and that the best preventive as regards the disease spreading is to at once take up and burn every diseased bulb, and do not plant other bulbs in the same position for two years.—G. S. S.

The cultivation of January-flowering Chrysanthemums (*Amateur*).—To ensure the development of *Chrysanthemum* blooms in January a late propagation is important, and a late period of stopping is also an essential factor. Nor must we forget that the selection of varieties is all important. Propagate by cuttings at any time between the present and May; the earlier the cuttings are inserted the bigger the plants will be. After being rooted the young plants should be potted up, and when 6 inches high the point of each plant should be pinched out. Other shoots will evolve as a consequence of this treatment, and these in turn, when 6 inches long, should be pinched or stopped as before, and each succeeding 6 inches of growth treated in like fashion. The last pinching should take place during the third week in July, from which point the plants should be grown on to the terminal buds. The plants do well when finally potted into 8-inch or 9-inch pots. House the plants as late in October as possible, being guided in this matter by the weather at the time. The plants must be kept cool and abundance of air given for quite a long time, gradually reducing the ventilation, so that by the time the buds are nicely set sufficient fire-heat may be given to dispel frost.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W. C.

PRUNING ROSES.

THE time for pruning Roses is approaching, and a few notes on the subject will doubtless be useful to our readers. For the majority of Roses the second week in March is a good time, but slightly earlier in early districts and slightly later in late ones. Tea Roses are best left until April. If these have begun to shoot out, retain some of the young growths.

In the following instructions it should be remembered that Rose-growers prune the last year's growth, so that if it is directed to prune back to 2 inches or 3 inches, that measurement is reckoned from where the growth starts from, frequently from the previous year's shoot.

Another fact is worth remembering, and that is to look over the plants in September and free the centres from small, useless wood and much of the old wood; the young wood is then enabled to ripen well. If quality of blossom is desired, the number of growths retained in September will be reduced to three or four of the best and ripest of the current year's production. All soft, rank growths are best pinched or stopped in September.

CLIMBING AND RAMBLING ROSES

should receive their principal thinning out and pruning soon after flowering, the plants being released from their supports for this to be done; their growths are subsequently retied and spread out.

STANDARD ROSES

are pruned on the same lines as dwarfs or bushes, except that they will sometimes make rather shorter growths. These are retained a little longer than dwarfs of the same sorts. The centre of the heads of the standards should be well thinned. In all pruning cut back to an outward eye or bud where possible.

PRUNING ROSES FIRST TIME AFTER PLANTING.

This should be done rather severely. Many are in a dilemma how to treat climbing and rambling Roses the first season. We have proved that the best results were obtained in the future when the plants were cut back to within about 2 feet of the ground the first season. A ripe growth or two may

be left somewhat longer if desired. Where these Roses are grown as free bushes in beds they may be left almost unpruned the first year, but when planted in the spring they should be pruned hard at the time of planting. Next week we shall deal with individual hybrids and varieties.

"STREAK" DISEASE IN SWEET PEAS.

THE article on "Sweet Pea 'Streak' Disease," by Mr. F. W. Harvey, in THE GARDEN of the 15th inst. describes exactly the way in which my Sweet Peas were affected when the disease first appeared four years ago, but since then the disease has each year attacked the plants in an earlier period of their growth. In 1905 I brought a diseased plant to the National Sweet Pea Society's show; it had stopped growing when about 3 feet high, before any blooms had opened; the tops shrivelled up and the buds refused to move. It was on view at the show, but the disease seemed to be new to all the experts there. In the late autumn of that year, at Mr. Horace Wright's suggestion, I sent a plant to Mr. Masee, who discovered some traces of *Peronospora* on it; but it was a very poor specimen, the growth being quite over, as it was very late in the year. In 1906 the disease appeared quite early, when the plants were about 1 foot high. Believing it to be *Peronospora*, they were frequently sprayed with Bordeaux mixture, and later with sulphide of potassium, all to no purpose; the disease spread from plant to plant until nearly all were affected. In October the plants were all lifted and burned, and the supports, wire netting, walls and surface of the stations were sprayed with formalin (a 2 per cent. solution) with the idea of destroying all resting spores. In the spring of 1907, when preparing the stations no animal manure was used, as they had been heavily manured the three previous years; the second spit was replaced with fibrous loam from old pasture land, and this was dressed with Vaporite some wireworms being present. A dressing of superphosphate (about 4oz. to the square yard) was given to the top spit along with a small quantity of sulphate of potash and some burnt clay, all being forked in a month before planting out. The seeds were sown singly in 3-inch pots in a compost of fibrous loam, with some leaf-mould and sharp sand, and were grown in a cold frame until 3 inches high, being planted out about the middle of April.

The disease appeared in some plants very soon after planting out, and attacked others at different periods of their growth. An eminent bacteriologist and expert in fungoid diseases very kindly undertook to examine the plants; he had them under observation as they were attacked all during the growing season, but could not find any trace of *Peronospora*, no internal fungus mycelium in the tissues, and when grown on under warm, moist conditions no sign of *Peronospora* appeared on the surface. Later in the autumn I saw it suggested in a gardening

newspaper that the trouble might be caused by eelworms. I accordingly sent some roots of diseased plants for examination and they were found to be swarming with eelworms, apparently two distinct species, one of which was recognised as *Tylenchus minimus*. Some time afterwards, before destroying all the plants, I had the roots examined of some plants that had not shown any appearance of disease and some eelworms were found in them also, but these plants were quite withered at the time and the eelworms might have attacked them after their growth was over. It is quite possible that the eelworms may have been merely an effect and not the cause of the disease. It was noticed that there was a great absence of nodules and rootlets on the roots of all the diseased plants that were examined last year. The disease seemed to spread from plant to plant in the row until all were affected; some isolated stations escaped and diseased plants did not communicate the trouble to my neighbour's plants on the other side of the wall, although almost touching them.

These particulars may be useful in helping to determine during the ensuing growing season what this dire disease is and how it may be combated; it is to be hoped that the National Sweet Pea Society will take the matter in hand, keep under observation some gardens where the disease appears this year, and collect experiences from any of the members who may be so unfortunate as to have their plants attacked. Mr. Walter P. Wright has sounded the alarm "Breakers Ahead!" and the members of the National Sweet Pea Society must wake up to the danger, for the very existence of *Lathyrus odoratus* is in jeopardy.

HENRY J. R. DIGGES.

Dunkerron, Donnybrook.

MY attention has been called to Mr. F. W. Harvey's note in your issue of the 15th inst. on "Sweet Pea 'Streak' Disease." It may interest your readers to know that we are also troubled with this in Ireland. I examined microscopically during the course of last summer a considerable number of specimens, but invariably with the result that no trace of fungus mycelium could be found in the tissues of the affected parts, nor on the surface of them; the cause is certainly NOT *Peronospora vicia*. On placing the affected plants in an atmosphere thoroughly saturated with moisture a copious development of a *Botrytis* invariably took place after some time; but this, I am inclined to think, was a case of saprophytism occurring when the parts were already dead. Later in the year the roots were investigated and found to contain eelworms in plenty, but there were no galls or similar malformations such as are usually caused by the destructive members of this group. These worms were identified by my colleague, Professor Carpenter, and were found to belong to a species hitherto not recorded as being parasitic. Professor Carpenter found them also apparently equally abundantly in the roots of apparently healthy plants, so that it would not appear that these worms were the cause of the trouble. We hope to make further enquiries into the matter next year. It is possible that the disease may be of bacterial origin. Spraying and other preventive measures taken have so far proved of no value whatever.

GEO. H. PETHYBRIDGE.

Royal College of Science, Dublin.

THE note by Mr. F. W. Harvey on page 79 is very opportune and interesting, and if it leads, as I hope it will, to the bringing forward of some remedy, it will have served a valuable purpose. Up till last year I had never had a plant attacked and then only two plants were affected. Curiously enough, these were in the very centre of a semi-circle of eight pink varieties, and the plants attacked were of a very vigorous variety and a novelty at that, to wit, Agnes Eckford

However, I knew the "streak" of old, and immediately I saw the first trace of its appearance I pulled up the affected plants and burnt them, root and branch. But what caused the "streak" or whether it is a disease I have not the faintest idea. At present I throw in my verdict with that of the old gardener in a Berkshire vicarage garden. Last year his employer said to him, "Charles, what is this streak disease in Sweet Peas that the gardening papers are bewailing?" "Streak disease, sir," was the answer, "streak disease! Well, sir, streak disease is a mystery." That it is fungoid mystery is my own opinion; I certainly should not credit it to eelworm. I have had a deal of experience of the latter pest, and have never known it to give trouble after the plants had reached the flowering stage. Collapse generally takes place when the plants are anything from 6 inches to 18 inches high.

F. J. CASTLE.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

March 3.—Royal Horticultural Society's Exhibition of Flowers and Fruit, Vincent Square, Westminster, 1 p.m. to 6 p.m. Lecture at three o'clock on "Bulbous Plants in New Zealand," by Mr. E. White; Horticultural Club Monthly Dinner; Lantern Lecture by Mr. C. E. Pearson, 6 p.m., Hotel Windsor, Victoria Street.

March 5 and 6.—Royal Horticultural Society's Colonial Fruit Show.

March 9.—United Horticultural Benefit and Provident Society's Annual General Meeting, 8 p.m., Royal Horticultural Hall.

March 11.—East Anglian Horticultural Club Meeting.

Examination in horticulture.

An examination in elementary horticulture, for lads and young men under nineteen years of age, will be held under the auspices of the Royal Horticultural Society on Wednesday, March 25, in as many different centres in Great Britain and Ireland as circumstances may demand. The general conduct of this examination will be on similar lines to that of the more general examination. Intending candidates should write at once for a copy of the syllabus to the secretary, Royal Horticultural Society, Vincent Square, London, S.W.

Colonial Fruit Show.—On March 5 and 6 the Royal Horticultural Society will hold an exhibition of Colonial-grown fruit and vegetables, both fresh and preserved. Fellows will be admitted at 1 p.m. on the 5th and at 10 a.m. on the 6th. The exhibition will be open to the public on payment of 2s. 6d. from 2 p.m. to 6 p.m. on the 5th, and on payment of 1s. from 10 a.m. to 6 p.m. on the 6th. The band of the King's Colonials will perform each day.

Note from Baden-Baden.—To those lovers of early spring-flowering plants unacquainted with it, *Crocus atticus* well deserves to be recommended. It has been in flower here since the 6th inst., and was at its best on the 15th inst. The flowers are not large, but exquisite in shape and lovely in their shining pink colour. It is easy to cultivate, and received no protection this season at all; *Eranthis hymalis* is just beginning to appear.—MAX LEICHTLIN.

Potato trials in Surrey.—With the co-operation of Mr. Charles Moon of Chessington Court the Surrey Education Committee during 1907 conducted trials of Potatoes (change of seed) on similar lines to those previously conducted at Merton in 1905 and Farnham in 1906. Ten varieties were chosen, namely, Up-to-Date, Duchess of Cornwall, Factor, Peckover, Dalmeny Beauty, British Queen, Superlative, Royal Kidney, Sir John Llewelyn and Table Talk, and all were grown under exactly similar conditions.

The results fully confirmed those obtained in 1905 and 1906, and forcibly demonstrate the superiority of Irish and Scotch sets for planting in the South over those saved in Surrey. We give the results of Up-to-Date as being indicative of the general results. Surrey seed, 14lb.; Hants, 49lb.; Spalding, 46lb.; Scotch, 73lb.; Irish, 84lb. Twenty-six tubers of each were planted. In Royal Kidney, Sir John Llewelyn and Table Talk the Scotch seed gave slightly better returns than that obtained from Ireland. As Mr. Alex. Dean, V.M.H., who personally superintended the trials, reports, the above facts are "of supreme importance, and should have the fullest consideration by Potato-merchants."

Dwarf flowering shrubs in a London park.—On entering the Broad Walk from the south entrance of Regent's Park, a little to the left is a very interesting bed to all lovers of flowering shrubs. The centre of the bed contains *Rhododendron dahuricum* in full flower at the time of writing (February 17); Also may be seen the tree *Wych Hazel* (*Hamamelis arborea*), just going over, to my mind a most interesting plant, with its branches covered with the yellow and brown blooms. The white *Mezereon* (*Daphne Mezereum album*) is also in flower, but the purple flower is not so forward. Other plants yet to flower in this bed are *Rhododendron Early Gem* and *præcox*, also *Daphne neapolitana*. As the days lengthen the latter will no doubt be wreathed in bloom. The little *Winter Aconite* springing up here and there over the bed, make all who love a garden pause at this particular corner of one of the best of our London parks. It should induce all who have a sheltered corner in their London houses to plant a few of the above-named, especially for the pleasure they impart at this dull time of the year in the open garden.—G. S. JORDAN.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Sweet Pea nomenclature.—One thing in connexion with the beautiful coloured plate of Sweet Peas issued with THE GARDEN last week, which I noted was that of twelve varieties, ten had personal names and only two had non-personal appellations. Looking over a list of sixty-five selected varieties of these flowers published in the National Sweet Pea Society's schedule of classes for the coming exhibitions, I found that only twelve had non-personal names, all the rest having personal ones. Apart from the fact that individuals are paid but poor compliments when their names are attached to varieties that, such is the growth of variety in Sweet Peas, may be out of cultivation in two or three years, is there among raisers of Sweet Peas so poor imaginative power that names that are non-personal and short concise ones also cannot be found? I cannot conceive that there can be any special craving for the fugitive immortality associated with Sweet Pea naming. Would that the National Sweet Pea Society would offer prizes for best names, as for best flowers.—D.

Cotoneaster angustifolia.—This has fruited well with me against a south wall in Kent.—CRANBROOK, Hemsted Park.

Buchu plants of South Africa.—Referring to a recent note on the relations of plants and commerce it may be of further interest to record the appearance in the London drug market at the beginning of February of the leaves of a rutaceous plant, which were offered under the name of "Aniseed Buchu." It may perhaps not be generally known among the readers of THE GARDEN that the term Buchu is given in medicine to certain species of *Barosma*, of which

Barosma betulina, or Birch-leaved Buchu, is acknowledged in the British Pharmacopoeia as the true source of the drug, which is given medicinally as a tonic and diuretic. The plant furnishing these leaves is a small shrub, a native of Cape Colony, where the leaves are collected during the flowering and fruiting season. The leaves of Barosma crenulata and B. serratifolia are also known as Buchu by the natives and sometimes find their way into the English drug market. But those of the so-called Aniseed Buchu are said to be furnished by Agathosma villosa, a plant belonging to the same natural order (Rutaceae), but not known to possess any economic value, though A. virgata, a native of the mountain slopes of Cape Colony, is known as "Bok Buchu" by the people, among whom it is used in pulmonary complaints. All these plants belong to the same natural order as the well-known perfume plant of Australia (Boronia megastigma). From the fact that many plant products that appear in commerce spasmodically are gathered during the fruiting or seeding season, and that their botanical identification is

THE FRUIT GARDEN.

PLUM COE'S GOLDEN DROP.

THIS excellent dessert Plum is grown under various names, and in the Eastern Counties I have frequently seen it grown and sold under the names of Bury Seedling and Coe's Imperial. It was raised by a Mr. Coe at Bury St. Edmunds 100 years or more ago, and is still one of our best late dessert Plums. In many gardens it is not robust enough for a standard, though on the South Coast in a warm soil I have seen it bearing splendid crops grown on a short stem. The fruits hang on the trees when other kinds are past. However, such a splendid fruit is well deserving of a wall, and, given ample room, it gives a good return. This Plum is not ripe, even in the South, till well on in September, and in the North it is an easy matter, by gathering late and storing in a cool place, each fruit being placed singly in tissue paper and laid in

vinery is provided there is no reason why the amateur should not plant Vines with the most satisfactory results. One occasionally meets with a Vine planted in a border under the greenhouse staging, with no care taken as to the soil in which it is planted, nor to the drainage of the same. This treatment cannot be successful in producing good quality fruit.

PREPARING THE BORDER.

The thorough preparation of a Vine border is most essential, and entails a fair amount of labour; however, by a careful estimation of the material required for this purpose, and arranging for this to be at hand before commencing operations, the necessary preparations for planting Vines is not the difficult task that many suppose it to be. In the majority of cases it is wise to have a hard and impenetrable bottom to the Vine border, which should slope from the house to the front of the border. Place a few rows of 3-inch drain pipes across the prepared surface, connecting these with a drain carried in front of the border. This drain should consist of 4-inch pipes. Place between the pipes a layer of limestone or broken bricks, covering them with about 2 inches of the same material.

The next question is the preparation of the soil in which the Vines are to grow. Turf cut from an old pasture is best for this purpose. This may be used quite fresh, although it is frequently advised that turf for this purpose should be kept in stack for a year. This fresh turf is very likely to contain wireworms, but these are not injurious to the Vine roots, or in fact any tree or shrub, although so destructive to many other plants, such as Carnations and Carrots. Taking these facts into consideration, it will be found that the quantity required for planting a medium sized vinery is moderate, especially when it is remembered that only a portion of the border is completed the first year, a portion of the remainder being added annually until finished. This system is far better than filling in the whole bulk of soil in the first instance, as, by adding fresh soil, food is supplied to the Vines, and the border becomes evenly filled with healthy roots. Place a layer of the turf, grass side downwards, over the drainage, building up the outer walls with the same material and filling in between these walls soil prepared by mixing ten barrow-loads of roughly-chopped turf, one barrowload of old mortar rubbish and 1 cwt. of Vine Border Compound as supplied by the leading firms dealing in artificial manures. The turf should be light rather than heavy, what is termed a sandy loam being the best for this purpose. Make the border moderately firm by treading the soil as the work of filling in proceeds.

PLANTING THE VINES.

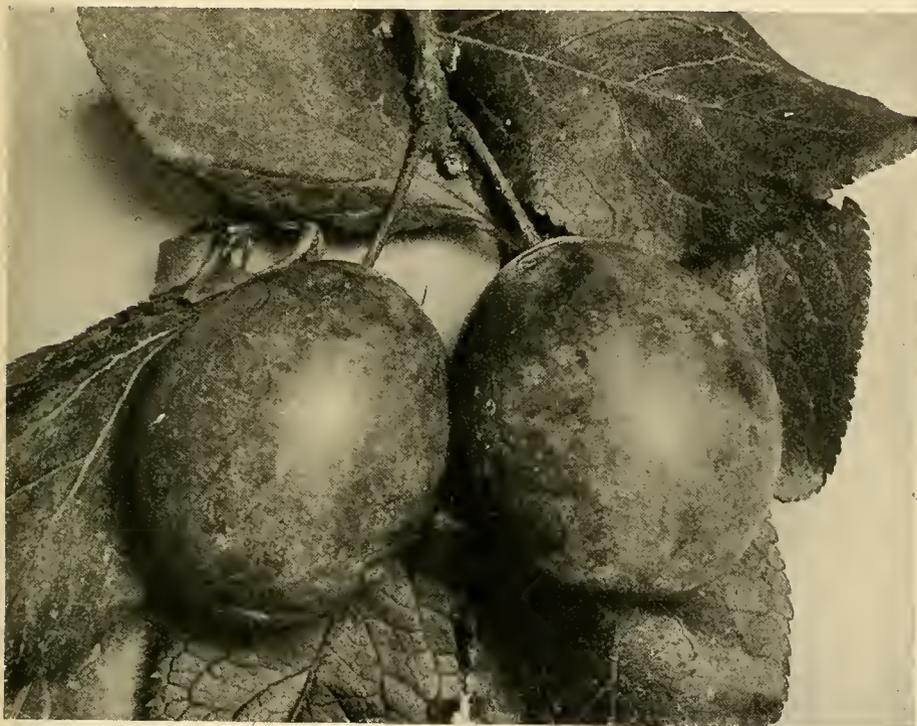
Do not undertake this until the plants commence to swell their buds. Turn them out of the pots and carefully remove the soil from their roots. This may be done by placing the ball in a vessel containing tepid water and removing the soil with the hands. If several Vines are being planted deal with one at a time, so that the roots are not exposed for a longer period than is absolutely necessary. Prepare a shallow bed for the reception of the roots, spreading these out carefully and covering them with 3 inches or 4 inches of soil. The Vines must be allowed to grow at least 1 foot before any artificial heat is applied. If any attempt is made to force them into growth before they have made fresh roots total failure will be the result. If there is no inside border and the Vines are taken through the front wall into the house the exposed portion of the rod should be protected during the winter. Single rods should be planted from 3 feet 6 inches to 4 feet apart.

THE PLANTING OF GROWING VINES.

This may be undertaken from May to July, and in some cases these prove more satisfactory than the dormant plants. Disturb the roots as little as possible.

Munden Gardens, Watford.

C. RUSE.



A SPLENDID DESSERT PLUM: COE'S GOLDEN DROP.

often greatly assisted by the presence of seeds or fragments of fruit, it often happens that the seeds are in a condition for germinating, and plants new to cultivation may thus be raised.—

JOHN R. JACKSON, *Claremont, Lympstone, Devon.*

Snowdrops flowering in three weeks from planting.—While clearing out my seed and bulb chest towards the end of January, I happened upon six home-saved Snowdrop bulbs which had been overlooked at the October planting. They had made such a brave effort to grow in the box, having made shoots an inch long, that I thought they were worthy of encouragement. Accordingly, the next day, January 28, I put them in on a sunny south border, about 1½ inches deep. To my astonishment when potting about the border a fortnight later I saw two or three tiny white flower-buds where the patch of Snowdrops were planted. At first I could scarcely believe my eyes, but to-day, St. Valentine's Day, there are two fully expanded flowers daintily dancing in the sunshine. And what valentine could be more welcome?—E. J. C.

single layers in a drawer, to keep them good to the new year.

Of late years this variety has found much favour when grown as a pot tree, and grown thus it does grandly; the tree fruits in a very small state, and the crops hang well. I grew this variety on the back wall of a cold house and got a splendid return, as with glass protection it never failed us, and the tree was not a rank grower by any means. In a warm garden it makes a nice pyramid when grown in this way. The trees at times suffer when in blossom, so that, if possible, a sheltered position should be chosen, the soil well drained and the roots not too deeply planted, so that rich surface food may be given.

G. WYTHES.

THE PLANTING OF YOUNG VINES.

JUDGING by the various queries dealing with this subject which appear from time to time in THE GARDEN, it appears to be an important matter with many readers. When a suitable

THE FLOWER GARDEN.

A PRETTY AND USEFUL ANNUAL.

(*COLLINSIA BICOLOR*.)

ALTHOUGH so long an inmate, and a favourite inmate, of our gardens, the pretty little *Collinsia bicolor* does not appear to have received any generally recognised popular name. It is well worthy of one, but the generic name of *Collinsia* comes so readily to English tongues that no other seems really necessary. As a dwarf edging plant for beds or borders this *Collinsia* is deserving of more attention, for if the soil is well firmed after planting the specimens rarely exceed 9 inches in height, and bear a profusion of pretty little delicately coloured flowers. As may be seen by the illustration these somewhat resemble a *Salvia* or *Snapdragon* in shape, so that they make a welcome change from the general run of summer garden flowers. They are generally white, tipped with blue or bluish lilac, though there is a pure white form called *candidissima*. The *Collinsia* is a native of California, but is classed as a hardy annual in this country, and is really so in all but cold and wet districts.

The culture usually accorded to hardy annuals should be given to it, but in view of its possessing a modicum of tenderness sowing should be deferred till the weather gives promise of being fairly warm and sunny, say the end of March or the beginning of April. On light soils and in warm districts autumn sowing will be found to give the best results, the plants forming sturdy and good-sized patches before the heat of the sun urges them into flower. In wet and cold districts autumn sowings generally perish in the winter.

HOW TO PREPARE AND SOW A LAWN.

THE one feature about our gardens and public parks that immediately appeals to visitors from tropical or subtropical countries is the velvety closeness and verdant hue of the lawns which abound, a feature that has been characteristic of British gardens from the earliest times. Certainly there is nothing more restful and refreshing for tired eyes than a well-kept grass plot, no matter what its size may be, and nothing provides a better setting for the highly-coloured flowers of many kinds that abound in most gardens. There are two methods of preparing or making a lawn, viz., by laying down turves or by sowing seeds. As the former, to be successful, should be done in early autumn or winter it will be useless to deal with it now, but seeds are best sown in the spring, say early in April, although they can be sown in the autumn with a fair prospect of success.

PREPARING THE SOIL.

As in every other gardening operation, a good beginning is absolutely essential if success is to crown our efforts, and it is quite useless to sow grass seeds on soil that has only been prepared in a haphazard manner. Although the ground, especially where it is of a heavy or retentive character, is best prepared in the autumn, there is still time to do the work, but it must be carried

out at once. Artificial draining is not often required, but if it is needed it must be done before anything else is seen to. Levelling will be the next task, and this needs a certain amount of care so as to ensure as nearly as possible an equal depth of good soil over the surface. This good soil ought not to be less than 9 inches in depth all over the plot; twice as much is better. If the soil is very heavy or sticky it will be necessary to add such substances as road scrapings, leaf-soil, burnt earth or garden refuse, or even well-decayed old hot-bed manure, so as to render it more friable.

After levelling thoroughly, dig the soil, taking care to remove the roots of any perennial weeds such as Docks, Thistles and Nettles that may be present. Many opinions exist as to the wisdom

levelling, tread the whole of the bed so as to make it firm but not hard. When this is finished the surface in general should be quite level, and a raking with a coarse-toothed rake is all that will be needed before sowing.

SOWING THE SEEDS.

The quantity of seed needed will be the first consideration. To ensure a good thick crop 1 lb. per square rod is not too much; less may be used, but this is not advisable. Practically all seedsmen of repute supply excellent mixtures of grass seeds, varying the kinds according to the soil, so that it is needless to name the grasses here. A still day must be selected for sowing, and it is imperative to scatter the seeds evenly over the surface. Some sowers prefer to go over the plot twice, using half the quantity of seed each time, working across the first course taken.

After sowing, give the bed a raking over to cover the seeds and then roll it with a light roller, doing this in two directions so as to ensure every portion being rolled. Birds are very fond of many grass seeds, and where the plot is only of medium or small size it is wise to protect the seeds with fish netting or strands of black cotton secured to sticks a few inches from the surface.

AFTER TREATMENT.

The young plants will usually present themselves in three or four weeks, and growth will subsequently be fairly rapid. If the weather is dry copious waterings will be needed or the young plants will quickly perish. The first mowing should be given when the young grass is about 3 inches high, and this operation needs a good amount of care. A sharp scythe is usually better than a mowing machine, but the latter may be successfully employed providing the knives and blades are perfectly adjusted so that the cutting is clean. Close cutting must not be performed, it only being necessary to remove the tops of the plants. Throughout the summer light rollings and mowings will be necessary, and watering must be attended to if the weather is dry. This is most important.



A USEFUL ANNUAL (*COLLINSIA BICOLOR*).

of manuring soil for lawns, but, as in most other things, this will be ruled by local circumstances. It is certainly preferable to secure a site that was manured well for some other crop the previous year, but where this is impossible and the ground needs manure, this may be incorporated when digging, taking care to use short material only and see that it is evenly distributed.

Digging finished, the ground must be allowed to settle for a few weeks, or until sowing time, which is, preferably, early in April. By this time, if much levelling was needed at the outset, some parts of the plot will have settled down more than others and some additional levelling will be necessary. Select a day when the soil will not cling to the boots for this work, and after

thinks his own particular pet sorts are the best. So, although I have grown Potatoes in about six counties of Great Britain with success, under varying conditions of soil and climate, I look upon the task of selecting the best Potatoes as a subject open to much criticism. Still, from proper criticism springs knowledge, so I welcome it. We depend on the Potato as a source of food supply to a large extent, and we require the supply to last for as long a period as possible during the year. Therefore, to get best results, careful attention must be given to certain points, from the selection of the sets till final earthing up.

SELECTION AND PREPARATION OF SETS.

These should be carefully selected tubers, free from disease, of medium size, and from 2oz. to

THE KITCHEN GARDEN.

THE BEST POTATOES AND HOW TO GROW THEM.

(Second Prize Essay.)

EVERY grower of this useful and necessary tuber (like our friends the raisers of Sweet Peas)

3oz. in weight, with robust sprouts at the time of planting. To ensure this, all sets should be selected (or, if bought, procured) early in the autumn, and stored in an airy, light, yet frost-proof place in special boxes.

The system practised here in Jersey is the best I have yet met with, and is universal. Even the poorest labourer has his Potato boxes, constructed from quarter-inch deal boards, 24 inches long, 12 inches wide and 2½ inches deep, provided with stout cross handles 1 inch thick, and standing 4 inches clear above the top of the box. The seed size tubers are picked up in these boxes straight from the ground, taken to the storeroom and stacked up in tiers. During the slack winter months they are carefully looked over and all diseased tubers removed. About three or four months before planting time, and before growth commences, they are graded according to size, and set up on end in their boxes to sprout, free circulation of air being given at all times, except during actual frost, and growth is confined to one or two strong sprouts.

The following advantages result from the above method. A sprouted tuber given favourable weather comes up at once, and an earlier crop results. Should the weather be unfavourable, planting can be delayed until the soil is in a suitable state, when, once in the ground, the sets go on without a check. At planting time the boxes are taken out as they are, the sets are put direct from them into the trenches, and the result is a perfect set with sprouts undamaged. I have dwelt on this at length, as upon the proper selection and treatment of the sets the crop to a great extent depends.

SOIL AND PREPARATION OF THE SAME.

The quality and quantity of ground to be set aside for Potato culture must, of course, be determined by the cultivator. Potatoes may be and are grown excellently in nearly every class of soil, although the best results may be expected from sandy loam. It is just here, however, that a little judicious experimenting, together with an intelligent observation of your neighbour's crop, may come in useful. Take notice of those sorts which do well in your immediate neighbourhood on soil similar to your own, test their keeping and cooking qualities where possible, and make your selection of varieties accordingly. Should you desire to grow for the show table, the appearance of the tuber must also be studied. I have no hesitation in saying that tubers quite suitable for both purposes may be obtained by observant selection.

As regards preparation of the soil, for my own part, whenever possible, I practise and strongly recommend autumn digging and manuring, then leaving the ground rough to get the benefits accruing from frost and snow. Give a liberal manuring with half-rotted stable manure, trenching the same in at least 1 foot. By this process there will be a friable, mellow top crust at planting time, which will work easily and evenly. I am

well aware that on the point of autumn digging and manuring expert opinion differs; however, I contend that ground so prepared in nine cases out of ten is in a far more suitable condition to receive the sets and gives better results than when prepared and planted straight away in spring. Where good natural manures cannot be obtained, artificial must be used. There are at the present time many excellent sorts of Potato manure on the market; but for those who like to prepare their own, the under-mentioned is an excellent mixture: Three parts superphosphate, two parts kainit and two parts sulphate of ammonia. Sow it broadcast over the ground before commencing to plant at the rate of 8lb. to 10lb. per square rod. This mode of application encourages root formation and the tender rootlets run less risk of damage by contact with the strong chemicals than when the manure is sown in the trenches in quantity.

PLANTING.

The principle to guide us here must be to see that sufficient space is given to every plant to mature and absorb sun and air, according to the character of the variety and the state of the soil. There is no doubt that close planting is a source of disease, resulting as it does in a drawn weakly haulm, which when saturated with moisture and without sufficient space for air and sun to penetrate and dry it falls a prey to disease and the crop is worthless. With care in planting the opposite result would probably have been obtained.

The following are safe distances to plant: Early varieties—1 foot from set to set, 18 inches to 2 feet between the rows; second earlies and small top varieties—12 inches to 16 inches from set to set, 2 feet to 2½ feet between the rows; main crop—15 inches to 18 inches from set to set, 3 feet to 4 feet between the rows.

TIME OF PLANTING.

This depends in a great measure on the locality and season. If a warm sheltered south border with light good soil is available a late February planting of a good early variety would probably have good results. But for all ordinary purposes, and especially if the soil is of a cold nature and exposed, March and April are the most suitable months, and even May is not too late. The advantages of early planting are always counter-balanced by the risk of late frosts and inclement weather, and cannot be generally recommended.

CULTIVATION.

If good results are desired this must be carefully attended to. As soon as the growth shows above ground lightly fork or hoe carefully between the rows, thus keeping down weeds and making the soil more suitable for earthing up. Should frost threaten have litter handy, or even Pea sticks, which can be laid along the rows for protection and easily removed when not required. Careful attention must be given to earthing up as growth progresses, and when it is apparent that the haulms will be bruised by further working among them the final earthing should be given, taking care to draw the soil well up around the stems and not to leave a hollow for the reception of moisture around them.

DISEASE.

The old saying, "Prevention is better than cure," is very applicable to Potato culture, and those who wish to raise a crop of good, clean, sound tubers, free from disease, should spray their crop occasionally during the growing period with "Vermorite" or some other good preparation of Bordeaux mixture. The result will more than repay for the trouble taken. The first spraying should be performed at the end of June or early in July. Earthing up will prevent spores of the Potato disease being washed from the haulm to the tubers in the event of the former being attacked. The list of the best varieties will be given next week.

GEORGE COOPER
Beauvoir, St. Saviours, Jersey.



CYCLAMEN LOW'S SALMON KING (NATURAL SIZE). (See page 103).

THE GREENHOUSE.

SCENTED-LEAVED PELARGONIUMS.

IN the history of gardening there was a time when the scented-leaved Pelargoniums were more extensively cultivated than they are at the present day. The passion for novelties and the enormous number of plants now at the command of the gardener probably accounts for the change in taste, but, where possible, a selection of the Cape species should certainly be cultivated, for though the flowers are small they are often beautifully and delicately marked, and the fragrant foliage possessed by many is compensation for lack of more showy qualities.

One frequently sees scented-leaved "Geraniums," as they are popularly called, in cottage windows, turning their leaves and flowers towards the light, but in more pretentious places the showy fancy, zonal and Ivy-leaved varieties have displaced them. Exception, however, must be made in the case of Gunnersbury House, where there are some remarkable specimens trained in the form of fans over trellis work, forming portable fragrant screens capable of being used in a variety of schemes of indoor and outdoor decoration. Our principal nurserymen also stock a collection of the best varieties, and from this fact it is safe to assume that there is still a demand for them.

Nearly all the species of Pelargonium, of which some 170 are known, are natives of the Cape of Good Hope, and were probably introduced to Europe by the early Dutch and English settlers during the end of the seventeenth and the beginning of the eighteenth century. As early as 1690 Pelargonium cucullatum, one of the parents of the florists' Pelargoniums, was known in England, and *P. zonale* and *P. inquinans*, the two original parents of the race of zonals, were introduced in the years 1710 and 1714 respectively. Linnæus knew about twenty-five species, which he described under the name Geranium. In his celebrated work "Geraniologia," published in Paris in 1787 to 1788, L'Héritier first applied the name of Pelargonium, and included Linnæus's species. Early in the nineteenth century they were much cultivated in England, and probably

reached the culminating point of their popularity on the appearance of Sweet's "Geraniaceæ," a handsome work in five volumes, containing 500 coloured plates of plants of the Geranium family. It was published in London during the years 1820-30.

Some species are worth growing as foliage plants alone for the sake of the form of the leaves, which is often as elegant and varied as are the fronds of some of the most beautiful Ferns. These, when well grown, make excellent subjects for table or window decoration, and harmonise in almost any group of flowering plants. A selection of the best varieties most suitable for cultivation as foliage plants is as follows:

P. crispum.—A slender, much branched species from South Africa, with small fan-shaped leaves crisped at the margins and arranged on the stems in two ranks; sweetly Citron scented. The purple flowers are produced in September in two-flowered to three-flowered clusters. The variety

majus has larger flowers, and *variegatum* has leaves beautifully blotched with white.

P. denticulatum.—A species with finely-cut leaves of medium size, very sweetly scented. The flowers are lilac or rosy purple, the upper petals being two-lobed. The variety *majus* is usually cultivated, and *odoratum* is more fragrant than the type.

P. filicifolium odoratum is probably a form of the preceding species with finely divided leaves, suggesting, as its name implies, the fronds of a Fern. It is a very fragrant variety.

P. Radula.—The leaves of this species are cut into many lobes, which have revolute margins; they are rough to the touch on the upper surface, soft and velvety beneath. The flowers are small, pale purple with dark streaks. The plant has a balsamic fragrance, and is cultivated for its essential oil. The many varieties under this name are probably hybrids between *P. Radula* and *P. graveolens*, the latter having larger and less divided leaves.

Lady Mary.—Leaves of medium size with undulating notched margins; Citron scented.

Lady Plymouth.—A very attractive variety with deeply cut fragrant leaves, beautifully variegated with white on a green ground. It is one of the best of the cut-leaved varieties.

Little Gem.—Leaves deeply lobed with toothed margins; Peppermint scented. Flowers bright rose coloured.

Stag's Horn.—As indicated by its name, this variety has leaves beautifully cut and lobed in a variety of ways, with the margins finely toothed and crisped; a very attractive foliage plant.

R. SPOONER.

(To be continued.)

THE EDITOR'S TABLE.

MESSRS. BULL'S PRIMULAS.

We have received from Messrs. W. Bull and Sons, King's Road, Chelsea, London, S.W., some flowers of their Chinese Primulas which are very fine indeed. Varieties that specially appealed to us on account of their large size and exquisite colours were Duke of York, deep crimson; Giant White, large single white with yellow eye; Countess, delicate blush pink; Imperial Blue, beautiful lilac-blue; Pink Beauty, blush pink; Ruby Queen, rich crimson-magenta, small yellow eye; The Duchess, pure white with a zone of crimson surrounding a clear yellow eye; Vulcan, deep bright crimson, extra fine; and Blushing Beauty, a very large variety.



Denticulatum. *Little Gem* *Lady Mary.* *Crispum variegatum.*

TYPES OF SCENTED-LEAVED PELARGONIUMS.



Filicifolium odoratum. *Radula major.* *Lady Plymouth.* *Stag's Horn.* *Filicifolium odoratum.*

TYPES OF SCENTED-LEAVED PELARGONIUMS.

COLOURED PLATE. TREES AND SHRUBS.

PLATE 1344.

EXTRA FRILLED SINGLE BEGONIAS.

THE advent of this charming break in the single Begonia marks an epoch in the advancement of this useful family similar to that obtained by the raisers of the fimbriated Primulas, and will, when known, find as many admirers.

There are many people who consider the smooth-flowered single Begonia to be a comparatively stiff and gross-growing plant, and not without some reason, but the frilled varieties when well grown possess a charm and beauty that can in no sense be termed stiff, and as the foliage is much smaller than in the ordinary singles, the plants being also much more branching in habit, they are graceful in appearance and of great utility for decorative work in the conservatory, while for bedding they will be found quite equal, if not superior, to the ordinary single Begonias.

Up to the present the finest frilling is to be found in the salmon and pink shades of colour, but doubtless in the near future the other colours will be brought to the same level of quality. This section also produces shades and combinations of colours that are not found in other Begonias; the lovely salmons and pinks, combined with yellow, buff, or orange, can only be compared to the shades to be found in a glorious sunset. The flowers figured in the coloured plate were from plants raised from seed by Messrs. Blackmore and Langdon, the well-known Begonia experts of Twer-ton-on-Avon, Bath, in 1906, and these plants flowered profusely during the whole summer of 1907, some of them lasting well for four months. They are quite easily raised, and good plants can be obtained from seed in six months from the time of sowing. Seedlings, like all Begonias, are variable in character, but this extra frilled strain will be found a great advance on any previously offered of this type.

NEW PLANT.

CYCLAMEN LOW'S SALMON KING.

THIS is certainly one of the most delightful of the deep salmon rose shades of colour that we have seen in this popular group of winter-flowering plants, and as such it merits the attention of all gardeners and amateurs. The very high percentage of 95 per cent. to 97 per cent. of the seedlings, we are informed, come quite true to colour, the latter being especially valuable when seen under artificial light. The individual blossoms are large, and borne upon strong stems 9 inches or so above the ample marbled leafage, which forms a perfect setting to the flowers. Shown before the Royal Horticultural Society by Messrs. Hugh Low and Co., Enfield, on February 11, Award of merit for the strain.

THE TWELVE BEST WALL PLANTS.

FREQUENTLY the question arises as to what are the most suitable climbers for covering walls. In the first place, the word "climbers" is given a great deal of latitude by some people, for they refer to any plant growing against a wall as a climber. For the present I propose to discard the word, for some of the best plants mentioned below are not climbers at all, but quite strong bushy shrubs when allowed to grow naturally. The reason for placing such plants against a support is that a little extra protection is necessary for them than is obtainable in the open ground, or that they prove such excellent

with good soil. It is not advisable to procure large plants to begin with, for small ones become established quicker, and eventually outgrow older specimens.

AFTER TREATMENT.

Until the available space is covered it will be necessary, in the case of plants that do not cling naturally to the wall, to go over them occasionally and nail up the leading branches, pruning away all those that are not required. When, however, all the space has been covered, the owner has to decide as to whether his plants are to be kept neatly cut back to the wall or whether they are to hang naturally. The latter way has much to commend it. On the other hand, they take up a lot of room grown in this manner, harbour dirt, attract sparrows, and are often damaged by wind.



A CREEPER-COVERED COTTAGE.

subjects for covering walls that it is out of the question to neglect them. In the selection of the best plants it is necessary to settle on the height of the wall to be dealt with, for if a wall is only 10 feet or 12 feet high the planter has a far wider range of subjects to deal with than if the wall is double that height. Consideration is also needed as to the particular part of the country in which the wall is situated, for if in the milder places, such as Devonshire and Cornwall, many plants may be grown which have to be included among the occupants of the warm greenhouse further north. With these objects in view I have based the following selection on the material required for a wall 20 feet or 25 feet high, situated in any but the coldest part of the country.

THE PLANTING OF WALL SHRUBS.

When about to plant shrubs at the base of a wall care should be taken to excavate holes at least 3 feet across and 2 feet deep, filling them

SELECTION OF SORTS.

Ivy.—Although Ivy is so common everywhere, it must be admitted that it is the most useful of all wall plants. As an evergreen it has the advantage of keeping an otherwise ugly object slightly throughout the year, while it grows rapidly, thrives in both town and country, and gives a good account of itself in positions where other plants would fail. It also gives little trouble when once established, except a good hard cutting back in April each year. In addition to the common Ivy and the stronger growing variety called canariensis, the following sorts are of use: Algeriensis, amurensis and dentata, notable for their very large leaves; digitata, Emerald Green, caenwoodiana, deltoidea, donerailensis, himalaica and nigra, with comparatively small leaves; marginata major, and Crippsii, with silver variegated leaves; and chrysophylla, chrysomela and palmata aurea, with golden variegated foliage. W. D.

(To be continued.)

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

HARDY FLOWER GARDEN.—When the weather is suitable and the soil fairly workable, I make a rule to plant perennials quite freely. The present is an excellent time for this work, such subjects as Pinks,

Delphiniums, Pansies, Sweet Williams and Canterbury Bells answering well from an early spring planting. Old and worn-out clumps of perennials should be lifted and divided; any of the outer pieces, if broken off with care, make useful plants in the flowering period. They should be planted firmly in deeply-dug soil. For immediate results I often make a planting of the free-flowering *Aubrietia*, *Arabis albida* (both single and double forms), alpine *Auriculas* and similar subjects in sunny positions. Rambler and other climbing Roses may still be planted, as may other climbers such as the Clematises, Passion Flowers, Hops, Ivies and Virginian Creeper. For covering up unsightly quarters and to climb over arbours, trellises and stumps of old trees, these climbing plants are most suitable.

Chrysanthemums.—By the aid of a cold frame I raise a nice batch of young plants from cuttings inserted at this period. The cuttings are made about 3 inches long, and are inserted round the edge of pots of any size available; when space is limited I prefer to use shallow boxes. Light, sandy soil will answer the purpose of propagation very well. Always press the soil firmly at the base of each cutting and water in after the box or pot is full, using a fine-rosed can. Place in the cold frame forthwith, and, if possible, make up a bed of leaves beforehand. I find there is just a little bottom-heat gained in this way, and, provided the frame is matted up when frosts prevail, root-formation will be speedy at this season.

The Vegetable Garden.—During the month of March my time is much occupied with preparing the ground for planting and sowing. My second early Potatoes are now planted to maintain the supply of this vegetable when the first becomes exhausted. In spare corners of the garden I usually make a sowing of herbs at this season. Peas, Broad Beans and stump-rooted Carrots do exceedingly well when sown at the present time, often gaining on those sown earlier. Parsnips should be sown in ground that has been deeply dug and well broken up. Sow the seed in drills 1 inch deep and the drills 15 inches asunder.

Frames.—The frames are invaluable at this period. For raising seedlings of all kinds, and for hardening off tender subjects that have been raised in the greenhouse or hot-bed, the cold frame is indispensable. Lilies that have to be potted up should be dealt with



1.—AN OLD PLANT AFTER BEING STORED FOR THE WINTER.

without further delay; it is already quite late enough to do this work. The satisfactory condition of the occupants of the cold frame may be promoted by carefully ventilating the same on mild days. Avoid draughts at all times. Hardy border *Chrysanthemums*, Pansies and Violas, and many other such plants I made a rule to lift and break up into numerous pieces at this season; individual pieces of each kind are then dibbled into some light sandy soil, and in such circumstances they soon make beautiful plants for summer and autumn flowering.

The Fruit Garden.—Even at this period old Filbert trees that are overgrown may be pruned, cutting away the old branches. Raspberries may still be planted. Shorten the long, thick roots, retaining those of a fibrous nature. The canes should be cut down to within 1 foot of the ground; they then break away strongly and do

well the next year. I find it a good plan to give the roots a mulching of manure by spreading it round about the base of the plants. Complete the pruning and nailing of Apricots and Peaches on walls. Cut out dead wood and weak growths; cut others back to spurs. D. B.

INCREASING DAHLIAS.

THERE are several methods of increasing Dahlias from stocks that are already in our possession. We have to assume that the old roots that were lifted last autumn have been stored in some dry, cool, dark quarters during the past winter, and are now quite dormant. See that the label of each tuber is securely tied to a portion of the roots before placing them together in the basket or box for removal to the propagating quarters, and in this way avoid what is sometimes considerable inconvenience and disappointment when the labels are missing. The most popular and also the most satisfactory way of increasing stocks is that of propagation by cuttings. Provided the grower can command quarters where bottom-heat can be obtained or where genial quarters in a heated glass structure are available, no difficulty whatever will be experienced in procuring cuttings and rooting them quite easily. The present is an ideal period to commence operations.

Treatment of the Old Tubers.—These should be embedded in some light and sandy soil in boxes, pots or any similar receptacle, and stood on the greenhouse or conservatory bench for the fresh young growths to develop. Make the soil just moist to encourage the tubers to grow, and if the receptacle containing them can be arranged near to the hot-water pipes so much the better. A better plan, however, is that of making up a bed for the roots on the side benches of the greenhouse, where a gentle bottom-heat can be obtained from the hot-water pipes immediately underneath them. The old roots as represented by Fig. 1 should be arranged in regular order

from the back to the front of the greenhouse bench. Should the side benches be made of wood, cover these with slates, boards or anything answering the same purpose. Subsequently place a layer of light and sandy soil over the slates, &c., and proceed to arrange the tubers in the manner above suggested. The tubers will be found to vary considerably in their character, but the one illustrated here is a fair representative of the majority. As soon as the collection as a whole is arranged in position, fill in the spaces between them with some light soil, and keep the same moist. Water from a fine-rosed can is the better method of making the soil just nicely moist. If the temperature can be maintained at from 55° to 65°, growths of a very satisfactory kind



2.—METHOD OF PLACING THE OLD TUBERS ON A GREENHOUSE STAGE.

will quickly evolve, and the quarters allocated to the old plants (roots) will be represented as seen in Fig. 2.

Inserting the Cuttings.—Have the necessary pots and soil ready for the insertion of the cuttings, so that as soon as they are ready to be detached they may be inserted forthwith. Fig. 3 represents an old tuber lifted from the bed and depicting the roots recently emitted and the strong and sturdy shoots that have developed. Generally speaking, cuttings should be from 3 inches to 4 inches in length, although they are

covered with sheets of glass is an admirable arrangement for the purpose, or a bell-glass may be used by those who need only a few plants of each sort. A high temperature is not really necessary, except for hurrying on an early batch of plants. Cuttings rooted in cooler conditions are more likely to give good results, especially where there is a deal of uncertainty how to control the plants subsequently. Before the planting out in June the young plants must be repotted into 5-inch pots, otherwise the roots will get pot-bound and the plants suffer in consequence.

HOW TO GROW SNAPDRAGONS.

NOTWITHSTANDING the fact that Antirrhinums, or Snapdragons as they are popularly called, are hardy perennials, there is a rapidly growing tendency to treat them as annuals, a system that is quite satisfactory where flowers for late summer and autumn are required. The many beautiful varieties now on the market render them one of the most useful subjects that we have for bed or border work, while their continual flowering propensity makes them most valuable where a show of flowers is needed over a lengthened period. Roughly, the varieties may be divided into two sections, viz., the Tom Thumb or dwarf sorts and the tall-growing varieties. The culture of both types is the same.

To secure good plants from seeds to flower this summer and autumn, a sowing must be made under glass at once, using well-drained pots, pans or boxes for the purpose. A good soil for sowing the seeds in is one composed of two parts loam, one part sand, and one part flaky leaf-soil or well-decayed manure. This must be sifted through a quarter of an inch mesh sieve, taking care of the rough portions as well as the fine. After placing the crocks in for drainage, half fill the pots or pans with the rough soil, and then fill to the brims with the finer. When pressed moderately firm with the bottom of a clean pot the soil should be about half an inch below the brim of the pot or pan. Scatter the seeds thinly on the surface, give a light sprinkling of sand, and lightly press the whole with the bottom of a pot. Give a watering with a fine rosed can. cover with a pane of glass or a sheet of brown paper, and stand in a warm greenhouse or on a hot-bed in a frame.

The soil in the pots or boxes must not be allowed to become dry, but any watering that is needed must be carefully done so as not to wash the seeds out of the soil. As soon as the seedlings appear, remove the coverings of glass or paper and stand the pots near



4.—CUTTING PREPARED FOR INSERTION.

the glass, a sturdy growth from the first being imperative. When an inch high the seedlings must be pricked off into other pans or boxes, using the same soil as advised for the seedlings, but leaving the leaf-soil or decayed manure in a rougher or more flaky condition. Place each seedling 3 inches from its neighbour. As soon as the young plants are thoroughly established in these receptacles, a hardening off process must be commenced, gradually inuring them to cooler conditions, so that they are ready for planting in the open by the third week in May.

To obtain the best results from these plants very rich soil is not advisable, the tendency in such being to make gross growth at the expense of flowers. Soil that was well manured for a crop last year is best, and if a quantity of old mortar can be incorporated with it so much the better. The Snapdragon, however, is not at all fastidious as to soil. One foot apart is a good distance to plant, taking care to retain the ball of soil and roots as intact as possible. The Tom Thumb varieties, owing to their compact habit, are not so extensively grown now as they were some years ago, the more graceful taller varieties being most favoured.

Seeds may be sown in drills in the open during June and July for flowering the following summer, thinning the seedlings early and transferring them to their permanent quarters in the open. Beds of one colour in each are very effective, hence it may be well to name a few of the best varieties. Dobbie's Crimson King is one of the best. As its name implies, the flowers are of a brilliant velvety crimson, the leaves being deep green on the upper surfaces and dull crimson beneath. White Queen, a pure white variety, and Yellow Queen, a clear yellow, are two other splendid varieties supplied by Messrs. Dobbie and Co. The habit of the three named above is very similar. Cottage Maid is a new variety of high merit. The colour of the flowers is a mixture of pale rose and white. It is of a rather strong habit, and the flowers are of very large size. This variety was universally admired when shown before the Royal Horticultural Society by Messrs. Dobbie a year or two ago. Sutton's Golden Chamois and Carmine Pink are also excellent varieties in the tall section, the colours being explained by their names.

H.



3.—PLANT LIFTED FROM BED ON GREENHOUSE STAGE.

often much longer. We prefer the shorter cuttings, as it is then possible to detach with each individual cutting a small piece of the tuber, which will help to support it until it is rooted. Those who wish to raise a goodly number of plants will not be disposed to cut back the shoots so hard. Fig. 4 represents an ideal cutting of the kind just referred to. It will be observed that the lower leaves are removed and the stem of the cutting cut through immediately below a joint; it is then ready for insertion. We prefer to insert the cuttings singly in what are known as thumb pots, although, where accommodation is limited, a number of cuttings may be inserted round the inside edge of a 3-inch pot. The soil for the cuttings should be made up of two parts good fibrous loam and one part of leaf-mould, or, failing the latter, Coconut fibre refuse and plenty of coarse silver sand. A bottom-heat of from 65° to 70° will enable the grower to ensure root-formation within a period of about ten days. Fig. 5 represents a cutting inserted in a 2½-inch pot. Keep the cuttings syringed, using water that is slightly tepid. Constant syringing is necessary in order to maintain moist conditions during root-formation. Our chief concern from now onwards is to keep the young plants from getting drawn. They must be gradually inured to hardier conditions by carefully ventilating the glass structure, so that by the middle of May the plants may be placed in cold frames. Again reverting to the propagating period, any rough propagating frame may be made up on the greenhouse bench. A box



5.—CUTTING INSERTED IN A "THUMB" POT.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Moss on a lawn (*Carnation*).—You are acting correctly in raking out the moss, but we do not like the idea of covering the grass afterwards with sand. A much better plan would be to procure some finely-sifted soil and give the lawn a quarter-inch thick dressing with this, supplementing it with a mixture of superphosphate of lime, 6lb.; Peruvian guano, 3lb.; and bone-dust, 3lb., this quantity being evenly spread over five square rods or poles. The work must be done at once.

Stocks and Phlox Drummondii (*D. C.*).—As a general rule the middle of March is quite early enough to sow Stocks; but you probably have some valid reason for sowing at the middle of February. The Phlox should be sown on an open border in the first week of May, a site facing east being preferable. Thin and transplant before crowding takes place, pinch out the points when 3 inches high to make the plants bushy, and again transplant to 6 inches apart. If for any reason the Stocks do not thickly fill the beds you could plant the Phlox among them as soon as the Stocks are in flower. Then, when the Stocks have finished flowering, place the hand flat on the soil with the stem of a Stock between the fingers and gently but firmly uproot it. Stocks make but few roots, so that if the removal is carefully done the Phlox need be scarcely disturbed. Water them well afterwards with a rosed can. If this plan does not commend itself to you give the Phlox in the nursery bed a thorough soaking of water one night, and the next morning pull up the Stocks and level the beds. When the sun has left the beds in the evening, dig up the Phlox with a trowel, lay them on a board for carrying to the beds, and then plant them firmly, with as much soil adhering to their roots as possible. Well water them in and they should go on growing and flowering without a check. If the weather is showery such care is not required, but it should be remembered that the Phlox will then be large plants, and that the sun has great power in July. You may peg down the growths or not at discretion. The plants should flower until frosts stop them. With regard to the ditch mould, if your soil is heavy use half mould and half garden soil; if your soil is light use one-third of ditch mould. Too much ditch mould would grow leaves instead of flowers.

Treatment of "cankered" Carnations (*E. E. F.*).—Many theories have been put forward to account for border Carnations going off as those sent, but no satisfactory solution seems to have been arrived at. The majority of cultivators put it down to the effects of frost, either acting on the pith of the plant or just where the stem enters its soil (the vulnerable point). One very important matter is in planting to see that the stem is made secure in the soil and does not sway about with the wind. To save the layers plant them in a spot that has not previously been occupied by Carnations.

Burning Pampas Grass (*E. C. Crichton*).—We cannot recommend the burning of the old or withered tufts of leaves of these plants, and the practice might easily be carried too far. The firing of the tufts merely does away with the rubbish and dead material, even when judiciously applied, and there is the danger of destroying the heart growths of the plant. At the best such drastic measures afford little or no assistance in the direction of

resuscitation, which is what is most needed at such a time. The probabilities are that the plant has quite exhausted the soil of the position it now occupies, and could be best restored to vigour and health by lifting, dividing and replanting in a well-prepared position next April. If this were done the clearing out of the tuft would be a simple matter. You do not say whether the plant continues to flower or not, but if not, there is need for attention, as above suggested.

TREES AND SHRUBS.

Distance apart to plant *Pyrus floribunda* (*G. C. C.*).—When ten or twelve years old the plants will cover a diameter of 15 feet, so that due allowance must be given at planting for ultimate development. Close planting might be practised if provision is made for removing alternate plants in a few years' time; still, much the best method is to plant 18 feet apart and carpet the ground with varieties of *Erica vagans*, thereby obtaining a bright effect in autumn when the *Pyrus*-flowering season is past. Although most frequently met as a small standard with a large mop head and grafted upon another stock, there are many positions, such as banks and undulating ground, where dwarf bushes planted 6 feet to 8 feet apart would soon become an effective group, while upon large rock gardens there are usually positions in which its utility can be clearly demonstrated.

Where to procure *Azalea* peat (*M. L. W.*). The best *Azalea* peat that we know of can be obtained from Messrs. Epps and Co., nursermen, Ringwood, Hants. The firm supply several kinds of peat. It would be advisable to obtain samples, then you could select the most likely. We are afraid that you will not find any peat very cheap by the time you get it, as cost of transit adds considerably to cost of material.

Evergreen climbers for north-east end of cottage (*E. G.*).—As you desire as far as possible to avoid nalling, there is nothing so good as *Ivies* for the purpose named. You may plant either one variety or a mixture. We can recommend *Emerald Green*, with rich green leaves; *angularis aurea*, whose leaves are mottled with gold; and *Cavendishii*, in which they are margined with white. With these three a pretty combination might be formed.

ROSE GARDEN.

Pruning newly-planted hedge of *Roses* (*G. L. K.*).—As you have only recently planted the *Roses* it will be best to defer any pruning of the same till the end of March. As the desire is doubtless to have the plants reach the 5 feet height as quickly as possible, we advise you to retain the hardest growths almost their entire length, unless they exceed the height; but all soft, pithy, unripe shoots must be cut back to within a few inches of the base. The next and succeeding years you should have one or two of the oldest growths of each plant cut down to the ground, which will thus keep the base of the hedge from becoming bare. The *wichuraiana* *Roses*, producing as they do such long trails of growth, sometimes 12 feet in a season, may be utilised to droop over in a pendulous fashion, and then when they have blossomed cut them away. These would be succeeded another year by the young growths which are constantly appearing. If it be practicable to allow a growth or two to trail along the ground or over some rockwork close by, this will be far better than crowding the growths in the hedge.

Planting *Roses* on a fence (*Dragoon*).—When we referred to the "west side" we meant the western aspect of the fence. This aspect would be most suitable for both *Gustave Regis* and *White Maman Cochet*. Therefore, in the rearrangement we advise you to plant upon the eastern aspect of the fence *Grüss* an *Teplitz*, *Bouquet d'Or*, *Cheshunt Hybrid* and *Mme. Alfred Carrière*. On the western aspect *White Maman Cochet*, *William Allen Richardson*, *Climbing Mrs. W. J. Grant* and *Gustave Regis*; in both aspects plant in the order as given.

Pruning various *Roses* (*Mrs. S.*).—The *Briar* *Roses*, such as *Harriotti* and the *Penzance* hybrids, need only to have their extreme ends just tipped this season. After they become established they should have some of the old wood removed each year immediately after flowering and all young growths retained their full length. The plant of *Conrad F. Meyer* planted last November should be pruned back to within 2 feet of the ground, and *Gottfried Keller* to about 18 inches. Another season

both of these varieties should be very sparingly pruned, treating them rather as free bushes or pillar *Roses*. We do not recommend the application of Tonk's manure to *Roses* planted in November. Such plants would be benefited by weak applications of liquid manure about once a week during May and June. A very safe liquid manure is made from cow or sheep manure and soot.

Trailing *Roses* for tubs (*Ignoramus*).—The best *Roses* for your purpose are such sorts as have flexible growths. These could be selected mainly from the *wichuraiana* group. You could plant, say, two plants in each tub, and as they would possess growths some 3 feet to 5 feet in length, they could be brought over the sides of the tubs and partly up the bank this season. In course of time these plants will produce several growths from their base, which could be utilised to droop over the front part of the tub. Such growths could either be curtailed when they have reached any desired limit, or allowed to run upon the ground. Early-flowering sorts are: *Jersey Beauty*, *Gardenia*, *Alberic Barbier*, *Griess* an *Zabern*, *Ruby Queen* and *Aglaia*. Late-flowering: *Dorothy Perkins*, *Hiawatha*, *Maudslayi Triumph*, *René André*, *wichuraiana* (type), *François Foucard*, *Paul Transon*, *Bennet's Seedling* and *Félicité Perpétue*. Some of these flower early and late. You could plant alternately the early and late-flowering sorts, so as to prolong the blooming period.

THE GREENHOUSE.

Information about *Asparagus Sprengeri* (*Wexford*).—This is an exceedingly difficult matter to advise on without seeing the plants, for some plants of *Asparagus Sprengeri* form several crowns and readily lend themselves to division, while others produce all, or nearly all, of their shoots from one central crown. If division can be carried out, we certainly advise you to do so. Better wait till the middle of March, then turn out of the baskets and cut off any old fronds that are no longer fresh. Next, with a pointed stick, untwine the roots as far as possible without injuring them; then, either by using a pail of water or by holding under a tap, wash all the soil away from the roots. This will enable you to see exactly where the division can be performed without any risk. We presume you intend to again furnish your baskets from the divided plants, in which case the best rooted and most shapely ones should be chosen for the purpose; the others, if you wish it, may be potted. This division will necessarily inflict a considerable check on the plants; therefore even the baskets must not be hung up until the plants become established, as in a hanging position they are naturally more exposed than if they were standing on a snug, shaded portion of the stage. A month should suffice for them to become sufficiently established to allow of their being hung up again. After division, frequent damping with the syringe will assist greatly in keeping the shoots fresh till the roots are again active.

Liliums to flower in August (*Veronica*).—In order to have *Lilium auratum* in flower by the middle of August the bulbs should be obtained and potted without delay. Care should be taken to have bulbs that are in a good plump state, as if they have been exposed and dried satisfactory results cannot be expected from them. In the first place, if you desire one plant to be at its best on August 15 it will be necessary to pot half-a-dozen bulbs, for Nature draws no hard and fast line, and it is quite impossible for anyone, even with the experience of a lifetime, to induce one to flower on a specified day. The weather plays a very important part in the matter, and no one can foresee the kind of weather we shall experience between this time and the middle of August. A suitable sized pot for a single bulb of *Lilium auratum* is one 6 inches to 7 inches in diameter. This must be clean and effectually drained with a few pieces of broken crocks in the bottom. A mixture of two parts loam to one part peat and about half a part of sand forms a suitable compost. In this the bulb must be potted at such a depth that there is about 2 inches of soil above the topmost portion of the bulb. Then place in a good light position in the greenhouse, giving enough water to keep the soil moderately moist, but care must be taken not to overwater, especially till growth recommences. As the plants develop a sharp look out must be kept that they



EXTRA FRILLED
SINGLE BEGONIAS
(BLACKMORE & LANGDON).



THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

WASPS AND DESTRUCTION OF QUEEN WASPS.

AMONG the most familiar insects in our gardens we may fairly place the wasps, though in many ways they may be considered an unmitigated nuisance, particularly when they attack ripe fruit or enter our dwelling-houses, which they are very fond of doing at meal times, when they are certainly unwelcome guests. Yet they have their good points, for, unlike bees, which only collect honey and pollen, with which they form the bee bread on which their young are fed, they feed their grubs with a considerable amount of animal food, consisting of grubs, small caterpillars, flies, aphides and other insects. They are most hardworking insects. Lord Avebury, when he was conducting some experiments in reference to their intelligence, found that they worked from early morning until dusk. One morning he found a wasp which he had purposely left in his study so that it could have access to it at work at a few minutes after four, and it made 116 visits to the honey during the day, the last being made at 7.46 p.m. In the course of these journeys rather more than sixty-four grains weight of honey were carried to the nest.

Our British wasps, six in number, belong to the genus *Vespa*, which also includes the hornet (*V. crabro*). Two species, *V. vulgaris* and *V. germanica*, are equally common and often resemble one another so closely that careful examination is required to distinguish to which species a specimen may belong. *V. norvegica*, a not uncommon species, often builds its nest in bushes. The hornet may easily be distinguished from any of the wasps, by its much larger size and by its browner colour. But queen wasps, which are much larger than the males, or workers, are often mistaken for them. When cold weather sets in in the autumn and food is becoming scarce the wasps drag the remaining grubs out of their cells and kill them. The young queens leave the nest and search for convenient winter quarters, and the males and workers gradually die off as food fails and the cold increases. The queens often make their way under the tiles or slates of a roof and remain under shelter during the winter.

One day in the autumn some years ago I noticed a number of wasps flying and crawling about the tiled roof of a house, evidently searching for some aperture through which they could creep inside. And on one occasion, going up into the roof of a house in which I was living, I found several queen wasps on each window

(there was a window in each gable) trying to make their way to the open air; I need hardly say that they were not successful in their laudable efforts. These wasps had evidently made their way into the roof, and when aroused by the warmth of a fine spring day naturally flew to the light of the windows and were balked by the glass in their endeavour to get out. The females which survive the winter and are able to leave their winter quarters at once begin to search for suitable positions in which to make their nests, more often than not choosing some hole in a bank in which to commence operations. Having made a few cells the queen protects them with an umbrella-like covering, which forms the top of the nest. In each cell she lays an egg, which in due course hatches, and she then has to feed the grubs, as well as continue to build the nest. The grubs soon undergo their transformations, and the young wasps at once begin to assist their mother in feeding the grubs and constructing the nest, which soon grows apace as fresh wasps are reared. The material of which the nest is composed is fibres of wood, which the wasps gnaw off old palings, posts, or any available woodwork. These fibres, mixed with a secretion from the mouths of the insects, are formed into a grey paper-like substance; instances are known of wasps having used paper in the construction of their nests.

A large nest when completed will measure from 16 inches to 18 inches in height and from 12 inches to 13 inches in diameter; it is usually rounded or oval in form, the outer walls are about half an inch thick, composed of several layers of the paper-like material, which are so arranged that there are air spaces between them. This no doubt renders the nest both warmer and drier than if the walls were solid. The rows of cells or combs, unlike those of bees which are vertical with the cells horizontal, are horizontal with single rows of vertical cells, the latter having their mouths downwards. There may be from ten to fifteen tiers of these cells, which are about half an inch apart and attached to one another by small pillars, which give strength and solidity to the whole structure. The number of cells in a nest have been computed by various persons at from 8,000 to 16,000, but probably the higher figure is far in excess of the number that any nest ever contained. It is said that each cell is used three times, and that towards the end of the season the nest may contain from 10,000 to 12,000 inhabitants. Until the beginning of September all the inmates have been workers (with the exception of the queen), then the lower tiers of cells are filled with grubs, which eventually become male or female wasps. It might be thought that the cells being vertical

with their openings downwards they would be useless for rearing the grubs in, as the latter would naturally fall out, but this is not the case. The female wasp when she lays an egg attaches it to the top of the cell by means of some viscid fluid and the young grub remains attached by the same means. As it grows, the front joints of its body become sufficiently enlarged to prevent it from falling out. At first the grubs are fed with the juices of fruits or the nectar of flowers, and afterwards on insects. The transformations of wasps occupy about a month, the eggs hatch in about a week, the grubs become chrysalides in a fortnight, and the wasps emerge in the course of another week. Wasps are too well known to render it necessary for me to describe them, but I may call attention to the fact that they have really four wings, though they appear to have only two, the lower wings have a series of fine hooks on their upper edge by which they can be attached to the others; the upper pair are folded lengthwise when not in use.

The sting of these insects is really the same instrument with which the females deposit their eggs, therefore the male wasps have no sting, but the workers have, as is too well known. The workers are really undeveloped females, which accounts for their stings.

THE BEST WAY OF DESTROYING WASPS

is no doubt killing the queens in the spring, but it is not by any means certain that they will be met with; however, offering a reward for everyone caught is often very useful, and a few shillings expended in this way is money well spent. Of course, the sooner a nest is destroyed after it is found the better; it is a good way if the nest is in a position which renders it difficult to find in the dark to place a mark which can be easily recognised at the entrance to the nest while there is still light. There are many means of killing the wasps in the nest. Rags dipped in melted brimstone, or tar pushed well into the mouth of the nest and then lighted, a squib, formed of a strong brown paper cover and filled with equal parts of brimstone, gunpowder, charcoal and saltpetre, may be pushed well into the nest. As soon as it is well alight place a turf over the entrance to the nest to keep in the fumes. Cotton wool dipped into a strong solution of cyanide of potassium (just enough boiling water should be used to dissolve the cyanide), pushed well into the nest, or 2oz. of the cyanide dissolved in a pint of water, poured into the nest are very effective. It is better to place a turf or some earth over the nest to prevent the fumes escaping. When anyone has the misfortune to be stung by a wasp the best thing that they can do, if they can reach the part, is to at once suck it well, and, if possible, make the place bleed with a view of getting rid of the poison before it has mixed with the blood. Then rub in hartshorn or ammonia in some form, washing soda or sweet oil, and keep as quiet and cool as possible so as not to increase the circulation of the blood.

In a letter sent to me by the Editor the correspondent asks "the best way to get rid of queen wasps when they first come out from their winter hiding-places in April? We are anxious to kill them before nesting time." The answer to this is: "There is no special means of killing queen wasps; but if found flying about, a syringeful of soapy water, properly applied, would no doubt bring them down and render them helpless for a few moments." G. S. S.

THE EDITOR'S TABLE.

SPLENDID APPLES FROM LINCOLNSHIRE.

Mr. Thomas Smith of Walmsgate Gardens, Louth, Lincs. sends beautiful specimens of Apples, which fully bear out what he says about them in the following letter: "In view of the frequent reference made in the pages of THE GARDEN about the comparative merits of Apples

suitable for amateurs who have only limited ground, I have sent you a small sample of five varieties of Apples generally classed as culinary sorts, although some of them are quite acceptable upon the table at this season. Considered only as cooking Apples, their long season, combined with the useful size to which the fruits attain, should, I think, give them a distinct preference in planting to those early season Apples which are only in use for a few weeks. Emperor Alexander, Bramley's Seedling and Newton Wonder are the produce of open ground trees; Lane's Prince Albert and Bismarck are from two year old pot trees. The two last-named varieties fruit in a younger state than the others; in fact, the propensity of Lane's Prince Albert to produce fruit-buds in a young state is its only demerit, and unless the fruit is rigidly thinned in its early years, a dwarf and stunted tree will generally result. All the fruits were gathered during late October, with the exception of Bramley's, which was picked in November."

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

March 9.—United Horticultural Benefit and Provident Society's Annual General Meeting, 8 p.m., Royal Horticultural Hall.

March 11.—East Anglian Horticultural Club Meeting.

Lent Roses.—That section of winter-blooming Hellebores generally known under this quaint designation are in large variety at Long Ditton, Messrs. Barr and Sons having secured a very representative collection. But the gems of the group are found in a selection of seedlings placed in the firm's hands for distribution by a well-known veteran amateur hardy plantsman of Devonshire, who has devoted his energies to the crossing and improvement of these Hellebores, and certainly the strain thus created may well be described as *H. orientalis grandiflorus*, so very fine are the flowers and so strong the general growth of the plants. While colouration is varied in the flowers, one of a charming rosy pink hue, the colours being shaded, forms a real gem, and is known as *rosea*. Without doubt all admirers of these exceptionally fine Lenten Roses will presently seek to secure plants and thus enrich their gardens with these novelties.—D.

Brighton and Sussex Horticultural Society.—This South of England society has this year, the seventeenth of its existence, arranged for three shows to be held respectively on April 7 and 8, August 18 and 19, and November 3 and 4. Jeremiah Colman, Esq., is the president, Mr. J. Thorpe, 53, Ship Street, Brighton, is secretary. The schedules include some very good classes, many of which are open, substantial prizes being offered in most cases. The committee is a strong one, and it is hoped that the shows this summer will be an advance even on the splendid exhibitions held last year. As usual, they are to be held in the Dome and Corn Exchange, Royal Pavilion, Brighton. All exhibitors of plants, flowers, fruits and vegetables would do well to secure copies of the schedules.

Preparing museum botanical specimens.—The *Kew Bulletin* for February contains some interesting information in an article by Mr. J. W. H. Trail on "Museum Preparations." Anyone that has attempted the preserving of botanical specimens in spirit will know how difficult it is to retain, in very many instances, the natural colour of the specimens being dealt with. This difficulty has been overcome by Mr. Trail by boiling the specimens in a solution of acetate of copper, washing the plants after boiling them and then placing them in the preservative. One or two minutes' boiling suffices for green seaweeds and submerged parts of vascular plants, but the leaves and young stems of most plants

need over five minutes' boiling, while those with thick cuticles may require from fifteen to twenty minutes. Plants thus boiled may also be pressed and dried between sheets of paper with good results. The colours of flowers and fruits are, however, variously affected by this process, the colours of some only being retained.

Croydon Horticultural Society.—The schedule of prizes offered for competition at the forty-first summer show, to be held near Haling Park, Brighton Road, Croydon, on Wednesday, July 18, is now ready, and a perusal of the classes is well worth while. There are many open classes for Roses, table decorations, collections of plants, cut flowers, fruits and vegetables, in all of which the prizes are of a substantial character. Amateurs and cottagers are also well provided for, and, of course, some classes are reserved for local residents. We are pleased to see this splendid provincial society making good headway, due, no doubt, to the energies of the secretary and committee. The secretary is Mr. A. C. Roffey, 55, Church Road, Croydon, to whom all enquiries should be addressed.

PRIZES FOR READERS. MARCH.

SCHOOL GARDENS.

A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF-A-GUINEA
are offered for the best essays on the above subject.

Competitors should describe briefly the laying out and size of the plots, crops to grow, tools required, and the best methods of teaching the scholars.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Tuesday, March 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Daffodils in pots.—Reading in THE GARDEN of February 22 about forced Daffodils quite out of character, if we take it for granted that this is correct where do our Roses, Carnations, Lily of the Valley, Solomon's Seal, Lilies and lots of other things come in? For my part I think the Daffodils grown in jam pots or vases surpass most things in spring. Perhaps February 11 is rather early, but from the end of February through March it is possible to get grand blooms of a lot of varieties quite up to those outside, and in some cases better, should the season be rough. I have grown such varieties as Mme. de Graaff, Glory of Leiden, Mme. Plomp, Victoria, Emperor, Golden Spur, Horsfieldii, Barri conspicuus, Frank Miles, Duchess of Westminster, Sir Watkin, Stella superba, and have had some really fine blooms three weeks to a month earlier than from the same varieties outside.—H. H.

Manuring and repotting Roses.

In recent issues two very important questions have been asked by "P.," who evidently wants to hear the experience of growers. This has induced me to answer these questions from my own experience and observation. I am convinced that very many do manure their Roses too much. It is not uncommon to see these with a thick coat of animal manure on their roots sufficient for two plants. This excludes the air from the soil and roots, charging the soil with stimulants far beyond the needs of the roots, thus causing it to become sour. Another point to remember is that it is the weak-growing varieties that suffer most. I am convinced that the major portion of weak-growing varieties are ruined by over-feeding, and if these were lifted and replanted in fresh, open, sweet soil this would give them a new life. I consider more evils attend the use of artificials than other kinds, especially in the hands of the inexperienced, although they are most useful when used in right proportions and at the proper time. On page 67 "P." asks if we repot our Roses too often. My experience induces me to say that in the majority of private gardens we do. During my experience (which extends over many years and many gardens) I have observed that those who only repot once in two or three years get the best results. When serving as a young man in large gardens I found those gardeners that treated their plants on the method advocated on page 67 always had good results. In one place in West Norfolk, where the soil was poor and good loam difficult to obtain, we used to repot only when the soil was packed with roots, and when these were disentangled giving larger pots.—J. C. F.

Black scab in Potatoes.—In THE GARDEN for February 15 there is a note on an article by Mr. E. Salmon, F.L.S., dealing with Potato disease fungus. Is it a fungus? I do not think it is, because it is in certain soils that Potatoes go this way. The cause of it is grit or sand in the soil. When the Potatoes are swelling the irritation of the soil causes warts, and a sure preventive is leaf-soil. Another thing that causes warts on Potatoes is fresh manure, this being put in with the Potatoes. Farmyard manure should never be put in the ground the same year as the Potatoes. It is better to use artificial manure, which will give far better results. I am in Perthshire and the garden where I am employed used to cause Potatoes to come warty, but when I plant my Potatoes with plenty of leaves round them they turn out free from warts. I hope you will bring this to the notice of Mr. Salmon.—JAMES T. M. ROBSON, *The Gardens, Kincardine Castle, Auchterarder.* [It is quite evident that our correspondent has not had any experience with the black scab or warty disease of Potatoes (*Chrysophlyctis endobiotica*) or he would not question its being a fungus. The disease or scabbing that he refers to is doubtless the old *Sorosporium scabies*, a totally different thing, but also a fungus. Many growers, however, believe that scabbing is caused by caustic or irritating substances in the soil, and that the fungus (*Sorosporium scabies*) is only a result of the scabbing. Grit or sand is present in variable quantities in all cultivated soil, and we have seen Potatoes lifted from very sandy soil that possessed very clear skins.—Ed.]

Introduction of the Malmaison Carnation.—Your correspondent "R. W." (page 87) must be somewhat wrong in his dates, for in the catalogue of Messrs. Downie Laird and Laing for the year 1874 plants of this Carnation are priced at 2s. 6d. each. It is also in Messrs. Henderson's catalogue for 1875. I have no older catalogues to refer to.—H. P.

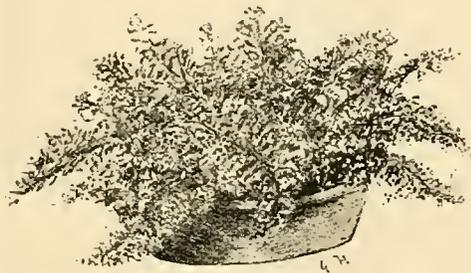
Book on grafting.—"Reader" will find "Grafting and Budding" (C. Baltet) catalogued by Morgan and Co., 8, St. Mary-at-Hill, E.C. He might get one at a railway bookstall, as I obtained one at such a place a few years ago.—J. B.

THE GREENHOUSE.

PRIMULA KEWENSIS.

AS a natural hybrid, of whose origin nothing is known save the abundant external evidence of the plant itself, this plant, which a few years ago appeared at Kew, is certainly among the most remarkable natural hybrids of the present day. It is obviously a natural hybrid between *Primula floribunda* and *P. verticillata*, and, as a matter of fact, appeared as a solitary example in a sowing of the seeds of the first-named species. The authorities at Kew were quick to note the great difference of growth, and kept a watch over the plant in question. The growth and leafage generally was that of a giant *P. floribunda*, the leaf blades alone being five or six times as large as the original. Later on, when the plant was showing for flower, the unmistakable evidences of hybridity became apparent, and the mealy leaf character of *P. verticillata* was noticed. Since that time this same characteristic has been amply evidenced in the hybrid, and later to a larger extent in some of its seedlings.

The plant itself has much improved under cultivation, and its whorls of yellow, fragrant blossoms often reach 18 inches or more in height. Quite as remarkable as the plant itself is the fact that prior to its appearance, and frequently since that time, efforts have been made to



A NEW FERN: NEPHROLEPIS EXALTATA AMERPOHLLII.
(A description of this plant appeared on page 72.)

reproduce it, the former at least without any good result. More than once has the present writer attempted to cross the species named, and in making the cross each way obtained nothing more than what existed before. Not a few others (the late Mr. Burbidge to my personal knowledge among them) did the same with no better results. And there is this remarkable fact remaining, that whether by wind, insect or other agency, but one solitary ovule, in an ovary containing many of the embryo seeds or ovules, was influenced apparently to produce the original plant, a sort of indication, one may presume, that but one tiny grain of pollen, or at least one pollen tube, if that be a correct description, was effectively transmitted to the ovary. Obviously, "Great things from small beginnings spring," and in this remarkable plant we have now a winter-flowering subject of great merit and attractiveness.

I believe that Messrs. Veitch, who put into commerce the original plant, have raised a variety with a more pronounced farinose leaf character, which should form an interesting companion. Seeds sown now make very fine examples for flowering next autumn and winter.

E. JENKINS.

LIBONIA (JACOBINIA) FLORIBUNDA.

This useful winter-flowering plant is not met with in gardens so often as it should be. The flowers, which are covered with a fine pubescence, are produced on short axillary racemes and are tubular, the tube being scarlet and the mouth

and terminal lobes yellow. While the flowers are not large, their profuseness and bright colours make a very effective display, especially as well-grown plants are of neat, bushy habit, and almost as leafy as the common Box.

This plant can be increased with the greatest ease by means of cuttings put in about February or early March. The young plants should be grown on in a moist, warm greenhouse under conditions similar to those given to *Epacris*, &c., after they are cut back in spring, potting them on as they require it and frequently pinching out the tips of the shoots. During the hot summer months they can be stood in a cool frame, and care should be taken that they do not suffer from want of water, either at the roots or overhead. They are free rooting plants, and a rich soil composed of turfy loam, silver sand and cow manure will suit them, with occasional supplies of manure water when the pots are full of roots. In October they should be placed in an intermediate temperature, which is necessary for them throughout the flowering season. T. B. FIELD.

A NEGLECTED GREENHOUSE FLOWER.

(THE EPACRIS.)

UNFORTUNATELY, the general cultivation of this and various other groups of what were once termed "hard-wooded greenhouse plants," has fallen into abeyance since the introduction of many of the popular greenhouse plants of to-day, the improvement of many of the old existing things, such as *Cinerarias*, *Carnations*, &c., and the comparative cheapness and convenience of heating arrangements for glass structures of the present day compared with those of fifty years ago. For many reasons this is to be deplored, for our forefathers loved the *Epacris*s, *Acacias*, *Apehexis*s, *Phenocomas*, *Grevilleas*, *Boronias*, *Ericas* and so on, the successful cultivation of which was considered to be the best test of a gardener's skill. These are now rarely met with, and too often, instead of being grown year after year in the same garden, they are purchased annually from one or other of the few firms of nurseries who still make a speciality of these plants.

The *Epacris*s are Australian shrubs and essentially peat-loving plants. They may, of course, be increased by seeds, except in the case of garden varieties; but this is rarely attempted, growers finding that more favourable results are obtained by means of cuttings of young shoots, which may either be inserted in April or August; for many reasons the former month is preferable. They are inserted in a soil of fine peat and silver sand, the component parts being almost in equal proportions. Pots 5 inches or 6 inches across may be used, and these should be three parts filled with clean crocks. On this a handful of rough peat may be placed and the remainder filled to within a third of an inch of the top with compost; on the compost a thin layer of sand may be placed after the whole has been made thoroughly firm. The cuttings, which may be from 1 inch to 1½ inches long, must be inserted firmly, about one-third of their depth being placed in the soil. Water with a fine rosed can, plunge in a propagating case in gentle bottom-heat, cover each pot with a bell-glass and roots will be formed, with proper care to watering, &c., in a few weeks. When rooted stand near the glass in the open house for a week or two, then pot the tiny plants singly into 2½-inch pots, using a compost of two parts peat and one part sand. As soon as they are established pinch the point out of each plant, and repeat this when young shoots are 1 inch or 1½ inches long; this repeated on several occasions will ensure a good stocky foundation for the future plant.

Repotting must not be done very frequently, and the smallest shifts possible must be given when it is necessary, as *Epacris*s strongly object to over-potting. The roots are very fine, and

base, but for garden decoration the growths may be retained even from 8 inches to 10 inches in length. Many of the sorts may be partially pegged down, selecting a long ripened growth and bending it over, with the result that blossom will appear all over the bent growth.

- | | |
|--------------------------|----------------------------|
| Admiral Dewey | Lady Rossmore |
| Aimée Cochet | Lady Wenlock |
| Avoca | Lohengrin |
| Bardon Job | Lyon Rose |
| Bellefeur | Ma Tulipe |
| Betty | Mme. Abel Chatenay |
| Caroline Testout | Mme. Alfred Sabatier |
| Celia | Mme. J. W. Budde |
| Charles J. Grahame | Mme. L. Moissy |
| Colonel Chaverendier | Mme. M. de Luze |
| Colonel R. S. Williamson | Mme. Pernet Ducher |
| Comtesse Cairns | Mme. Wagram |
| Comtesse of Anesley | Mamie |
| Comtesse of Caledon | Marie Croibier |
| Comtesse of Derby | Melanie Soupert |
| Crimson Crown | Milly Crean |
| Dorothy Page Roberts | Mrs. Aaron Ward |
| Elisabeth Barnes | Mrs. H. Thomas |
| Etoile de France | Mrs. H. Brocklebank |
| Ferdinand Jamin | Mrs. I. Milner |
| Florence Pemberton | Mrs. J. Bateman |
| Frau Alfred Mauthner | Mrs. Longworth |
| Gabrielle Pierrette | Mrs. W. Kershaw |
| General Macarthur | Peggy |
| Gladya Harkness | Pharisaer |
| Gloire Lyonnaise | Princesa Bonioe |
| Grace Darling | Princesse M. Meatchersky |
| Grossherzogin Alexandra | Rev. D. R. Williamson |
| Gustav Grünerwald | Rühmder Gartenwelt |
| Harry Kirk | Senateur St. Romme |
| Irene | Souvenir de F. Vercellone |
| Irish Elegance | Souvenir de Maria de Zayas |
| Irish Glory | Souvenir de Maria Zozaya |
| Italia | The Dandy |
| Jeanne Masson | Viscountess Folkestone |
| John Rnskin | Warrior |
| La Tosca | W. P. Lippiatt |
| Lady H. Viucent | William Askew |
| Lady Moyra Beauclerc | William Shean |
| Lady Q. Ewart | Yvonne Vacherot |

Very vigorous.—Many of these may be used as climbers or pillar Roses; they also make good free bushes, grown singly or in groups, and splendid standards. Retain last season's best growths almost their entire length when used as climbers, pillars or free bushes, and laterals cut back to 2 inches or 3 inches. If used as bushes or standards, prune back to within 15 inches or 2 feet of their base, and lateral shoots 2 inches or 3 inches. All soft, pithy wood should be removed entirely and any worn-out growths. J. B. Clark should be grown as a pillar Rose; this and F. Crousse and others of this group make fine hedge plants.

- | | |
|--------------------------|-----------------------------|
| Apotheker G. Hofer | Johanna Sebus |
| Arda Pillar | La France de '89 |
| Cheshunt Hybrid | Lady Waterlow |
| Climbing Captain Christy | Lina Schmidt Michel |
| " C. Testout | Lucien de Lemos |
| " K. A. Victoria | Mme. A. Carrière |
| " La France | Mme. C. Monnier |
| " Meteor | Mme. H. Leuilliot |
| " Mrs W. J. Grant | M. Desair |
| " Souv. de Wootton | Morgenrot |
| Comte de Torres | Nance Christy |
| Dawn | Noella Nabonnand |
| England's Glory | Pink Rover |
| Fraoçois Cronase | Purity |
| Germaine Trochen | Reine M. Henriette |
| Grüss an Teplitz | Reine O. de Wnrtenburg |
| Gustave Regis | Resette du Legion d'Honneur |
| J. B. Clark | Waltham Climbers |

(To be continued.)

ROSE REINE CAROLA DE SAXE.

THIS Rose as exhibited at one of the autumn shows gave promise of being a very useful sort. It is one of those varieties that possess very stout petals and a very compact sort of flower, with a beautiful conical form. It reminded me somewhat of Oberhöfgartner Terks, although perhaps not so pointed as that very distinct Rose. The colour is a beautiful blush, paling to French white at the extreme edges of the petals. I think it is a Rose to be looked after. It was raised by Gamon and introduced in 1903. As present-day raisers are giving us so many novelties with semi-double flowers, we naturally value the semi-double sorts when they possess the merits of distinctness and good lasting qualities. P.

THE KITCHEN GARDEN.

ASPARAGUS FOR AMATEURS.

(Continued from page 71.)

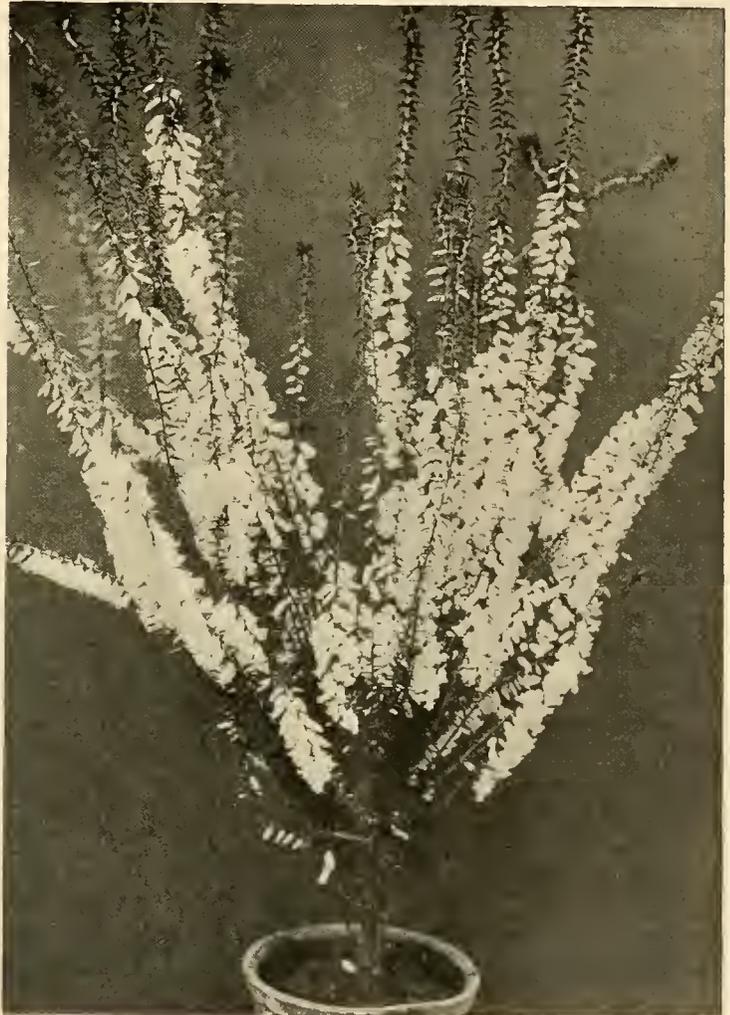
PREVIOUSLY referred to soils, sowing and planting, and will now briefly note an easy method of obtaining early supplies. Under this heading comes forcing and protection, and of course before the beds can be forced there must be a strong plant, and to get this so much depends upon the room at disposal and means to force. Many amateurs buy roots for forcing early in the year, but this is rather costly, as the roots when lifted and forced are useless, and this is a point that many cannot overlook. At the same time, I have no wish to condemn this system, as during the past few years the growers of forcing roots have paid much attention to them, and now very fine material may be purchased ready for forcing. On the other hand, there is a more natural system, that is, of forcing the permanent beds. Here there is no waste, the beds last many years, and each year force more readily if given ample attention during the growing season, so that good crowns are formed for the purpose. The culture, too, is so simple that it is admirably adapted for amateurs.

FORCING AND PROTECTION.

Earlier I referred to the age when the plants are strong enough to cut, and this also applies to forcing. They must not be forced till at least three years old, or have been in the permanent beds at least three years. For many years, for a Christmas supply, we always made it a point of lifting our oldest bed and placing the roots in frames on a bed of warm leaves, this being done early in November, new beds being planted every spring. I refer to this not to advise it to my readers, but to show that old plants force more readily. For instance, if the amateur has a patchy bed, or a bed where the ground may be required for other purposes, here the plants treated as above are made good use of, and it is much better to plant or sow a new quarter occasionally than waste ground on a poor plant. Lifted plants placed in heat or over manure force very quickly in two or three weeks, and there will be heads with a genial bottom-heat; but avoid too much warmth, as this causes a weak, thin growth. I advise less heat and slower forcing and that is why I always prefer fresh leaves in the late autumn, as these heat slowly, retain the heat

longer, and are moist, whereas in large bodies of stable manure the heat is too violent and forces too quickly. If the latter is used let it, if possible, be incorporated with leaves; if not, it should before using be placed in bulk in the open and frequently turned over thoroughly to sweeten.

We now come to the beds, and for early supplies there must be space between the beds of at least 2 feet, allow 3 feet if possible, and this space is filled in in November and December with fresh leaves. I have secured the best results from beds with two rows of plants, these being 18 inches apart in the centre and 1 foot at the outside on 3 feet 6 inch beds. Here the warmth readily permeates through, and the depth of both the bed and the alleys are equal, 2 feet to 3 feet, or



EPACRIS 'THE BRIDE'. (See page 111.)

the latter may be more if there is plenty of heating material. Of course, this applies to new beds made specially for forcing, and the beds at the sides may be made with any material at hand, such as slates, tiles, or bricks, the latter being pigeon-holed. I admit that here is a little expense, but once made it lasts for many years, and soon repays the cost of lifting or forcing under glass. In a stiff soil we have done without walls, merely using a few stakes and boards to keep the soil in position, and if the heating materials are well firmed or trodden when placed in the alleys and left till next forcing season the beds will keep in shape. When a good body of leaves is trodden in, the top portion may be covered with warm stable litter, and a good

depth of this also should be placed over the surface of the beds, and the long straw material on the top to throw off rain. It may be necessary to add to this at times. The Asparagus will appear in from four to six weeks, but the beds must be well drained in heavy land. Raised beds are best, and I have seen the same forced for over twenty years.

An amateur may not want to go to the expense detailed above, and may wish to force at a less cost. Here the process is simple, providing there is room between the beds. By digging out the soil to a depth of 2 feet, and filling in, say, with 3 feet of warm or prepared manure, and covering the surface of the bed with a good thickness of the same material, good heads may be secured in about six weeks, and the manure next season may be taken out and used as a surface dressing.

A word as regards premature forcing; by this I mean too early or too rapid. It is far better to collect the leaves or material and place in a heap till required than to put it in the alleys or trenches too early, as the plants must have sufficient rest. Too much heat causes a few weak shoots to push through, and the strong crowns damp off. November or December is quite early enough to start with beds, and better results are obtained even later when manure is the heating agency, say, January or early February.

PROTECTING THE BEDS.

It is a good plan to protect permanent beds to get heads in advance. By this I mean that any amateur who has a straw litter at command may with advantage cover a bed at night, removing the litter early in the day. In my next article, which will probably be the most important to amateurs, I will go into the culture of the open ground supply.

G. WYTHES.

BEST POTATOES.

(Continued from p. 101.)

ANY selection, however good, will fail to please all, but from actual tests of the varieties named, all well tried sorts, both as croppers and disease-resisters, and taking the Potato as a food product first, and for show purposes afterwards, the cultivator who fails to find in the following lists the sorts suitable for his purpose must be hard to please indeed. Those marked with an asterisk are suitable for exhibition. Six first early varieties: *Sutton's Al, *Midlothian Early, *Sir John Llewelyn, Duke of York, *Sharpe's Victor (forcing) and Sharpe's Express (forcing). Six second early varieties: *Dalmeny Radium, *Dickson's New Century, *Sutton's Reliance, *White Beauty of Hebron, *Maid of Coil and British Queen. Twelve main crop varieties: *Sutton's Superlative, *Snowdrop (Perkins), *Up-to-date, *King Edward VII, *Edgecote Purple, *Dickson's Eastern Planet, *The Factor (Dobbie's), *The Crofter (Dobbie's), *Rob Roy (Massey's), *Discovery (Sutton's), *Duchess of Cornwall and *Daniels' Special.

In conclusion, it should always be borne in mind that the Potato, if grown year after year on the same soil without a change of seed, seriously deteriorates, therefore seed should be exchanged, say, every two years. Varieties with strong and healthy constitutions are what is required, and we should aim at preserving the really good sorts we already have, and at once discard any variety which is a poor cropper under good cultivation or has the least tendency to disease.

GEORGE COOPER.

THE FLOWER GARDEN.

ANNUAL FLOWERS FOR DRY WALLS AND STARVED POSITIONS.

AMONG hardy annuals which grace our gardens during summer are some which find a place on account of their vivid colouring, while not a few win their way by reason of their dainty form, or it may be having features of other interest. Such a plant is the pretty annual Violet Cress (*Ionopsidium acaule*). The whole plant is exceedingly small; the leaves are arranged in the form of a rosette, above which, early in the season, appear the dainty cross-formed flowers of a delicate soft lilac colour. When grown like the ordinary run of annuals in beds or borders its merits are easily overlooked, for to enjoy it one must grow it in half-shady spots on raised ground, such as may readily occur on the rock garden, or, better still, to meet it a little below eye level ensconced in the crevices and courses of a shaded dry wall or nesting in the joints of rough steps in the informal part of the garden.

It sows itself freely after the first year, and each succeeding season will the seedlings appear

and in such positions they are the admiration of everyone. It is the plant for starved ground, and where the courses of dry walls are sown with this annual during February they present a striking feature in the garden right through summer and autumn. In rich soil it will grow 3 feet high, but in such positions the vegetative growth is always produced at the expense of flowers; grown as indicated above the average height is 9 inches to 12 inches and the flowers are produced freely in sunny positions.

Saxifraga Cymbalaria is also an annual and a fitting companion for similar positions and aspects named for *Calceolaria mexicana*. The growth of this plant is quite in accordance with the commoner members of the same great family, so that it is unnecessary to describe it in detail. The colour of the flowers is a soft citron yellow, and it is one of the best plants for the rock garden in summer.

THOMAS SMITH.
Walmsgate Gardens, Louth.

ANEMONE BLANDA.

THIS, in many of its seedling forms, is now most beautiful, especially in those positions where, by reason of a little natural shelter, the foliage was not harmed by the recent cold, searching winds. No more valuable plant exists, while its infinite

variety from seed renders it still more beautiful for grouping freely in the garden. The scarlet Windflower, as well as the Apennine kind, is also gay with blossom.

THE TWO-LEAVED SQUILL.

(*SCILLA BIFOLIA*.)

THIS, I think, is one of the most valuable of the Squills. It flowers much earlier than *S. sibirica*, and even in my upland garden I am generally able to pick many of its exquisite deep blue blooms during the first days of February. It is strange that this precious bulb is not more widely cultivated, since it can be purchased nearly as cheaply as *S.*

sibirica. *S. bifolia* grows freely in any light sandy soil, and does best in a sunny, sheltered situation. It delights in leaf-mould. An established colony makes a most delightful picture early in the year. During severe or wet weather I find it helpful to place a sheet of glass over a few of the finest clumps.

E. TESCHEMACHER.

TOP-DRESSING PRIMULA SIKKIMENSIS.

AMONG the Primula species which require some care to retain them in the garden for several years is the beautiful Primula sikkimensis, whose pale yellow, sweetly-scented flowers dangling from the tallish stems are so much enjoyed in their season. It is not, as a rule, of very long duration, often, indeed, failing after its third year in gardens where it has done well. Its life may, however, be prolonged if it is well watered in dry weather, and, more important still, kept top-dressed in spring, summer and autumn.

The waterings it should have in dry weather increase the necessity for this, as they wash the soil from about the crowns and bring the roots, which naturally lie near the surface, closer to it. The winter's frost has also a tendency to lift the crowns, so that they not only require



A PRETTY WINDFLOWER (ANEMONE BLANDA) IN MR. BLICKHAM'S GARDEN AT LEDBURY.

in autumn and the little rosettes cover the ground with a carpet of green throughout the winter.

Sedum ceruleum.—Quite one of the prettiest blue-flowered annuals is *Sedum ceruleum*, which is also suited for the position indicated to the Violet Cress, except that it requires sun. The leaves of the seedlings are succulent, as in most Sedums, and arranged in the form of small rosettes, which gradually elongate into the flowering head. The colour of the flowers is the summer sky reflected—a bewitching shade of azure blue. The plant attains to a height of 6 inches when in flower, and as it appears in the same position year after year from self-sown seed, there is consequently no difficulty about raising new plants. The appearance of the plant when in flower is light and airy, and it is distinctly beautiful when seen in a fair-sized patch.

Calceolaria mexicana is one of the easiest annuals to naturalise in any garden; a single plant will in the following year give rise to thousands, the seedlings appearing in the most unaccountable positions. Medium or rich soil produce a planta quite out of character, while spontaneous seedlings, which not infrequently occur between stone joints in pavement, wall or step, produce plants which literally cover themselves with delicate lemon-coloured blossoms,

pressing gently into the soil in spring, but are also all the better for some fresh material about them, even if the roots themselves do not show on the surface. I have found nothing better than some fine loam, with a little peat and sand added, or, failing the peat, a small proportion of leaf-soil. Many years of experience with this beautiful *Primula* induces one to write this short note. S. ARNOTT.

PLANTING BORDER CARNATIONS.

ALTHOUGH these Carnations are fairly hardy, it is not advisable to leave the best varieties exposed in the open borders throughout the winter, as severe frosts and excessive moisture damage the plants more or less. The wise amateur will have stored many valuable rooted layers in a cool frame, from which position they will be taken early in the spring. It is not necessary to wait until the end of April before the plants are put out. But duly prepare the border for their reception early in March, and on the first favourable opportunity do the planting.

PREPARING THE BORDER.

Merely digging the soil and putting in manure will not do. It should be trenched at least 20 inches to 2 feet deep, and the manure so placed that the roots of the Carnations will not come into contact with it until they have commenced to grow after planting. This means that the manure, which should be well rotted, not strawy, must be mixed with the soil about 9 inches below the surface. All the lower or subsoil must be well broken up, and the digging done, if possible, while the ground is fairly dry.

Carnations thrive best in firm ground, so that it is advisable to make the soil firm by judicious treading while it is moderately dry and before any plants are put out.

PLANTING.

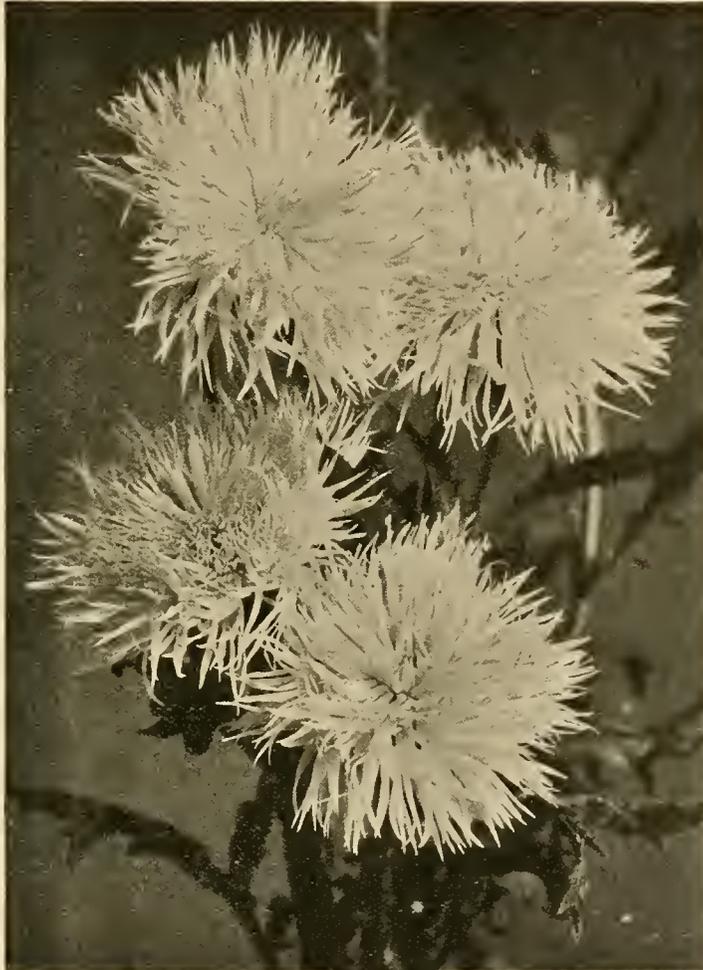
When Carnations are layered every care is taken to induce the formation of many roots. Now, at planting time, those precious roots should be preserved. Lift the plants with the aid of a hand-fork and place them in boxes for conveyance to the border. Then plant them in rows about 16 inches apart and the same distance from each other in the rows. Make the soil firm around them with the hands, and afterwards loosen the surface of the soil with a Dutch hoe, and finally rake off any large stones. The plants will then so on become established in their new quarters. AVON.

THE WHITE SWEET SULTAN.

THE Sweet Sultan belongs to a family (the *Centaureas*) which has furnished our gardens with many good plants, both annual and perennial. All are useful alike as decorative subjects in the border and as cut flowers in the house, from the giant *C. macrocephala* to the baby forms of *C. Cyanus*, the popular Cornflower. Probably the latter in its various colours is the greatest favourite of them all, but now that the improvement of the Sweet Sultan—which is scientifically called *C. moschata*—has been seriously taken in hand it should make a bold bid for supremacy.

For many years we have had more or less dingy purple Sweet Sultans, dirty white Sweet

Sultans and a very passable pale yellow form; but at last we find the improvement in the race is seriously undertaken, and the fine new varieties already obtainable give a splendid earnest of what we may expect in the near future. The illustration shows one of the newer white forms, and those readers who only know the flowers as produced by the ordinary seedsmen's packet will at once note the improvement exhibited—improvement in the purity of the colour and improvement in the size, for the modern white Sweet Sultan is twice as big as many of its forbears. For cutting these white Sweet Sultans are most admirable. Highly artistic in appearance, possessed of long and strong stems, delicately perfumed and lasting long in water, they approach very nearly the ideal cut flower.



A PRETTY ANNUAL: WHITE SWEET SULTAN.

As to culture, they grow themselves. They are hardy annuals, fairly vigorous in constitution, grow 18 inches to 2 feet high and battle bravely for themselves in the ordinary border of mixed flowers. The newer varieties are, however, worthy of a better fate than this. They may even be entrusted with the filling of a prominent flower-bed or formal parterre, and will acquit themselves nobly. For this purpose, and for all others where it is desired to get the best possible out of the plant, seeds should be sown on a reserve border about the middle of March. Use a light, sandy compost, sow in shallow drills 3 inches apart, prick out the seedlings early and transplant them to their flowering quarters soon after the middle of May and the Sweet Sultan will be far from being the least attractive plant in the garden.

INTERESTING PLANTS AT KEW.

POLYPODIUM AMERICANUM. — This, a native of the Andes of Ecuador, is one of the rarer Polypodiums, and, although it cannot be called a handsome plant, it is not devoid of interest. The specimens at Kew were raised from spores secured from a dried frond sent to the Herbarium some years ago for naming. Formerly it was grown in the Tropical House, but the plants have now been transferred to the Temperate Fern House, with the result that the fronds are more stunted in their growth. They are lance-shaped, with rather blunt apices, and when young each is covered with an almost white, dense coating of woolly matter, thus leading one to suspect that it likes a rather dry atmosphere. It has a creeping, rather slender rhizome, by the division of which it is readily propagated. It is also easily raised from spores, and delights in a peaty soil.

Selaginella watsoniana. — This pretty *Selaginella* is of garden origin, a piece being casually secured some few years ago. Although regarded by the Kew authorities as a species, it is possible that it may be a variety of *S. Martensii*, the species that it most nearly resembles in habit. It does well in a temperate house, the foliage coming a better white than when given a tropical temperature. At the bases of the plants the small leaves are greyish white, then comes a sort of broad band of clear green, the tops of the plants being a clear creamy white. When the plants are grown rather closely together in a pan they produce a fine effect.

Jasminum primulinum. — This beautiful Chinese species is now flowering in House No. 4, its large, bright yellow flowers proving a welcome addition at this time of the year. It is a pity that this plant has not proved hardy at Kew, the specimen planted against the bulb border wall having succumbed. It has practically the same habit as *J. nudiflorum*, but the flowers are much larger, some of them coming semi-double. The leaves are trifoliate, and young shoots are produced in abundance. The plants noticed were growing in a large pot, and appeared to be quite at home. The specimens planted out in the Himalayan House, although making an abundance of new growth, show no signs of flowering. This may possibly indicate that it flowers best when the roots are confined to a pot.

The Cornelian Cherry. — This hardy-flowering shrub, known botanically as *Cornus Mas*, ought to be grown far more extensively than it is at present. At the first glance one may easily mistake it for the Witch Hazel (*Hamamelis arborea*), the deciduous branches being very freely besprinkled with the small bright yellow flowers. It makes a large shrub of erect habit. The variety *Xanthocarpa* has a semi-pendulous habit, and the flowers are of a paler colour. Both are in flower in the beds near the Temperate House, and prove excellent subjects for following the Witch Hazels. The spring-like beauty of the Cornelian Cherry is very welcome at this season of the year; it is so fresh and winsome.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

LAWNS.—At this period I make it a rule to rid the lawn of Plantains, Daisies and Dandelions, as they become very troublesome later on. With material that is known as "lawn sand" I sprinkle the offending weeds, and in this way remove the trouble. My seedsman supplies the "lawn sand" at a low cost. I am just now making good all bare and patchy quarters by laying down new turf and making a sowing of reliable lawn Grass seed on less-worn patches. Top-dressing is an excellent stimulus for grass at this period; wood ashes and charred earth should be evenly distributed on the surface. In a little while worm-casts will be much in evidence, and should be dealt with before they become really troublesome. With a good Birch broom I go over the whole of the surface, sweeping it frequently. Subsequently the lawn is well rolled, and in this way the turf is again made firm and even.

Chrysanthemums.—I am lifting the old plants that flowered in the outdoor garden last autumn, and these are being divided into numerous pieces. The sucker-like growths in almost every instance have roots adhering, so that strong plants are soon developed. Those who have a cold frame may dibble in these divided pieces and thus hurry on their root formation. Cuttings of the varieties to flower in pots under glass next autumn are now nicely rooted, and these should be potted up singly into "sixties" (pots measuring 3 inches in diameter). Use clean pots and crocks, and prepare soil made up of two parts loam, one part leaf-mould and one part well-rotted horse manure. Pass these ingredients through a coarse sieve, and add coarse silver sand or road-grit in sufficient quantity to make the whole porous. Repot the young plants moderately firm, afterwards standing them in the cold frame or on shelves in the cold greenhouse.

Hardy Flower Garden.—Gladioli are planted at this period. I prefer to group this flower, arranging half-a-dozen to a dozen corms in each

group, and the corms about 1 foot, more or less, apart. The warmer quarters should be planted at this early season. Our patch of Lily of the Valley is just now being dressed with a thin layer of well-rotted manure, the old hot-bed material being used for this purpose.

Roses.—I have only just received a number of Roses ordered last season, and, although I would rather have planted them in November last, I do not fear the results of present planting. We spread out the roots when planting, and, that this may be done satisfactorily, we do not hesitate to take out a good hole in each instance. In the near future I propose to prune trees that are on warm walls; in other cases the pruning must be deferred for a while.

The Greenhouse.—I am preparing for raising a number of annuals under glass just now. With a little propagating frame arranged on the side bench of the greenhouse, just over the hot-water pipes, I can obtain the requisite bottom-heat to cause the seeds to germinate quite readily. A temperature above 40° will germinate seeds, but I prefer it to be quite 15° to 20° warmer for most subjects. Half-hardy annuals may be raised by the foregoing method quite easily. Cuttings of Fuchsias, fibrous-rooted Begonias, Bouvardias, Salvias, Geraniums, Hydrangeas, Lobelias, Marguerites, Petunias, Dahlias and Heliotropes, besides many other similar subjects, may be inserted now. Pots or boxes filled with light sandy soil should be used for inserting the cuttings in, and these placed in the propagating frame forthwith. Water in with clean water from a very fine-rosed can.

Vegetable Garden.—My Onion bed is now in beautiful working order, the surface soil having just been forked over and made friable. The first sowing is to be made at once. I am drawing the soil round Cabbages planted in warm quarters last autumn; this is a much appreciated attention. Vacant ground that it is intended to crop in the near future should be trenched or deeply dug without further delay. Autumn-sown Onions should be planted at once. I obtain handsome bulbs in July from these Onions planted at the present time on ground previously occupied by Celery. D. B.

THE HELIOTROPE AND ITS PROPAGATION.

THERE is not a lover of flowers who does not recall the familiar Cherry Pie, by which name the Heliotrope is popularly known. Its distinct and sweet fragrance has always been a fact, and one gladly welcomes the prospect of dealing with the plants in practical fashion forthwith. The Heliotrope is a native of Peru, and was introduced so long ago as 1757. There is only one species, but of this there are several beautiful varieties.

Treatment of Old Plants in Pots.—The glass structures of many amateurs possess a few old plants in pots, such as are represented in Fig. 1. Specimens of this kind look anything but attractive, and if left to take a natural course would very likely give weak and sickly shoots that would never produce the beautiful sprays of blossoms for which the Heliotrope is famous. For this reason these old plants are pruned in the early spring, preferably in late February. The pruning must be somewhat severe, but should be determined by the character of each individual plant. Cut well back is the safer course to follow, as this induces new shoots to form.

What to do with Cut-back Plants.—The result of the cutting back of the old plants will be seen in the illustration in Fig. 2. In the present instance the old plant has been cut back moderately, but sufficiently hard to induce it to



2.—THE SAME PLANT MODERATELY CUT BACK.

break away freely into useful growths. The shoots that were removed are not thrown away, but are preserved for the purpose of making cuttings. The plants, after being cut back, should be partially shaken out and repotted, using pots of the next size to those they previously occupied, and soil made up of loam, leaf-mould and manure from an old hot-bed, and plenty of sand, all well mixed together. See that the drainage is well arranged and this covered with some of the rougher portions of the soil to prevent the smaller particles from working down into and between the potsherds forming the drainage. Pot firmly. Subsequently place the old plants in a glass structure where a temperature of about 60° can be maintained, and in such circumstances, by a frequent syringing overhead, new shoots will soon develop and the foundation of bushy plants be laid.

Cuttings and How to Make Them.—Cuttings should be some 2 inches to 3 inches in length, and should, if possible, be of comparatively recent growth. The series of cuttings as seen in Fig. 3 gives a fair indication of the character they should represent when trimmed and ready for insertion. The lower leaves have been removed and the stem of the cutting cut through immediately below a joint.

Inserting the Cuttings.—These may be inserted in pots, pans or shallow boxes, in each of which they root very readily, provided soil of a suitable kind is used. A suitable soil may be made up of loam, leaf-mould and silver sand, the two former ingredients being passed through a sieve with a quarter-inch mesh and the whole mixed well together. When inserting the cuttings always see that the soil is pressed firmly at the base of each one, otherwise they may fail. Water in with clean water from a fine-rosed can as soon as the box or pot is filled with cuttings, placing them subsequently in a warm corner of the



1.—AN OLD PLANT PREVIOUS TO BEING CUT BACK.

greenhouse, where a little bottom-heat from hot-water pipes can be obtained. The cuttings root much quicker when placed in a temperature of from 65° to 70°, and this may be effected by standing the pots, &c., in a small propagating frame on the greenhouse bench, arranged over the hot-water pipes, or by using a bell-glass placed in the same position.

Cuttings after Rooting. — As soon as the cuttings are nicely rooted, as represented in Fig. 4, they should be potted up singly into 3-inch pots. These pots are known also as "sixties." Loam and leaf-mould in equal quantity and the liberal addition of coarse silver sand makes an ideal compost for the first potting up. Well mix the soil and pot fairly firm. To induce a bushy style of growth it is well to pinch out the point of the growth. Pot up into larger pots from time to time as the pots get full of roots, and in the end give them sunny quarters in the greenhouse or conservatory, or harden off preparatory to planting outdoors in June.

Heliotropes from Seed. — These are raised quite easily from seed, and in late February and throughout March, with a brisk bottom-heat, either from hot-water pipes or hot-bed, they may be dealt with most successfully. Sow the



4.—ROOTED CUTTING READY FOR POTTING UP.

seed a sixteenth of an inch deep in light sandy soil, using pots, pans or shallow boxes that are well drained. If a temperature of from 65° to 75° can be provided, the seed germinates freely and young plants are soon brought into being.

Varieties. — Lord Roberts, deep blue, white eye; Bouquet Blanche, white, very sweet; Mrs. J. G. Day, white, shading to lavender; Swanley Giant, bright blue; Mme. de Bussy, blue, with white centre; F. W. Harry Gulliver, deep mauve, shaded rose; Mme. Nelson, violet-mauve, compact; Chameleon, violet-purple, spreading trusses; The Queen, nearly white; Paul Arosa, deep blue, white eye; Madge Arthur, deep purple-blue; and Dr. Jenlia, deep violet-blue, one of the finest dark varieties.

HOW TO PRUNE EVERGREENS.

In many gardens throughout the country one frequently encounters some quick-growing evergreen that has either been allowed to outgrow its allotted space and so present an untidy or



3 — CUTTINGS READY FOR INSERTION.

uncared-for condition, or else the branches have been cut back with a pair of shears, or even a hedge-trimmer, so as to give it a close, rusted appearance, that is far from being a pleasure to behold. Many amateurs, too, make the mistake of cutting back their evergreens in the autumn, so that the plant is more or less bare all the winter.

Generally speaking, the end of February or early in March is the best time for pruning evergreens; new growth is then quickly made and the plants soon regain a cheerful appearance. A sharp pruning knife or a pair of sécateurs are the best implements to use, and if large specimens of Laurels or similar shrubs are to be dealt with, a sharp, narrow-bladed saw may also be necessary. The first operation will consist in removing any dead branches that may be present, cutting back into living wood. If the branch is a large one and has to be removed by means of the saw, pare the cut over with the knife and then paint it over with ordinary coal tar.

This done we must next see about the removal of branches that are crossing or chafing each other, and also give the specimen a general thinning out. The idea seems to be general that if a shrub is of an evergreen character overcrowding of the branches does not matter, but this is a mistake. True, it is desirable to have the branches closer together than are those of a fruit tree, but this is more often than not overdone to the detriment of the shrub or climber. Assuming that the plant under notice has filled its allotted space, we must next proceed to prune back adventuresome shoots, and this is where the hedge shears are often wrongly brought into use. Certainly it is quicker and easier to clip round a shrub or over a wall of Ivy than it is to remove each shoot separately, but the results in each case are such as to justify the slower method. An evergreen properly pruned should scarcely show a cut leaf, each shoot being removed separately by means of the knife or sécateurs. This is not such a tedious process as it may at first appear, and it is eminently more satisfactory. Ivies, Enonymuses, Laurels and Aucubas are evergreens that may be treated as advised above.

Such conifers as the Pines and Spruces require but little pruning, but where any shortening is needed the lateral should be removed entirely, taking care that a shorter one is left to take its place.

A USEFUL AMATEUR'S PLANT.

(CYPERUS ALTERNIFOLIUS.)

THIS evergreen native of Australia is not nearly so extensively cultivated in our greenhouses and windows as its merits demand. It is a most useful subject for providing greenery in almost any floral arrangements, and for rough usage, such as standing in draughty halls, stuffy rooms and other places where plants are required for decoration it will beat even an Aspidistra. The character of its foliage is at once unique and graceful, and its culture does not make any excessive demands on one's intelligence and time. Propagation is a simple operation. It can be performed by means of seeds, divisions or

cuttings, the two last-named methods being almost universally adopted. March is the best time to perform either, and personally I prefer cuttings to divisions. The divisions have, however, the advantage over the cuttings in that they make large specimens more quickly. In dividing a plant care must, of course, be taken to secure each portion with good roots and crowns, using a sharp knife to separate the portions. These are potted up at once into well-drained pots of a suitable size, a compost of equal parts of good loam, sand and peat being most suitable. Give a watering-in and then plunge the pots if possible to their rims in Cocoanut fibre refuse, allowing them a temperature ranging from 60° to 65° until they are established.

Cuttings require rather more care than divisions, but if they are rooted in March and grown on all the summer, they provide excellent material for embellishment the following winter. Mature heads of leaves must be selected, and they ought to have about 1 inch of stem retained. It will be found convenient to trim in the leaves to within 1½ inches of the stem before inserting the cuttings. Thumb pots, well drained, are the best to use, one cutting being placed in each, the portion of stem retained being the part to insert, so that the ring of leaves lies flat on the surface. Over the centre of this place a mixture of finely-sifted sand and peat, water with a rosed can and then plunge the pots to their rims in Cocoanut fibre refuse and afford a warm moist temperature. It will not be long before young shoots will push up from the leaves, and when they are about 3 inches high give the young plants a move on into 3-inch pots, using a mixture of loam, peat and sand. Keep them warm still, but the atmosphere less moist, until they have filled the pots with roots, when another move, this time into 4½-inch pots, should be given. As soon as they are established in these pots remove them to the cool greenhouse, and in a fortnight they will be ready for use in almost any position. In warm localities the pots may even be plunged in the open with success, providing the plants are not allowed to suffer for the want of water. At all times the latter must be freely applied, as the plant is a great lover of moisture. Almost any nurseryman will supply plants, or they may frequently be purchased in markets under various names, the most popular of which is the Umbrella Grass. The present is a good time to procure plants for stock purposes, and it is usually advisable to give them a rather warm house for a week or two after purchasing.



5.—YOUNG PLANT ESTABLISHED IN A 3-INCH POT.

THE TOWN GARDEN.

A RESERVE BORDER.—By a reserve border is meant a spare strip of ground wherein seeds can be raised, cuttings struck, or plants nursed back to health whose constitutions have become in any way debilitated; not that I approve, as a broad, general principle, of nursing sickly plants back to health; it is usually far better to buy or raise new ones. This reserve border should be in the sunniest part of the garden, a spot facing south-east or east being preferable. It need not be in the most conspicuous part of the garden, for, though there is nothing objectionable but much that is commendable in it, it must not be forgotten that plants are not expected to bloom within its precincts. Still, I would far rather give up the very best part of a garden than go without a reserve border, for it is indispensable if really good gardening is to be done.

In making such a border, let it slope gently from a wall or fence, if possible, and, above all things, do not have it more than 3 feet wide. One should always be able to reach across such a border without setting a foot on it, and over-reaching is a practice that every true man should set his face against! Seedlings, cuttings and weakling plants in general do their best in a light and sandy soil, and as the soil is not likely to be all that is desired in this respect it should be made so. Sweepings from the sides of the road after a heavy rain are excellent for making soils porous and open, while leaf-mould is the best ingredient for lightening heavy soils. A 3 inch layer of leaf-mould and a 1 inch layer of road grit or coarse sand, well mixed with the top 6 inches of the soil proper, will make a border that will spur on the most recalcitrant plant to do its best. After mixing in the sand and leaf-mould, leave the border rough until seed-sowing.

SEEDS FOR EARLY SOWING.—I do not propose to give lists of vegetable seeds, as I do not believe in growing vegetables in a town garden. It is all very well for people in the country—who, of course, cannot get vegetables—to try and grow them; but in towns the things are brought to one's very door, and are, moreover, sold at such knock-down prices that it does not pay to even think of growing them, so much better may the thoughts be employed in other directions. Besides, there are many reasons, upon which I need not dilate, why a town garden is not an ideal place for growing vegetables. Fruit, too, should not be attempted; not that one can raise much fruit from seed, even in the country. This leaves us flowers, and of them we will have abundance. There is still plenty of time for the planting of hardy herbaceous or perennial plants, and also for the sowing of what are known as half-hardy annuals, so that for the present I will confine my remarks to what are known as hardy annuals. These, I may inform the uninitiated, are plants which are raised from seeds sown outdoors, and which flower and die in the same year that they are sown. An exception to this rule occurs when the seeds are sown in the autumn, as then the plants flower and die early the following year. From these vast fields of experience I have garnered a few tussocks of knowledge, and they are given for the benefit of the reader in the following list of hardy annuals for towns: Virginian Stocks, Cornflowers, Sweet Alyssum, Candytuft; Godetias Duchess of Albany, Lady Albemarle and Duke of York; Sunflowers, dwarf and tall; Sweet Peas Dorothy Eckford, Gladys Unwin, Miss Willmott, Mrs. Walter Wright, Triumph and Paradise; Night-scented Stock, Mignonette, Shirley Poppies; Nasturtiums, dwarf and tall; Salvia Horminum Blue Beard, Saponaria calabrica and Linum grandiflorum rubrum. All, or almost all, of these will grow in a true town garden, and there are many half-hardy annuals—a list to be given later—which will bear them company. The above list of seeds should be ordered at once, as a first sowing should be in mid-March. E. J. CASTLE.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

HARDY FRUIT GARDEN.

PRUNING AND TYING ought to be finished by this time; any arrears must be speedily dealt with. When the finishing touch has been given prick up all the surface soil with a fork and leave the borders all trim and tidy. The ground around walls should not be cropped nearer than 4 feet, and this only leaves just sufficient room to walk round and examine the tree and room for the step ladders which have to be used for tying and disbudding during the growing season.

Figs grown outside that have been protected may now have the covering taken away and the trees pruned and trained where long shoots of fruitless wood exist. These should be cut out to make room for prolific growths. The branches of the Fig should not be too close together, or there is not proper room for leaf development, and if the pruning of the Fig can be done in the growing season so much the better. There is no reason why really good Figs cannot be grown outside.

Strawberries.—Where spring planting is done, now is a good time to plant. Royal Sovereign does well when planted annually, either in the autumn or the spring, and invariably the largest fruits are obtained from these plants. Those planted in the autumn should be looked over, and if any are lifted by the influence of frost press them down in the soil and make as firm as possible. The Loganberry and its varieties should be pruned and tied similar to Raspberries. They do well tied to poles or over arches or on strained wire.

FLOWER GARDEN.

Edgings.—Where such as Box, Arabis and Thrift are employed all blank spaces should now be filled, and any new designs in edging forthwith carried out. Beds containing Wallflowers, bulbs and similar plants should be pricked over, and if the soil is poor a little artificial manure will work miracles in a short time. Where Tea Roses have been covered the protective material must be removed. The planting of shrubs and trees should be got on with now as fast as possible, choosing fine weather (dry) for the operation. Bamboos, Camellias and Azaleas should have some manure forked in lightly; a little bone-meal of the best quality, with some soot, suits these plants to a nicety.

Rhododendrons will be benefited by a mulching of cow manure. Any choice plants in bad health should be taken up and placed in hospital, where they should receive a supply of new sweet soil, being divested of all the old sour material. This is the best system of dealing with plants so affected.

ALPINES.

These are now growing rapidly. A top-dressing should now be given, and after the necessary cleaning off has been done any bare spots must be made good from the reserve; the more tender plants may have the covering removed. Continue to put a little soot or slugicide around the plants and bulbs that are likely to be devoured by slugs or birds. Plant out now seedling Saxifragas, especially var. longifolia, planting these in vertical interstices and making the soil firm. All the Primulas should have a top-dressing at this season. They derive much benefit by being helped as they are pushing up their flower-spikes.

KITCHEN GARDEN.

March is a busy month in this department, and the sowing of seeds will demand much attention. Small sowings of Cauliflower Autumn

Giant, early varieties of Broccoli, Turnip Early Milan, Nimble Six Weeks and Early Snowball may be made. Of course, another sowing will be necessary towards the end of the month. Vegetable Marrows for an early supply should be sown in pots in a warm frame. Early Bush is a good one for early work, and it does not take up much room in a frame. Peas may be sown in quantity now of all the best Marrow varieties. Give plenty of room between the rows.

EARLY VINERY.

Increase the day and night temperature to 60° and 65°, running it up with sunshine at closing time. Give a little air on all favourable opportunities, especially in the morning. Continue to stop and tie down, regulating the shoots so that all the space is covered. Thin the berries as soon as possible after they are set. When the Vines are in bloom it is a good plan to give them a sharp tap about midday, as this will effectually distribute the pollen. Shy-setting varieties may have the pollen distributed by means of a rabbit's tail tied on a stick or Bamboo cane; damp down several times daily and syringe twice daily, thoroughly wetting every part.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

PALMS.—These should now have attention. They are among the easiest plants to cultivate, their chief requirements being good drainage and an abundant supply of water both to the roots and foliage. In the latter case, however, be sure it is clean. Perhaps the greatest error it is possible to fall into in growing Palms is to keep them dry at any period of the year. In regard to repotting plants, it is of the utmost importance to preserve intact the large, fleshy roots which are sure to be found coiled among the drainage. Sometimes these are ruthlessly destroyed; but it is a fatal error, for they are the feeders and real life-supporters of the plant. For soil use one part loam, one part peat, and one part good vegetable mould, well decomposed, with a good portion of sand added.

Sowing Seeds.—This is the time when many seeds require to be sown. Among others are Acacia lophantha, Grevilleas, Fuchsias, Celosias, Coleus, Myrsiphyllum and Cyclamen, the latter only if we cannot afford to wait until August for plants raised then, which will certainly be best, though a season is lost in flowering them. Avoid the mistake of sowing all seeds in strong heat; this has the effect of checking rather than forwarding the vegetation of seeds of those plants which require cool treatment when growing, and only seeds of warm house plants should be sown in a high temperature.

FRUIT UNDER GLASS.

Figs in Borders.—Where these show indications of making too much growth, it will be found a good plan to modify the treatment in a measure by lessening the atmospheric moisture and withholding, but not beyond the safety point, water at the roots.

Newly-planted Trees.—If this work is contemplated, now is a good time to do it, perhaps as suitable a time as can be chosen, provided in removal there is not too great a check given to the roots. Arrange, if it can possibly be done, to limit the border. In making a new border, guard against using anything of an exciting character in the soil. Good turfy loam and lime rubble will supply all that is needed, taking care to have the soil on the dry side so that it can be thoroughly rammed.

KITCHEN GARDEN.

Early Carrots.—With the soil in a nice condition there need be no longer any delay in sowing the first bed of Carrots in the open.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

March 17.—Royal Horticultural Society's Exhibition of Flowers and Fruit, Vincent Square, Westminster; Lecture on "Beautiful Flowering Trees and Shrubs" by Mr. G. Gordon, V.M.H., 3 p.m.; British Gardeners' Association Meeting, Horticultural Hall, Westminster, 4 p.m.

March 25.—Royal Botanic Society's Show, Regent's Park, N.W.

March 31.—Royal Horticultural Society's Hyacinth Exhibition, Vincent Square, Westminster.

Horticultural show for readers of "The Garden."—We particularly draw our readers attention to an important announcement respecting a horticultural exhibition that appears on another page. It has been suggested that such an exhibition for our readers only would prove interesting, and we are, therefore, offering approximately £100 in prizes and medals for flowers, fruits and vegetables. We know that our readers include some of the best cultivators in the country, both professional and amateur, and we hope that all will make an effort to exhibit and win the prizes. The schedule of classes, which has been carefully compiled by a number of experts, is published among our advertisement pages, and it will be published from time to time until the date of the show, which we hope to announce shortly. Our readers will then have an opportunity of letting us see the results of their labours, which, we anticipate, will be very interesting. Readers, of course, will be admitted free to the exhibition and there are no entrance fees.

Presentation to Mr. P. Murray Thomson.—On a recent afternoon a few of the subscribers met in the Royal British Hotel, Edinburgh, and presented Mr. P. Murray Thomson, the late energetic secretary and treasurer of the Royal Caledonian Horticultural Society, with a cheque for a handsome amount and a framed address of farewell and appreciation. No notice of the presentation was sent to the subscribers, or the company would have been a larger one, but it was representative and large enough to show the esteem of the horticulturists of Scotland for Mr. Thomson. The presentation was made by Mr. W. H. Massie in well-chosen words, and Mr. Murray Thomson made a feeling reply. On the motion of Mr. David W. Thomson, Mr. J. W. M'Hattie was warmly thanked for his services as secretary and treasurer to the fund.

Destruction of blight on Beech trees.—Recently some interesting experiments were made with the Beech trees on the estate of Archibald Grove, Esq., M.P., Pollard's Park, Chalfont St. Giles, for the extermination of *Cryptococcus fagi* by Messrs. Merryweather and Sons of London, in conjunction with the Board of Agriculture. The gentlemen representing the above body were Dr. Stewart McDougall of the Edinburgh University; Mr. Newstead of the Liverpool Practical School of Medicine; and Mr. Lees, Inspector of the Board. Messrs. Merryweather were represented by their engineer, Mr. A. T. Maryon. After the trees had been carefully examined by Dr. McDougall and his colleagues, it was decided to treat them with a compound consisting of a paraffin emulsion and caustic soda. This liquid was distributed through a series of portable flexible pipes by means of a high-pressure Merryweather spray-pump, operated by a small petrol motor, discharging the liquid at the spraying nozzle at a pressure of 100lb. to the square inch. By the help of specially-constructed scaling ladders supplied by the engineers it was found possible to get at close quarters with the fungus, which mostly infests the trunk of the tree, and to spray the affected parts quite successfully.

There is every reason to believe that this treatment, if persevered with by the owners of Beech forests, will soon entirely stamp out the disease which is making such ravages in the district.

PRIZES FOR READERS.

FEBRUARY COMPETITION—AWARDS.

In this competition readers were asked to name the best fifteen hardy annuals and describe the best way to grow them. The prizes are awarded as follows:

The first prize of four guineas to Mr. W. H. Morton, Ellamcote, India Road, Gloucester.

The second prize of two guineas to G. Cope, Holly Bank, Oakfield Road, Selby Park, Birmingham.

The third prize of one guinea to Mr. George Aitkens, The Gardens, Erddig Park, Wrexham, Denbighshire.

The fourth prize of half-a-guinea to Mr. J. R. Sissons, The Gardens, West Bank, Mansfield, Notts.

This competition was a most popular one, the number of essays sent in being very large. Generally speaking, the lists were rather weak, and it would appear that the term "hardy" as applied to annuals is not well understood.

The essays from the following, which we highly commend, were very good indeed: Miss Mabel Thomas, E. C. Howell, D. B. Allwork, A. E. Speer, W. West, Miss S. M. Laurie, Miss E. M. Kent, W. Latter, Miss A. Cecil Bull, W. G. Holtom, Miss H. M. Cockburn, A. W. Podger, W. Rawlings, D. E. Elder, Charles Turner, Godfrey Upton, J. Sargent, Leo. Allen, John Broadhurst, Thomas Crowe, C. W. Caulfield, E. M. Gunnell, F. W. Tooch, M. L. Dearden, A. O. Spence, Miss E. M. Keep, J. W. Canning Wright, Georgina J. Waterston, Miss E. K. Franklin, John Parr, Hugh McMullan, jun., R. E. Williams, Mrs. E. Anderson, A. J. Long, H. J. Lees, T. W. Herbert, Thomas Stevenson, E. C. Pooley, Charles H. Maskell, J. M. Callum, George Sewell and E. J. Lloyd Edwards.

CORRESPONDENCE.

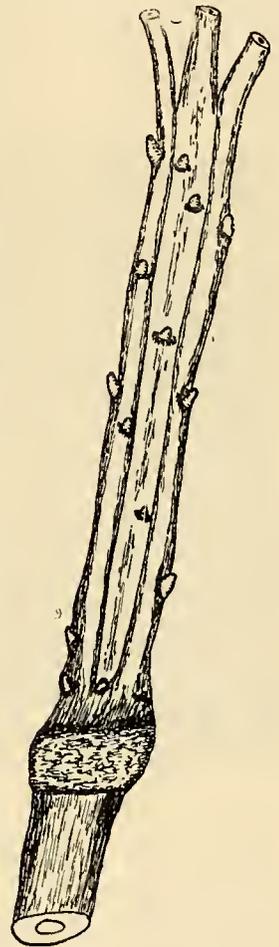
(The Editor is not responsible for the opinions expressed by correspondents.)

Dividing Daffodil bulbs.—It is the latter part of the following sentence in Mr. Jenkins's letter on this subject in THE GARDEN of January 11 that I do not think is quite clear: "Daffodils may be divided too early, to the detriment of the offset, and the same operation may also be done too late, to the detriment, *i.e.*, the subsequent progress of the offset itself." If Mr. Jenkins means by this that Daffodil roots may be lifted too early or too late or kept out of the ground too long I can, of course, understand, for in either of these cases they must suffer, but presuming that they have been lifted at the right time and not kept out of the ground too long, I think the later they are divided the better. The root selected for my sketch was one which ought to be divided; it would necessitate many sketches to illustrate every sort of root that might be divided. I chose that particular root as best illustrating my remarks on the subject, and, as I said before, the roots shown are the remains of the old ones of the last season; the new ones would not issue from underneath the bulb but from the fleshy circle outside the circle of these old roots. I think the sketch makes this clear. It is, of course, well known that the old roots shrivel up when the bulb is lifted and properly stored, but they do not disappear, and it is not wise to pull them out entirely. As I divided the root in question myself after making the sketch I may be allowed to say what sort of care was necessary. It was one which should, in my opinion, be divided immediately before planting,

since it contained the embryo rootlets referred to, and it was not one that could be safely divided in the rough and ready way Mr. Jenkins suggests, because the root base was tough and could not be severed without the aid of a knife. An attempt to pull the bulbs apart would almost certainly have resulted in the root base of one or both of the offsets being stripped off. The result of my observations is that when bulbs are held together by the root base alone it is immaterial when they are divided; great care is, however, necessary in dividing these when the root base is at all inclined to be tough. When the bulbs are joined together by the fleshy parts as well as the base these fleshy parts should never be severed with a knife, for the reason explained in my note on page 624, and the best time to divide these bulbs, in my opinion, is immediately before planting.—W. A. WATTS.

Fasciation of the Apple.—Last year was a remarkable one for fasciation of various

plants, shrubs, &c., but in no instance has such behaviour on the part of the Apple been recorded. That this noble fruit was not wanting in producing such peculiar growth is shown in the accompanying diagram, which is a true representation of a shoot taken quite recently from a tree. The growing points had been removed, probably when summer pruning or later. There is, however, sufficient evidence left to show that towards the point it again endeavoured to assume its normal form by breaking away into three separate growths. No doubt the day will come when we shall be able to definitely describe why such occurs, and it will not be surprising to find periodic seasons have a particular influence in causing such productions.—M.



Wattled hurdles.—FASCIATED GROWTH OF APPLE.

Your correspondent "R. G." can get wattled hurdles from Messrs. Coe and Son, Holt, Norfolk.

Introduction of the pink Malmaison.—With reference to the introduction of the old pink Souvenir de Malmaison Carnation into this country, you may be interested to know that my father, Mr. J. H. Martin, first saw, and subsequently grew it, at Hershani Lodge, Walton-on-Thames, Surrey (the then residence of B. F. Barton, Esq.) in the year 1872. They were year-old plants then. It was probably introduced after the conclusion of the peace caused by the fall of Napoleon and the restoration of the Bourbon Kings of France by England and the allied powers.—SYDNEY MARTIN, *The Lodge, Clarewood, Bickley, Kent.*

THE FLOWER GARDEN.

SOME OF THE NEWER CHRYSANTHEMUMS.

(Continued from page 52.)

VARIETIES mentioned in the earlier contribution were chiefly the large-flowered exhibition sorts, but in the present instance there is a goodly sprinkling of single-flowered varieties of considerable promise.

Splendour.—This striking Japanese bloom is regarded with much favour by many. It is a noble-looking flower, having broad, loosely-incurving florets that build beautiful exhibition specimen blooms. Colour, Indian red with buff reverse. Award of merit, Royal Horticultural Society.

Amarantha.—A large Japanese with broad reflexing florets of good length. Colour, rosy amaranth with silvery reverse.

Rose Pockett.—In this instance we have a very promising Japanese flower of large proportions. The colour, as defined by the National Chrysanthemum Society's floral committee, is buff yellow. The committee expressed a wish to see this variety again.

Marjorie Gouldsmith.—This is an ivory white flower of promise that the National Chrysanthemum Society's committee also wish to see again. It is a good Japanese incurved bloom, having broad petals that build a deep flower.

Maurice J. Cole.—A sport from the popular W. A. Etherington, and is regarded by some experts as identical with another sport from the same variety named Marquis of Northampton, and fully described on page 52. The colour is a bronzy yellow. The National Chrysanthemum Society also wish to see this variety again.

Bessie Evans.—This is a Japanese reflexed flower of solid build, having long, evenly reflexing florets that build a flower of good form. Colour, creamy white centre shaded bluish pink on the lower half of the flower. First-class certificate, National Chrysanthemum Society, November 18, 1907.

Henry Prior.—A pretty buff yellow sport from the popular decorative Japanese variety Mme. Gabrielle Debrie. The National Chrysanthemum Society's floral committee commended this variety, November 18, 1907.

Beacham Keeling.—This is a pretty Japanese incurved variety that the National Chrysanthemum Society's committee wish to see again. The flower is one of neat and even form, having fairly long florets of good breadth. Colour, rich buff, the inside of the florets being light chestnut.

Mab Ellis.—In this instance the flowers are of medium size and are classified by the National Chrysanthemum Society as being suitable for market purposes. The colour may be described as bright yellow. For late November displays this is a variety of promise. Commended by the National Chrysanthemum Society's floral committee, November 18, 1907.

Fochunter.—As shown before the National Chrysanthemum Society this is a rather flat Japanese flower, but its rich bright chestnut colour, with old gold reverse, makes it a very attractive variety. The florets are of medium width and incurve slightly at the ends. First-class certificate by the National Chrysanthemum Society as a market variety, November 18, 1907.

Romance.—A very useful incurved variety that evolves large and attractive exhibition blooms of good form without the need of "dressing." Florets of good breadth and substance that build a somewhat deep flower. Colour, rich canary yellow. First-class certificate, National Chrysanthemum Society, November 6, 1907.

Clara Wells.—This is a distinct acquisition to the incurved section. The blooms are large and

of beautifully even form, having florets of good length and medium width. Colour, buff yellow, paling somewhat at its apex. First-class certificate, National Chrysanthemum Society, and award of merit, Royal Horticultural Society.

Mrs. J. Hygate.—This may be regarded as the incurved novelty of the past season, notwithstanding the fact that it was first distributed as a Japanese variety. As submitted to the National Chrysanthemum Society's floral committee, it fulfilled, in every particular, the points of a true incurved flower, as defined and accepted by that committee since its inception. It is a very large flower, having long florets of good breadth, building a deep specimen for exhibition purposes. It is of massive character, though refined, and is a chaste white bloom. First-class certificate, National Chrysanthemum Society.

SINGLE-FLOWERED VARIETIES.

White Edith.—This belongs to the large-flowered single type, and is suitable either as a freely-flowered sort for decoration or disbudded for exhibition. Pure white, with yellow disc. First-class certificate, National Chrysanthemum Society, November 6, 1907.



A BEAUTIFUL HARDY ANNUAL: NIGELLA MISS JEKYLL.

C. Rolijant.—A charming addition to the large-flowered singles. The form is good and the colour a pleasing shade of rosy carmine, with a yellow disc. First-class certificate, National Chrysanthemum Society, November 6, 1907.

Crown Jewel Improved.—This is an excellent addition to the large-flowered singles, the blooms being typical specimens of the type and the florets rather broad and somewhat pointed. Colour, terra-cotta, tipped gold. First-class certificate, National Chrysanthemum Society, November 6, 1907.

E. Nottell.—A free-flowering representative of the large-flowered section. The sprays are beautiful, and these, when disbudded, evolve handsome individual blossoms. Colour, a pleasing tone of primrose yellow. First-class certificate, National Chrysanthemum Society, November 6, 1907.

Mrs. Harris.—A promising large-flowered single that the National Chrysanthemum Society's floral committee wish to see again. The colour is rich yellow, with bronzy yellow reverse.

A. Howard.—This is another large-flowered single that the National Chrysanthemum Society

commended on November 6, 1907. The florets are of medium width and of good length, and the colour is deep rose, with a yellow disc.

Elsie Matthews.—A useful large-flowered single suited alike for exhibition or for decorative uses. The colour in this instance is pale chestnut, with a yellow disc. First-class certificate, National Chrysanthemum Society, November 6, 1907.

Lillie Godfrey.—A charming flesh pink-coloured variety. The blossoms are of medium size and are borne in beautiful sprays, so useful for decorative purposes. First-class certificate, National Chrysanthemum Society, October 28, 1907.

Mrs. Chamberlain.—Another beautiful October-flowering single of rather larger size than the last-mentioned. Colour, bluish pink. Florets of medium width, neatly arranged around a well-formed disc. First-class certificate, National Chrysanthemum Society, October 28, 1907.

Exmouth Yellow.—This is a beautiful single of exquisite form, and valued because the plants come into flower in October, when there are few singles available. Colour, a distinctly pretty shade of bright yellow. Awarded a first-class

certificate by the National Chrysanthemum Society, October 28, 1907. D. B. CRANE.

LOVE-IN-A-MIST.

(NIGELLA MISS JEKYLL.)

This is one of the most beautiful of annual flowers, and should be sown between now and mid-April very thinly in the border. The flower is larger and deeper than that of the ordinary Love-in-a-Mist; the colour a rich blue, veiled over with bright green bracts. It is very easily grown, and just a simple annual flower. P.

A BEAUTIFUL NEW ANNUAL FLOWER.

(DIMORPHOTHECA AURANTIACA.)

I HAVE been expecting an article from one of your contributors on the subject of this very beautiful annual, catalogued by Messrs. Barr and Sons this last spring as a new introduction; it seems very little known. This state of things will not, I venture to think, be long the case,

for a more effective plant for a brilliant mass of colour I do not know. The flowers, as large as those of the Gazania and much the same colour, are produced in the greatest profusion, and by keeping the faded blooms cut off a constant succession is produced up to late autumn. It comes very freely from seed, and the habit is neat and bushy; it is about 12 inches to 15 inches high.

Borden, Sittingbourne. CHARLES PRENTIS.

SWEET PEAS.

VARIETIES TO GROW THIS YEAR.

THE selection of Sweet Peas given in THE GARDEN of the 15th ult., is an excellent one, like the coloured plate; but, though the latter endeavours to show the true "wave" of the latest development (not with folds like a serviette, as numerous coloured abortions have shown), the list of sorts given reminds one of the show-boards of last summer, and not of what to exhibit at this year's shows. To be explicit, there are other and better sorts—at least, in the opinion of the writer; and now invidious comparisons shall be made, solely—let it be clearly understood—in order that the best of a colour shall be grown.

Evelyn Byatt.—This does burn, and burned badly last summer; while

St. George hardly burns at all, and is a finer and larger flower.

Henry Eckford.—Almost every flower burned, and it is too small for exhibition. "Dobbie's" assert that their selection is sun-proof, and it is to be hoped so, for the colour is quite unique at present.

Helen Lewis is good, the best last year, but this year St. George will be grown in much larger quantity.

Audrey Crier, Enchantress and Miss Willmott are condemned for various reasons, and rightly so, for

Countess Spencer is by at least one grower of excellent trade reputation guaranteed as having come true for the last three seasons; and this for two seasons I can vouch for.

Audrey Crier, when shaded, is magnificent.

Frank Dolby, grown side by side with Lady G. Hamilton and Mrs. Walter Wright, does not convince one of superiority. Fours were very scarce, three being the rule.

Dorothy Eckford is the best known white here in England, but one of the greatest authorities in the Sweet Pea world has said that Burpee's White Spencer is the best white he has seen. He, therefore, who wishes the best should try both.

John Ingman is the largest and possibly the finest in its colour yet seen; of the varieties sold under this title Bolton's is the finest form.

Mrs. Collier is a splendid cream, and is not classed as a yellow. Who would dream of bracketing it with the Hon. Mrs. Kenyon, Dora Breadmore or the Primrose Spencer? Of course we all laugh at the description yellow as applied to Sweet Peas.

Black Knight, small and three flowers on a stem. In

Hannah Dale it meets its victor, for this is a large maroon. Even

Horace Wright, a violet-blue of not at all too clear a complexion and rendering twos chiefly and rather shyly, would eclipse it.

Queen Alexandra is undoubtedly the finest scarlet so far as can be seen, but it does burn occasionally, and instead of this colour

King Edward VII., quite as fine a flower, although crimson, should be grown for showing. Of course one may grow both and shade the former.

But where are the others necessary to complete the colour scheme? Have we no blues?

Lord Nelson is the best of the deep shades, and

Romolo Piazzani of the lighter; large flowers and trusses. The latter appear of the palest blue, but when left to expand for a few days the colour

deepens to a lovely shade—at least the ladies so term it.

Dora Breadmore is a splendid buff, strong grower, free bloomer and produces three or four flowers on a stem, and lastly

The Marquis, the finest mauve of all.

But what to grow for the best six or twelve levies toll on my judgment and also time during the preceding year, visiting shows and, better still, growers' gardens. Mine own twelve (and more) are expected to excel all and sundry, but will they? Here they are, with their supporters, which are grown in smaller quantity, shown in parentheses: White, White Spencer (Etta Dyke, Dorothy Eckford); cerise, John Ingman; scarlet and orange, St. George (Helen Lewis); cream, Mrs. Collier (Clara Curtis); yellow, Primrose Spencer (James Grieve); buff, Dora Breadmore; maroon, Hannah Dale; blue, Lord Nelson (Romolo Piazzani); purple, Duke of Westminster; mauve, The Marquis (Lorna Doone); edged, Dainty (Evelyn Hemus); striped, Marbled Blue; marbled or watered, Helen Pierce; crimson, King Edward VII.; violet, Horace Wright (this gives twos usually); and pink, Countess Spencer (Mrs. Hardcastle Sykes).

In all things "a good big 'un will beat a good little 'un," and Sweet Peas, unlike Roses, have no class of exhibition varieties useless, or almost so, for all other purposes. One word more. Take care that the best seed is obtained. Three seeds for 3d., or twelve for a 1s., good and true, are better than an ounce of doubtful ones for the same money.

St. Albans.

W. B.

TULIP LA MERVEILLE.

LA MERVEILLE is one of the beautiful May-flowering Tulips that have come to us from France. It was first shown at the May show of the Paris International Exhibition in 1900 by MM. Vilmorin-Andrieux et Cie. In the following issue of the *Revue Horticole* it was mentioned as one of the best novelties there. There is no doubt that the future has borne out the favourable opinion of the flower which was then formed. By sheer merit it has slowly made its way in the gardening world, until to-day it is regarded as one of the best of all May-flowering Tulips. It is a "Parisienne" in every sense of the word. No Tulips in that graceful and pretty group have properties which are more in accordance with the *raison d'être* of their characteristic name than La Merveille. They are as a class tall-growing flowers of a longish and mostly reflexed shape, with pretty colouring. Jaune pur (Parisian Yellow) and La Vierge (Picotee) are two well-known flowers that belong to this same group. La Merveille has many points in its favour; it is sweet scented and has a beautiful orange red colour with a clear yellow zone at the base of the petals. In shape it is what is often called in English lists "pitcher-shaped," that is, the flower narrows about two-thirds of the distance from the bottom, and then arches out again at the top. It is very hardy and stands both wind, rain and sun remarkably well. Except when the latter is very hot it generally retains its graceful appearance, and, although it looks somewhat delicate and fragile, it remains in perfection for a considerable time. I find in taking people round my garden that it invariably attracts their attention, and I can quite believe Mr. Hartland's description of it in his Tulip list as "quite the lady's fancy at Ard Cairn." I need hardly add that it is splendid as a cut flower. Its long, wiry stems and pretty reflexed petals lend themselves to artistic arrangements in vases. Some three or four years ago La Merveille "broke" in certain gardens, that is, its uniform self colour became changed into stripes of orange red and yellow. I have not seen it in its new dress yet, but I have bought some bulbs of La Merveille panachée (broken), and one of my excitements of the coming season is to see how it will suit its graceful wearer.

JOSEPH JACOB.

TREES AND SHRUBS.

THE GORSE.

PROBABLY no indigenous plant is more neglected than the common Furze or Gorse (*Ulex europæus*), and yet there is nothing more beautiful or useful in certain positions. Where the ground is so poor and stony that it will hardly grow anything else, the Gorse will thrive and produce a wonderful display of golden yellow flowers for practically half the year. It is a common plant among the Heather in this district, and I have seen it more or less in bloom all the year round, except during very severe weather. It is a difficult subject to transplant, and should be obtained in pots if plants are desired, or a better plan is to dig the ground over roughly and sow it with seeds. Two year old seedlings are fairly successful if planted out during showery weather in April. They are usually from 6 inches to 1 foot in height at that age, and should be cut back to within 3 inches of the ground when planted. By doing this they are not so exposed to drying winds, and if care is taken to plant them well, 60 per cent. or 70 per cent. of them will live. When once established growth is very rapid, and they soon make a good show. Old Gorse that has become ragged and weak can be improved by cutting it back to the ground and inducing a fresh growth entirely from the bottom. If Gorse or common Broom were more freely used in rough places, many a spot would be beautified that is otherwise unsightly. The double Gorse (*M. europæus* var. *flore-pleno*) is a dwarfer and bushier plant than the type, and bears double flowers of the brightest golden yellow colour. This is raised from cuttings of half-ripened wood struck in cold frames in August, or of fully-ripened wood outdoors in October, and is always transplanted from pots, as it is quite as impatient of removal as the type. A bed of this plant is quite as effective as some of the subjects used for bedding, and much more easily grown. At Kew it is now being used very extensively for filling up spaces where the soil is none too good, large quantities of plants being propagated a few years ago. The Irish Furze (*U. europæus* var. *strictus*) is an upright-growing form with single flowers. It is no improvement on the type, and is also more tender.

Hedges of Gorse are very effective and also ornamental, and it is rather a pity that we do not see it more often used in this direction. In some country districts the Gorse is cut during the winter and wattled into thick hurdles to be used as wind breaks for various purposes, its dense bushy habit rendering it especially suitable for this work, the only drawback being the number of spines that are produced on the branches.

Bagshot, Surrey.

J. CLARK.

THE TWELVE BEST WALL PLANTS.

(Continued from page 103.)

THE VIRGINIAN CREEPER (*Vitis inconstans* syn. *Ampelopsis Veitchii*).—As a deciduous shrub the same may be said of this as of the Ivy as an evergreen, for it thrives in almost any position, is ornamental throughout the summer, and during autumn is gorgeous by reason of the bright colours affected by the foliage. It climbs without assistance, is held firmly to the wall by its tendrils, and gives no more trouble than an annual cutting back.

The Fire Thorn (*Cratægus Pyracantha*).—This is known better, perhaps, under the simple specific name of *Pyracantha*. It is a first-rate wall plant though strictly a bushy shrub. When kept cut fairly close back to a wall its dark evergreen leaves are effective, while it is of neat appearance. In addition to its general green effect it has two periods of extra beauty, one in May, when covered with its large flat heads of white flowers, and again in autumn and winter,

when laden with its profusion of rich orange scarlet fruits.

Wistaria.—For the front of a house, either alone or in conjunction with Ivy, the *Wistaria* is excellent; in fact, it is one of the most ornamental climbing plants we possess. If given good soil when first planted, it grows rapidly, and may be depended upon to bloom freely each year. Until the branches have covered their allotted space they should be trained up two or three times a year, cutting away the weak points of the shoots in spring; after a good foundation of branches has been laid, however, vigorous pruning in July and again during winter may be resorted to, with the end in view of obtaining short, well-budded spurs, from which an abundance of the lovely racemes of fragrant lilac flowers will be produced during May and June.

Escallonia macrantha.—Should a site be available on a south or west wall, this lovely flowering shrub might well be introduced. Although quite hardy in many counties, it is not to be depended on in the open ground everywhere; with the extra protection, however, afforded by a wall it becomes quite safe. As an evergreen it has much to commend it, but its most pleasing period is during late summer and early autumn, when laden with its short racemes of pretty rose-coloured flowers. By pruning the breast wood fairly close back in April the plant is readily kept within bounds.

Clematis montana.—Although most of the decorative sorts of *Clematis* are valuable for clothing walls, there is nothing more beautiful than the Himalayan Mountain *Clematis* when covered with its glittering, starry white flowers in May. A strong and vigorous grower, it thrives under a variety of conditions and is not subject to the distressing disease that so often proves fatal to the garden *Clematises*. It quickly covers a large area, forming long shoots annually, from almost every bud of which flowers are produced. To keep it within bounds it is necessary to cut the young wood hard back as soon as the flowers have fallen. Should variety be required, a form called *rubens*, with reddish flowers, has recently been introduced from China.

Hydrangea petiolaris.—It is curious that this Japanese *Hydrangea* has not been made more use of in the past for covering walls, for it is of rapid and compact growth, and a self-clinger, fastening itself to its support by means of aerial roots after the manner of the Ivy. The leaves are deciduous, but after their fall a rather bright effect is produced by the brown bark. The flowers are in large flat cyma in July and August, a goodly number of fertile and a few larger and more conspicuous sterile ones composing each head. Pruning consists of trimming back breast wood in spring.

The Winter-flowered Jasmine (*Jasminum nudiflorum*).—A charming effect is produced by this plant when covered with its pretty golden flowers from December to February. It may be planted in any aspect, and always blooms well. The branches should be cut well back as soon as the flowers have fallen.

The Jasmine.—This is the summer-flowering *Jasmine*, and admired by all on account of the fragrance of its pure white flowers, which are produced over a period of two or three months.

It thrives best in a sunny position, and should be well thinned out each spring, taking care to retain a fair amount of young wood yearly. Left to grow naturally it forms a picturesque tangle.

Cydonia japonica.—In some parts of the country this is essentially the cottager's wall plant, and is generally spoken of as "*Japonica*." Trained against a wall it readily attains a height of 20 feet, and by being kept well spurred back during summer it rarely fails to produce an abundance of scarlet flowers in spring. The variety *cardinalis* is exceptionally rich coloured.

Garrya elliptica.—This evergreen shrub does not require very severe pruning to be had in its best condition. It is well suited for planting in the angle of a wall, where it can be allowed a certain amount of freedom. Apart from its



TULIP LA MERVEILLE.

evergreen leaves the long, pendulous catkins of yellowish green flowers are very conspicuous in March.

Cotoneaster microphylla.—Though it is not usual to plant this against a high wall, it will under favourable circumstances surmount one 20 feet high. It forms a compact green surface, and is very effective in May when covered with white flowers, and again in autumn when laden with vermilion fruits.

This completes the list of twelve of the best subjects for walls. Of course, many first-rate plants have had to be omitted which would be in every way desirable. Roses, for example, are not mentioned, but for general purposes those referred to will hold their own anywhere.

W. DALLIMORE.

THE GREENHOUSE.

POTTING YOUNG PLANTS FOR BEDDING.

YOUNG plants of Geraniums, Marguerites, Heliotrope, &c., which have been wintered in pots, pans or boxes should now be potted off singly into 3-inch pots. Although these plants do not need a very rich compost at this stage, care should be taken to give them a suitable soil, moderately light, and, above all, made porous by a free admixture of sand. The soil when used should be neither too wet nor too dry; also see that it is of a suitable temperature. A cold, wet soil must never be used for potting. When

potting off carefully preserve all the young roots and remove dead leaves and flowers. The pots should be perfectly clean and dry before they are used. Pot rather firmly. Arrange the plants in the greenhouse or heated frame, where they must remain until they have made new roots. For the first few days they must be kept close, and in some instances it may be advisable to provide a slight shade during bright sunshine until the plants become established. Spray overhead frequently should the weather be bright, and apply water to the roots by means of a fine-rosed watering pot when the soil in the pots shows signs of getting dry. When the plants have recovered and are beginning to root into the fresh soil, admit air gradually at first, but increase the amount as the season advances. In many gardens all the glass structures are crowded at this season, and the individual plants are apt to suffer somewhat from this cause unless they are frequently rearranged and all dead leaves, &c., removed. This rearrangement will also prevent the roots pushing through the drainage hole into the bed of ashes beneath.

C. R.

SCENTED-LEAVED PELARGONIUMS.

(Continued from page 102.)

As stated in a previous article, the Cape species of *Pelargoniums* are commonly known as *Geraniums*, and one is often asked how the two genera are distinguished. There are several technical differences, the most essential being in *Pelargoniums* a somewhat woody stem, petals of unequal size, and the presence of a tube containing nectar running down and attached to the flower-stalk. This nectary

is not noticeable to the ordinary observer, but can be clearly seen by cutting across the flower-stalk just below the bloom. The stamens are ten in number, but usually three or more are abortive, and are not furnished with anthers. In *Geraniums* the corolla is regular, that is, the flowers have five petals of equal size, the nectiferous tube is absent, and the ten stamens are all fertile. At Kew there are about fifty species of *Pelargoniums* in cultivation, all natives of South Africa, with the exception of *Pelargonium Drummondii* from Australia, and *P. Cotyledonis*, a native of St. Helena.

CULTIVATION.

The plants may be propagated by means of cuttings, taken from tolerably firm wood, inserting

*Quercifolium minor.**Tomentosum.**Ordinary variety.*

FORMS OF SCENTED-LEAVED PELARGONIUMS.

them in light sandy soil at almost any season of the year, but probably spring or late summer are the more suitable seasons. The cuttings, from 2 inches to 3 inches long, should be cut off at a joint and have the lower pair of leaves removed; they are then firmly inserted in the soil, and will quickly root in a temperature of about 60°. Little water will be needed until new leaves begin to appear. For their subsequent culture a mixture of turfy loam with a little leaf-mould and decayed manure is suitable. Pots of too large dimensions should be avoided; specimen plants of fair size may be grown in pots of 5 inches or 6 inches diameter. In spring the plants should be placed in a little warmth to encourage new growth, and afterwards transferred to a cool house or frame to flower. When flowering is over it is advisable to expose them to sun and air so as to get the wood hardened before the winter. They may be stored in a cool house or frame during winter months, when little water need be given them. The following sorts have leaves resembling those of the common Pelargonium, but in most cases are delightfully fragrant, and the flowers of not a few are bright and attractive.

P. capitatum (the rose-leaf Geranium).—This and other species are largely cultivated in the South of France, Algeria, and South of Spain for the sake of their fragrant oil which is distilled from the leaves. The oil is the basis of many favourite perfumes, and is said to be used as a substitute for Otto of Roses. The plant has weak and trailing stems furnished with long white hair, the heart-shaped leaves are three to five-lobed, the lobes rounded and toothed. The rose-purple flowers are borne in dense clusters on stalks longer than the leaves. The whole plant is Rose scented.

P. odoratissimum (the Nutmeg Geranium).—This also is cultivated for the sake of its essential oil. The plant has a short stem which produces many weak branches from its base. The leaves, provided with long stalks, are heart-shaped at the base and three to five-lobed with rounded toothed margins. The flower-stalk originates opposite a leaf, and bears from five to ten small white flowers in an umbel. The plant sometimes met with as *P. fragrans* is probably a form of this species.

P. quercifolium (the Oak-leaved Geranium).—This species or forms of it are frequently seen in cottages. The leaves, broadly heart-shaped in outline, are furnished with two to three pairs of oblong side lobes, and often have a back spot in the centre. The red or purplish flowers are

produced, several in an umbel, on rather short stalks. The variety minor is smaller than the type.

Fair Helen is a large Oak-leaved variety with rose-coloured flowers.

P. tomentosum.—A thick plant covered all over with white soft velvety hairs. The long-stalked leaves are broadly heart-shaped in outline, with three, five or seven lobes, the margins of which are toothed and notched. The flowers, produced in a loose panicle, are white, with red near the centre. The whole plant is strongly Peppermint scented. The variety lobatum has its leaves more deeply cut than the type.

Dale Park Beauty.—A very fragrant variety.

Duchess of Devonshire.—Flowers bluish white with a maroon blotch.

Prince of Orange.—Leaves orange scented.

Rollison's Unique.—A handsome free-flowering sort with purplish crimson flowers.

Scarlet Unique.—Flowers dull crimson with a maroon blotch; very free.

Shottesham Pet.—Rosy purple flowers; delicately perfumed leaves.

Mrs. Douglas.—A variety with rich mauve-coloured flowers, the upper petals blotched with maroon.

R. SPOONER.

COLOURED PLATE.

PLATE 1344.

GOOD PEAS FOR SUMMER AND LATE SUPPLIES.

EARLY in the year I noted some of the best early Peas, and will now briefly deal with the value of later varieties, at the same time mentioning a few of the best sorts for exhibition, as a correspondent asks for some information on this point. Fortunately, there are a great number of splendid varieties to select from. Soils greatly influence the summer and autumn crops, and many fail to get the best results. For instance, we are asked what would be a reliable Pea for exhibition the last week in August; and that could readily be answered if it was a mere question of variety, but the cultural conditions are even more important, and no grower who exhibits would rely upon a single sowing for a certain date, as the plant is so much influenced by the weather and the nature of the soil.

SOIL AND SITUATION.

Peas often do fairly well with only ordinary culture, and therefore, when there are failures, the right cause is not considered. The seed is blamed, whereas the soil or cultural conditions are probably at fault. For instance, in a dry summer, with a shallow soil resting on gravel, there are often failures. Here the soil must be made good by digging out trenches and replacing the poor soil with good and a liberal supply of food. Our best exhibitors prepare the land some considerable time in advance of sowing, and rely upon deep cultivation and liberal supplies of food. They also sow thinly and in an open position, and if pods are required for a certain date one sowing is not relied upon. If good dishes are required at the end of August from light soil, instead of one sowing, say, the early part of June, we advise two or three, one ten days earlier and another as much later. There will not be a waste of seed, as a longer succession of good pods will result. In heavy land with a good depth of soil, well enriched with manure, two sowings would suffice, say, the first at the end of May or early in June, and the second a fortnight later. One of these would give the crop at the time required if the land was in good condition, the position open, and a good plant secured at the start.

LATE CROPS.

I have touched upon the season asked by our correspondent, but pods are often required later.

*Scarlet Unique.**Lady Scarborough.**Dale Park Beauty.**Fair Helen.*

FORMS OF SCENTED-LEAVED PELARGONIUMS.

THE FRUIT GARDEN.

FIG TREES IN POTS.

WHEN grown in pots, the Fig is one of the best fruits we have. Naturally the tree is inclined to make a too strong growth, but having the roots restricted it is brought into bearing when very young. In later years it can be fed liberally, and produces fruit freely from the short growths made yearly. The tree illustrated shows how fruitful it is under pot culture.

Varieties.—Brown Turkey and Negro Largo are excellent, and of the newer ones, St. John's, a fair-sized green fruit with white flesh, very sweet

the trees in the spring, that is, placing them in a cool place or under a north wall, had the fruits well into December. It will be seen how useful these fruits are, as it is not easy to force the early green varieties named above, and get good fruits in March or even earlier. The Brown Turkey is valuable for a succession. This may be had in splendid condition from May to October, and it is one of the best for its free cropping; it bears a good second crop. Negro Largo is much shyer, but it may be had some months later.

Some of my readers may like the small sweet Figs grown in Spain, such as the Early Violet. These bear large crops in pots, and force readily with little trouble. The White Ischia is another delicious smallish white fruit, an enormous bearer; when quite ripe the flesh is pale yellow and of delicious flavour. This bears two or three crops in a year, and requires severe thinning. The

Brown Ischia also is excellent, and somewhat similar to the others named. The Angelique, or Madeline as it is also named, is an early good fruit of peculiar shape, and forces well. The

CULTURE OF THE VARIETIES NAMED,

to give a long succession of fruit, say, from March to December, is by no means difficult; but in a small state the grower must be careful not to have too much root space at the start. I also prefer the plants grown on a single stem, as then it is easier to keep down sucker growths. The Fig should have some good loam, with a liberal addition of fine old mortar rubble or wood ashes mixed in the soil. Firm potting is essential, and as what are called yearling trees can be got at such a small cost at the start from the growers, these potted on will fruit the second season; but they make good plants the following year, and fruit for many years.

At the start 7-inch or 8-inch pots are large enough—I mean for the first fruiting season—and later on, when a shift is required, the smallest possible size should be given, as a liberal portion of the old surface soil and lower roots may be removed as the plants attain age. I like to repot early in the autumn, some time before the leaf drops. It is not necessary to repot yearly when a good-sized plant is obtained, say, every other year, giving a rich top-dressing and using bone-meal and good manure freely for the purpose. After the crop is over it is a good plan, say, from July to October, to place the trees in the open, but those forced the earliest must be kept growing under glass to

get well-matured wood till the wood is ripened.

To get ripe Figs in March start the trees in November, and the early sorts named are valuable for hard forcing; 50° to 55° in mild weather is ample, and if a mild bottom-heat can be given the plants soon respond. Close stopping of the shoots is important, as these shoots are the fruit-bearers another season. With pot trees it is a good plan to remove weakly spray growths and not crowd the leading shoots. As the fruit swells more warmth can be given, also food in the shape of liquid manure. At all times the grower must be careful in watering, as with a good number of fruits liberal supplies are required. If the roots get dry the trees cast their fruits badly. Trees to fruit in the early summer months should be started in March, and later for a succession. G. W.



POT FIG TREE BEARING A GOOD CROP.

and juicy and remarkably early, and Pingo de Mel, which is another of the early kinds and very similar to the St. John's in growth and earliness. This variety has yellowish flesh and large green fruits of good quality when its earliness is considered. Nubian is a fine black fruit, late and remarkably rich, and the Bourjassote Grise has rich dark red fruit. Osborn's Prolific and Brunswick are good pot varieties, the last two being mid-season or earlier than the Nubian and Bourjassote Grise.

Doubtless the best all-round pot Fig is the Brown Turkey, a large brownish purple fruit of excellent flavour and earlier than the Negro Largo. I have always found the large dark red varieties, like the last-named, are longer maturing their fruits, which thus makes them more suitable for late supplies. I have, by retarding

Much of the advice given above is applicable as regards soil and culture, and in gardens with a good depth of soil Peas may be had very late in the northern part of the country. I have had regular supplies well into November, but the rows, to do them well, must be a good distance apart to allow all the light possible to reach the plants, and they must be situated on a good sunny, open border. Some varieties are what are termed continuous croppers, and better adapted for late supplies than others, as they continue to form flowers and set pods at the upper portion of the plant. For late supplies in a poor soil trenches are most valuable, as plants growing in these can easily get the moisture required.

EXHIBITION VARIETIES.

This is a point I am asked to refer to, and there are some splendid things to select from.

For July and August.—Last season, at the great Shrewsbury show, on August 24, the first prize for Peas in a very strong competition went to Sutton's Centenary, a splendid marrowfat variety averaging ten to twelve Peas in a pod. Another very fine Pea is Sutton's Peerless Marrowfat, and Sutton's Magnum Bonum is also good. These are splendid for exhibition and of grand quality, size and reliable in every way. The newer Carter's Quite Content, one of the longest podded marrowfat Peas in cultivation, is a superb variety for exhibition; it may be termed a giant, and was one of the leading prize-winners last season. This variety was raised by Mr. E. Beckett, and distributed by Messrs. Carter and Co., High Holborn. The coloured plate given with this issue will enable readers to gain a good idea of the size of the pods. Carter's Exhibition is also splendid, it being a 5-foot Pea of the Telephone type. A later marrowfat of fine size and shape is Carter's Dreadnought; this is of dwarfier growth, usually reaching 3 feet in height. No list would be complete that omitted that fine Pea Edwin Beckett, sent out by Messrs. Cutbush. It is a grand Pea, having nine to eleven Peas in a pod, and it does well with ordinary garden culture. A very reliable exhibition variety is Veitch's Prodigy, a 5-foot high Pea having a robust growth and large handsome pods, each containing nine to eleven Peas, and these of splendid quality. Veitch's Prestige is also a remarkably handsome Pea of medium height for July and August.

LATE VARIETIES.

These are different in some respects from the exhibition varieties, and find more favour with growers who have a fair depth of soil. Veitch's Autocrat is a splendid late 4-foot Pea of the Ne Plus Ultra type, and it has a splendid constitution. Chelsonian may also with advantage be included in this list, as it is one of the best for late supplies. Carter's Michaelmas is an excellent late Pea, and I have had it good till the end of November; it is remarkably free from mildew, is 2½ feet high, and is very prolific and of splendid quality. Other late varieties of special merit are Sutton's Windsor Castle, a robust grower of splendid quality, and Sutton's Continuity, a late Pea of rich marrow flavour and a continuous cropper. Sutton's Late Queen and Latest of All complete the list; both are grand autumn varieties. G. WYTHES.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

WINDOW GARDENING. — As the plants indoors are growing more vigorously, I am watering more freely than formerly. Ferns in pots, if they are root-bound, need pots of larger size to do well. Old Geranium and Fuchsia plants are now ready for repotting; I propose therefore to do this at once. India-rubber Plants, Aralias, Palms and Aspidistras (Parlour Palms), &c., all so valuable for window decoration, should be repotted at this season. When repotting see



1.—SET WITH BAD SPROUTS; THE RESULT OF KEEPING TUBER AWAY FROM LIGHT.

that the old soil and roots are thoroughly watered some time beforehand, so that the whole ball of soil and roots get well moistened. Plants that are very dry stand in a pail of tepid water for some time. The surface soil in Fern cases in the window should be renewed. I find it better just to remove the loose soil, replacing this with a mixture of loam, leaf-mould and peat in equal parts and plenty of silver sand, all well mixed.

Cold Frames.—Some of the earliest Lilies are starting into growth, and for this reason should be removed from the plunging material and placed either in the cool greenhouse or cold frame; the latter should be much in demand at this season. For hardening off Chrysanthemums and numerous seedlings raised during the past month frames are indispensable. Take care, however, not to allow draughts to prevail, otherwise the occupants will suffer. For some time to come protection must be afforded the frame-lights at night; in fact, at all times when there is a prospect of frost. By carefully manipulating the frame-lights and making the occupants of the cold frame comfortable I invariably raise a fine lot of sturdy plants. Top-dress Auriculas that are in pots; a good soil for this purpose is equal parts of decayed cow manure and loam, rubbed through a sieve to break it up. This top-dressing gives a much-needed stimulus to the flower-apikes that are now fast developing.

The Greenhouse.—Cuttings of Fuchsias, Geraniums, Heliotropes and Petunias may be inserted. I always put in a batch of cuttings in March, as they make charming plants by mid-summer. Any light sandy soil may be used for propagating purposes, and the cuttings should be inserted around the edge of some of the smaller-sized pots or in shallow boxes. Take care to press the soil to the base of each cutting. I am making another sowing of the better half-hardy annuals. All that is needed is a gentle bottom-heat; a hot-bed is also useful for the same purpose. Cannas may be sown now. I find it better to soak the seeds for twenty-four hours before sowing, also taking the precaution to make a notch in the shell; a file or knife will do this. Sow the seeds singly in 2½-inch pots or those a trifle larger, using soil composed of two parts loam and one part leaf-mould. To germinate the Canna seeds a bottom-heat of something like 70° is necessary. Seedling Petunias, Heliotropes, Perilla, Nicotiana and similar subjects should be pricked off forthwith. Light sandy soil that has been passed through a quarter-inch sieve is suitable for the seedlings. Pans, boxes or pots may be used, and after being filled with the seedlings should be given a warm corner of the greenhouse to get established.

The Hardy Flower Garden.—This should be a very busy period. Hardy Ferns may be planted forthwith, and among the numerous hardy flowering plants that need to be planted without the least delay I am taking in hand the following: Carnations, Sweet Williams, Pansies and Violas, Delphiniums, Hybrid Pyrethrums, Solomon's Seal, Lilies of the Valley, London Pride and quite a host of beautiful hardy plants that are indispensable in all gardens. Continue to plant Gladioli in beds and borders, arranging them in groups for effect and planting 4 inches deep and about 4 inches apart from one another. The better hardy climbing plants may still be planted. I have made good use of the Clematis, Honeysuckle, Roses, Jasmine and similar subjects for covering arches, pillars and arbours.

The Vegetable Garden.—I am making sowings of different vegetables for succession—Broad Beans in drills 3 inches deep and 2 feet to 3 feet asunder, Main Crop Onions, Parsnips, Carrots, Early Milan Turnips and Cabbage. Second Early Peas should be sown now. Main Crop Potatoes should have the sets placed 7 inches deep and 15 inches to 18 inches asunder in the rows, the rows being 2½ inches to 3 inches apart.—D. E. C.

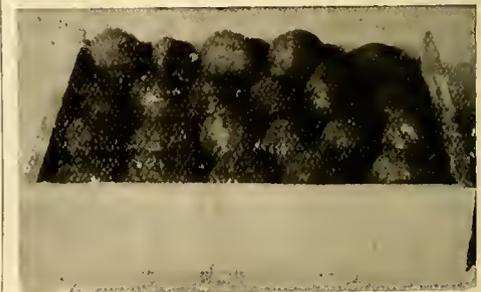
SPROUTING MAIN-CROP POTATOES.

THE sprouting of main-crop Potatoes is a practice generally more honoured in the breach than in the observance. Earlies and second earlies are sprouted by the careful cultivator as a matter of course, but the main-crops are often deprived of their shoots as they form, simply because planting time is still some way ahead; or if left on they are left severely alone, so that they often present the appearance of that shown in Fig. 1. Such shoots are worthless, and one had better be without than with them; weak and drawn to start, they give weak and drawn leafy shoots, and the crop of tubers is a poor one. Instead of leaving maincrops to their own resources, cultivators would do well to give them just as much attention as is now deemed to be the rightful prerogative of the first and second earlies, for they will repay the trouble expended tenfold. It is a fact but little realised that the character and number of the sprouts on a Potato set largely determine the character and number of

the tubers yielded as crop; yet such is the case, and the cultivator can have—within reasonable bounds—either large or small tubers for his crop, according to the manner in which he manipulates the sprouts on his sets.

The first step to this is to set the selected seed tubers on end in a shallow box, as shown in Fig. 2. The illustration shows a box of Up-to-Date, still one of our very best main-crops, though a little more liable to disease than some of the newer sorts. As may be seen, the tubers are rather large, and the selection of good-sized sets is always advisable with varieties that naturally run large. Thus, 2oz. tubers should be regarded as the minimum size for Up-to-Date, the range extending from that weight to 3oz. To prevent the tubers from making the kind of sprout shown in Fig. 1 they should be stood on end as soon as possible, always keeping the large, or rose, end uppermost, as it is from thence that the best sprouts are produced. The box should be stood in a light but frost-proof place, and should not be covered up at all, excepting in very severe weather. If covered, the sprouts become drawn and weakened, whereas the aim should be to keep them sturdy and semi-tuber-like.

In a very short time the tubers, if well exposed, should resemble that shown in Fig. 3, sprouts of varying strength being produced from all the bold eyes. In practice it is found that a tuber planted with all its sprouts retained gives a mixed crop, in which small tubers preponderate. The sprouts nearest the surface in planting commence growing first, so that the tubers coming from them have a start of those from other shoots which have to travel farther in order to get to the light, and this gives inequality of size; the fact of many sprouts being retained causes a weakening of the whole, and this accounts for the tubers being small. With fewer sprouts, and those on the top of the tuber or set, growth commences much more evenly, and as the strength of the tuber is concentrated on a minimum number of shoots, the shoots become much stronger, and the tubers are consequently larger. Many shoots, many but small tubers;



2.—BOX OF TUBERS SET UP TO SPROUT.

few shoots, fewer but larger tubers may be taken as a Potato-growing truism.

Taking it for granted that a crop of good-sized tubers is most generally desirable, all the sprouts on Fig. 3 are rubbed off, with the exception of two, or perhaps three, at the top end. Fig. 4 shows a tuber so dis-sprouted, and it also shows clearly the correct—i.e., the large—end at which the aprouts should be retained. Only two sprouts are retained in the example illustrated, and that number is generally sufficient. It may, however, be found that other sprouts will push at the side of the two retained—from the same eye or basin—and these must be rubbed out as they show, leaving the two sturdy central sprouts



3.—TUBER SPROUTED NEAR THE GLASS, BUT CARRYING SUPERFLUOUS SHOOTS.

in sole possession. Such shoots will be anything from half an inch to 1 inch long by planting time, which should be the early part of April. If the shoots show a tendency to become drawn and weakly before the ground is ready for their reception, the box should be stood in a shed having a northern exposure to retard growth a little.

SOWING ANNUALS IN THE OPEN.

Not a few amateurs are apt, when reading instructions about sowing and raising annuals under glass, to imagine that they cannot be successfully sown and raised in the open garden, and consequently those that have no glass at their disposal refrain from growing these beautiful subjects, or, if they do grow them, deem it necessary to purchase the plants. While glass culture in their early stages has much to commend it in connexion with annuals, practically all can be sown and raised in the open with good results, providing a little care is exercised when carrying out the work.

In the first place we must determine for what purpose the plants are required, and then plan our operations accordingly. Generally speaking, annuals are used for two purposes, namely, the filling of beds and the filling of blank spaces in borders. Taking the last-named purpose first, it is usually advisable to sow the seeds where the plants are to flower, thinning the seedlings as soon as they are large enough to handle. Now the seeds of the majority of annual flowers are very small indeed, and to sow them in the open border with only ordinary preparations is, in most cases, a sure road to failure. In the majority of flower borders, especially where the soil is heavy, the ground is none too friable, and the following method should be adopted to ensure success.

Mix up a barrowful of good soil similar to that used for filling seed boxes, two parts good loam and one part sand, with a good sprinkling of leaf-soil if the latter is procurable, forming a good mixture. Pass this through a half-inch meshed sieve. Then with a spade scoop out the original soil of the border where it is desired to sow the annuals to a depth of 2 inches, and fill in the depression thus made with the prepared soil. Make this fairly firm and sow the seeds thinly on the surface, covering them very slightly in the case of tiny seeds and deeper in the case of comparatively large ones. Water with a fine-

rosed can, and then stretch strands of black cotton across the patch rather thickly a few inches from the surface, fixing them to sticks to keep birds at bay. Should dry weather prevail afterwards, water each patch as often as may be deemed necessary, never allowing the soil to become very dry and using a fine-rosed can for the purpose. It is when the seeds have just sprouted, and before the tiny root has grown enough to penetrate the soil, that the most damage from drought results. If the above precautions are taken, the majority of annuals can be raised satisfactorily in the open border.

Where beds are to be filled with annuals the above plan has its drawbacks. It will frequently happen that at the time when the annuals need to be sown the beds in question will be occupied by other plants, and the cultivator cannot therefore sow the seeds where the plants are desired to flower. This is where a reserve bed or two in some open yet inconspicuous part of the garden will come in useful. Place on this reserve bed a 2-inch or 3-inch thick layer of the soil mixture advised above, and in this sow the seeds, treating them exactly as advised for those sown in the border.

It is when the seedlings appear that we must vary our border system. Instead of thinning them out early, lift them carefully with a fork as soon as they have made a few true leaves, watering them well one evening and lifting them the next. Then into another bed of prepared soil prick out the seedlings 2 inches to 3 inches apart in the row, and allow a distance of 6 inches between each row. Water in well with a fine-rosed can, and if the weather is sunny shade for a few days with brown paper, leafy branches stuck in the bed, or any other material that may be handy. By adopting this system the plants will soon make a mass of fibrous roots and will prove most useful for filling beds and making good any blanks in the border. Of course, they will be later than those sown and raised under glass, but in many gardens this is an advantage rather than otherwise.

ANNUAL NASTURTIUMS.

The annual Nasturtium, or *Tropaeolum majus* as the botanists call it, is regarded by many as a common subject to be relegated to some obscure portion of the garden, or not worthy of a place at all. Why this should be so is hard to conceive, unless it is that its easy culture makes but little demand on the intelligence of the cultivator. With a little care in the selection of varieties and site for the plants there is hardly another annual that will give such a brilliant display of flowers for so little outlay of money and time.

The plants are represented by two distinct sections, viz., the Tom Thumb or dwarf and the climbing. The former are excellent for filling beds and blank spaces towards the fronts of borders, while the latter are admirably adapted for climbing over trellis work, wire netting, unsightly hedges, over clumps of Pea sticks in the border, or as a trailing or climbing subject for window boxes. The culture of both types is the same. For all ordinary purposes the seeds are best sown where the plants are to flower, and as the latter are very susceptible to frost, the end of April or the beginning of May will be soon enough to sow.

As regards soil, the one thing to specially avoid is heavy manuring. If this is resorted to, enormous stems and leaves will be produced at the expense of flowers; also very light and dry soil should be avoided. The plants will grow in such soil, but their flowering period is considerably curtailed. With these two exceptions, the plants will thrive in any soil that is likely to be encountered in gardens. For filling beds sow the Tom Thumb varieties 9 inches apart each way, placing two seeds in each hole and allowing the two seedlings to remain and grow together. The reason for this is that when the plants flower there may be one or two not true to colour, and

these can then be removed without making a gap in the bed. Two inches is a good depth to sow; the climbing varieties should be sown 1 foot each way.

After-culture will consist in keeping down all weeds, supplying abundance of water during dry weather, and, above everything else, picking off the seeds as soon as the flowers have fallen. The seeds make an excellent substitute for Capsicums if placed in vinegar as gathered. If the above instructions are persistently carried out, these plants will provide a glorious display of flowers until frost kills them. The following are excellent varieties in the dwarf section: Carter's Cloth of Gold, yellow foliage, bright scarlet flowers; Empress of India, deep slate-blue foliage, rich crimson-scarlet flowers; and Ruby King, green shaded foliage, bright ruby-coloured flowers. Besides the foregoing and many others, there is a variety now in commerce with handsomely variegated foliage. The climbing varieties are usually grown in mixture, but crimson, scarlet and yellow varieties can be obtained.

RAISING ST. BRIGID ANEMONES FROM SEED.

This lovely Anemone should be grown in every garden. The flowers are large, semi-double, very freely produced, and of various colours. The foliage is also extremely pretty, setting off the flowers to perfection while they are growing, and is well suited for mixing with them in vases in place of Fern fronds or other foliage.

If seeds are sown in a prepared border in April the resultant plants will bloom the same year. If the soil is naturally light and sandy it will suit the Anemone very well; but if it is of a heavy, retentive nature, then it will be advisable to mix plenty of leaf-mould, sand and light soil from the potting shed with the ordinary surface-soil wherein the seeds are to be sown. Open out drills 18 inches apart on deeply-trenched and well-manured ground. As the seeds adhere together, they must be mixed with dry sand and then be gently rubbed in the hands to separate them. Sow the seeds thinly about 4 inches apart in the drills, and cover them with fine soil half an inch deep. An open, sunny border is the most suitable for these plants. All that is needed during the summer is to keep the surface-soil loose and free from weeds by hoeing, and also to give water freely in very dry periods. AVON.



4.—TUBER PROPERLY SPROUTED, WITH ALL BUT THE TWO TOP SHOOTS REMOVED.

THE TOWN GARDEN.

PERENNIAL PLANTS.—These are the mainstay or backbone of any garden, whether it be in town or country. In their ranks are numbered all the hosts of Roses, Chrysanthemums, Carnations, Dahlias, Pansies, Violas, Michaelmas Daisies, Irises, Pyrethrus and scores of others which do so much to beautify the garden year after year once they are properly planted. It is obvious, then, that a garden, to be worthy of the name, must contain a good proportion of perennial plants, or, as they are frequently called, hardy herbaceous plants. As herbaceous is a somewhat puzzling word, I will just mention that it strictly means herb-like, and is applied to plants whose stems or top growth die to the ground each winter, but whose roots remain alive and send up new stems each succeeding spring.

Fortunately for the town gardener, the majority of these hardy herbaceous plants are of a very obliging disposition, and will thrive almost anywhere if they receive a little encouragement. Mind, there are some real tantalizers in the family—plants that require as much coaxing to persuade them to grow as a New Cut canary does to sing—but if these are avoided and only a few stereotyped favourites taken in hand, there need be hardly any failures.

A SELECTION OF PLANTS.—To anyone who does not care about variety, or whose garden is in the very heart of a crowded bricks and mortar area, I can unhesitatingly recommend German Irises in various colours, London Pride, Creeping Jenny, Violas, Periwinkles and the perennial Sunflower called *Helianthus rigidus* as being of the grow-and-flower-anywhere class. A little water in dry weather will assist them in their good work, but they will do more even without this than many other plants will do with it. In districts where the proportion of bricks and mortar to gardens is not so great, the following may be expected to either thrive or do fairly well, according to circumstances: *Achillea Ptarmica* The Pearl, white, long-lived and worth growing in quantity; *A. millefolium* roseum, pink, not so good, but useful in a dry spot; *Anemone japonica*, pink and white varieties, likes moisture; *Armeria maritima* (Thrift), pink, a neat foliated little edging plant; *Calystegia pubescens*, pink, a beautiful climber, which soon gets out of bounds; *Chelone barbata* (or *Pentstemon*), coral red flowers in elegant spikes; *Delphiniums*, blue, in various shades, beloved by slugs when young; *Erigeron speciosus*, mauve, Daisy-like flowers; *Gypsophila paniculata*, white, fancifully called the Ganche Flower and Fern Saver; *Helenium grandicephalum striatum*, chocolate yellow and crimson, a very fine cut flower; *Heuchera sanguinea*, graceful spikes of red flowers for cutting; *Lupinus polyphyllus*, blue and white spikes and elegant foliage; *L. arboreus* (the Tree Lupin), yellow; *Lychnis Chalcedonica*, a glorious scarlet; *Papaver Orientale* (the flaming perennial Poppy); *Polyanthuses* and *Primroses*; *Pinks* (the old white and Mrs. Sinkins); *Pyrethrum*, single and double and in a variety of colours; *Chrysanthemum (Pyrethrum) uliginosum*, white, one of the very best autumn flowers for towns; *C. maximum* King Edward VII., a giant white Marguerite; the *Shasta Daisy*, something like the preceding; *Solidago* (Golden Rod) in variety, yellow; and *Thalictrum aquilegifolium*, fine foliage for cutting. From the above list readers should be able to select twelve or twenty-four plants to almost fill every requirement. The plants should be ordered without delay, as planting may be done at any time between now and the middle of April—the sooner the better. Meanwhile, the soil should be enriched with manure and deeply dug, for replanting will not be required for several years, and the plants should have a deep and rich root-run if they are to do their best under adverse circumstances. E. J. CASTLE.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANT HOUSES AND FRAMES.

CHRYSANTHEMUMS.—The earliest batch will now be ready for a shift into $4\frac{1}{2}$ -inch pots, and this should be done before they get pot-bound. Provide good substantial soil at this potting, stand on a cool bottom and grow them sturdy in order to make robust plants. A batch of cuttings may now be put in for very late work. In the warm stove all the plants that require potting should now be done. *Ixoras*, *Crotons*, *Gardenias*, *Dracenas*, *Allamandas* and *Clerodendrons* will probably need this attention. Any large plants of the two last named that are in tubs or planted out should have the top soil removed and the plants pruned and cleaned, finishing off with a top-dressing of some good fibrous loam, with some peat and a handful of bone-meal and sand added.

FRUIT HOUSES.

Grapes.—Continue to thin the berries of early varieties as they become large enough. When done at one thinning—and this should be the aim of every Grape thinner when a quantity is to be thinned—put down mats or a canvas cover to collect the berries as they fall. This saves much time in cleaning up. As soon as the house is finished apply a good sprinkling of guano or Le Fruitier and water in thoroughly at a temperature 10° above that of the house. Maintain a steady temperature of about 65° to 70° .

Peaches and Nectarines.—Continue to thin the fruits at an early stage, as the sooner these are off the better for the crop. Continue disbudding, doing this in the early house as soon as possible now. Successional houses in flower must have plenty of air and the trees a sharp tap every day at noon to distribute pollen.

Cherries should now have a little more warmth and be fumigated before coming into flower.

FLOWER GARDEN.

Hardy Annuals may now be sown in spots where they are to flower. Sow thinly in drills or broadcast. Cover the seeds with some fine soil but very slightly, though the larger the seeds the deeper should they be sown.

Half-hardy Annuals, such as Stocks, Asters and *Zinnias*, should be sown in boxes or frames in gentle heat. A good place is on a mild hot-bed where *Asparagus* or similar crops have been forced. Sow thinly and water with a fine rose, after which do not water until the seedlings are coming through, or the seeds may perish by being too wet. On the other hand, they must not be allowed to become dust-dry. As soon as the seedlings are large enough they should be pricked out into other boxes and all carefully labelled, so that no mistake occurs in the colours or varieties at planting time.

Border Carnations.—These may have a sprinkling of soot or Carnation manure, this being lightly pricked in. A good dressing once or twice in the spring also prevents the sparrows eating the tips of the plants. Put out any spare plants that are in pots to fill up blanks.

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FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

GLOXINIAS FROM SEED.—The advantage in growing seedlings is that they are not so liable to be troubled with insect pests. For flowering the same season the seed should not be sown later than the second week in March. I have

sown early in January, but find there is little gain, for the seed germinates quickly, and if we get dull, dark weather the young plants will be liable to damp off, or if they survive they will not be so vigorous as those raised later. The seed being very small, care should be taken not to sow too thickly, and if the soil is left loose on the surface before sowing and then gently pressed no further covering is necessary. I always place the seed-pots in a light and thus avoid shading. If the surface soil is not allowed to get dry, the seed will germinate well and there will be far less trouble with damping.

ORCHIDS.

Calanthes Veitchi.—Now is a good time to report this *Calanthe*. Fresh roots will by this time be forming at the base of the old pseudo-bulbs, the soil having been kept quite dry since flowering. Carefully shake all the old soil from among the roots, and sort the pseudo-bulbs into sizes, as it is not advisable to mix large and small together. The pots should be quite clean and half filled with crocks. As much moisture at the roots is required during the growing season, it is essential that abundant drainage be provided. The soil is important, and it is on the preparation of this that success largely depends. The soil that gives satisfactory results is one largely composed of fibrous loam—three parts of this to one of partly-dried cow manure, but not much decayed. A free addition of sharp silver sand and charcoal will keep the whole porous when the loam is of a heavy character.

KITCHEN GARDEN.

Outdoor Tomatoes.—The middle of March will, as a rule, be found the best time for sowing Tomatoes for open-air work. When sown earlier the plants frequently suffer through being pot-bound, as they cannot be turned out till the weather is settled and fairly warm. If the seed is sown now in small pots and the young plants brought forward in a temperature of 60° until the first rough leaves are formed, that of a warm, sunny greenhouse will then suit them best until hardening off in frames takes place about the middle of May.

HARDY FRUITS.

Open-air Peaches.—All Peach trees on walls must now be pruned and either tied to the wires or nailed to the wall, as the case may be. Wherever possible prune to a triple bud, reducing the growths so that those remaining will be about 4 inches from one another after tying is completed.

THE ROSE GARDEN.

Wherever possible let decayed leaves and manure be mixed up together and used freely as a mulch between established plants. By mulching now there is a good prospect of the feeding properties being washed down to the roots at a seasonable time. Let there be no delay in filling up any gaps in old or new plantations of Roses. It is not yet too late to plant from the open ground.

FLOWER GARDEN.

Sweet Peas for Pots.—These are much more amenable to pot culture than might generally be supposed, and give very little trouble, while they keep up a bright display for a considerable period, and may be grown in pots by those who have little or no convenience for growing them in the garden. The seeds should be sown now, about seven or eight in a 5-inch pot. Good loam, with a liberal addition of manure, may be used, and it should be pressed moderately firm. The seeds should be well covered with soil. After sowing the pots may be placed in any light, open position in a frame or cool greenhouse. Care must be taken that there are no mice about. After the seeds begin to germinate light and air, with a moderate supply of water, is all that is needed until the seedlings require some support.

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BOOKS.

"ROSES: THEIR HISTORY, DEVELOPMENT AND CULTIVATION."*

A NEW book on the national flower, with a title that promises something removed from the ordinary, by such an acknowledged authority as Mr. Pemberton, is assured of creating that necessary amount of curiosity that prompts desire to sample its contents, which a cynical publisher laid down as the one thing needful to make a successful book. In his preface, Mr. Pemberton notes the change that has taken place in recent years with regard to the cultivation of the Rose, from being "primarily an exhibitor's flower, it is now extensively grown for garden and house decoration"; in other words, it has become the flower of the home, and keen exhibitor though he is (and one hardly knows where to find a keener), yet he has successfully managed to sink what has been his own preference, and has written a book with the avowed intention and hope of affording assistance (in the cultivation of the many and varied classes of the Rose that are now grown) to the Rose gardener rather than to the Rose exhibitor.

A short introduction served the purpose of recording a few modest personal reminiscences, which might well have been extended at far greater length. One who exhibited at the first show of the National Rose Society, and who has never missed exhibiting at a single Metropolitan show of the society since, must have stored away a fund of recollections that could not fail to be of interest, at any rate to exhibitors. But that is one of the unexpected features of the book. The exhibitors and exhibition side of Rose culture occupy only the thirty odd pages out of the 330 that complete the book, a bare 10 per cent.

I am inclined to think that the first of the subsidiary titles is not quite made good by the subject-matter; at any rate, the historical aspect is not the strong point of the book. There is no single chapter dealing with the question, unless the first can be said to do so, and that is headed "The Rose, the Flower of England," and the mention of the date of the introduction of any particular species or variety to cultivation, which is done throughout the book, can hardly be said to constitute a history of the Rose.

The arrangement and scheme of the book otherwise is excellent. Briefly it is as follows: Starting with as clear a statement as is possible perhaps, dealing with such a thorny question as the botany of the Rose, the book proceeds with the foundations of the subject, namely, the species, taking first the British wild Roses, then treating such of the wild Roses of other countries as have come under the writer's observation, from thence to the first of the Hybrids (the summer-flowering varieties), on to the first of the Perpetuals (summer and autumn-flowering varieties). Part II. is devoted solely to the cultivation of the Rose, and begins *ab initio*, with the soil, manures (here placed in their proper place, namely, before), the plants and the planting, after which follow pruning, budding, other means of propagation and hybridisation, then three chapters on exhibiting, a chapter on growing Roses under glass, followed by one on pests, the whole closing with an appendix consisting of a short descriptive list of Roses recommended for cultivation. The chapter on the botany of the Rose is as unbotanical as is possible, and the veriest tyro can have no difficulty in following or appreciating it. The family of the Rose is divided into sixteen sections, on the lines laid down by the late M. Crépin, each briefly described, is accompanied by a most interesting analysis of the species, and which, as if anticipating his critics, the author describes as "an attempt to indicate, however

imperfectly, the sections, species and sub-species from which the hybrids have originated." Whether or not his printer has played him false I cannot say, but the analysis contains more errors of commission and omission than the whole of the remainder of the book. The analysis is set out in four columns. Column one, the sixteen sections before referred to. Column two, the species, each of which belongs to one or other of the sixteen sections. Column three, the sub-species, presumably derived or related to the species. Column four, a hybrid, typical of those derived from the species or sub-species.

I do not believe in taking out *en bloc* any portion of a book that one is criticising and reprinting it. I will, therefore, forbear from going into further details, but the line between the species and sub-species has not been kept distinct. Why is *setigera* a species and *rubrifolia* (spelt *rubrifolia*) a sub-species? *Hibernica* is said to be a native species in the letterpress, but is called a sub-species in the analysis. *Macrantha* is also down as a sub-species, but it is, I believe, a natural hybrid between *canina* and *gallica*, and should, therefore, be in column four, not three; *Xanthina* is not a species, and its proper column is certainly not two, but three, if not four; and Austrian Yellow is *Rosa lutea*, yet one is in column three and the other in column two. *Soleil d'Or* might well have been mentioned as a hybrid of *lutea*. Then *Rosa sinica* is not a hybrid of *berberifolia*, with which it has no concern, but is an allied form, or sub-species (if preferred) of *lævigata*, and *Marie Leonidas* is in column four as a hybrid of the Banksian, but the only Rose I know of that name is the double form of the Macartney Rose or *Bracteata*. In the letterpress *Rosa stylosa* is referred to as a sub-species of *arvensis*, but *Rosa stylosa* is one of the sixteen primary families or sections. Then there are some curious omissions. Mr. Pemberton asks for an examination of the table, and draws attention to two facts, "(1) the distance the Hybrid Teas are removed from the original species, and (2) that there are many species from which little, if any, advance has been made." "They remain as they have come from the hand of Nature, they have no progeny," and then he very truly says: "Does not this fact indicate the wide field still open to the hybridist for the production of new Roses; how much remains to be done in directions other than crossing and interbreeding Hybrid Teas? And, further, does it not suggest the probability that great as the progress of the Rose has been in the nineteenth century, it will be greater still in the twentieth, and that some of the most beautiful varieties of the genus *Rosa* are yet to come." That is undoubtedly true, but he need not have omitted to give descendants to at least six of his species or sub-species. *Rubiginosa* can boast of the Hybrid Sweet Briars of Lord Penzance; *alpina* is commonly thought to be the parent of the Boursaults; *lucida* has many varieties beside *lucida plena*, *lucida alba*, *sorbifolia*, &c.; *canina* is reputed to be one of the parents of *Macrantha*; *lævigata* or *sinica* is the parent of that beautiful hybrid *sinica anemone*; and *spinosissima* is surely the parent of all the dwarf Scotch Roses, not to mention Stanwell Perpetual, &c.

Is it to be wondered at that I found Mr. Pemberton's analysis of the species one of the most interesting pages of the book? But apart from this all Rose lovers will, I am sure, welcome the fact that so large a portion of his book (approximately one-fifth) is devoted to the species; they are far too much neglected in Rose gardens, and the letterpress, apart from the analysis, gives most interesting descriptions of each. They are deserving of far wider culture, and no doubt this book will materially help towards that end. Mr. Pemberton gives *Rosa moschata* as the source of that most precious of scent Attar of Roses; I have always understood that a variety of *Rosa damascena* called *Kazanlik* was cultivated for that purpose. Printers' errors perhaps are responsible for the date of *Rosa lutea* introduction as

1586, most authorities put it ten years later (1596). Messrs. Loddiges' name, the famous nurserymen of Hackney—some of whose Roses were still in existence on the site of their old nursery twenty-five years back, although they flourished in the early part of the nineteenth century—is spelt Loddings. And why is General Jacqueminot throughout the book given the two accents over the two first "e's" and an additional "e" (as if he had not enough "e's" already) tacked on to the final "l," so that one hardly recognises an old friend? I cannot find any authority for this pedantic spelling. The accents one can forgive, they are perhaps correct, although dropped by general consent years ago, but the final "e," where did it come from? One turns quickly from these small points (pin pricks, I believe they are called) to the essence of the book. There is a charm about the unexpected, altogether apart from its privilege of "always happening," that is pleasant, and I have found this portion, or Part I., of Mr. Pemberton's book particularly pleasant reading, and I can thoroughly commend it to all garden lovers. Part II., on "Cultivation," appeals more particularly perhaps to Rose lovers, but the initial chapter on "Soils" contains many truths that must be learnt by all cultivators of the soil, be they vegetable or flower growers, and one notes in passing that the writer is not a believer in the heavy autumn mulch, to be afterwards "forked in" in the spring, that is so commonly but erroneously recommended. He pins his faith to the hoe *properly* used as the garden tool.

The following chapter on "Manures" is of equal interest. He reminds us of two facts that are often lost sight of—(1) that plant life derives its food from two sources, the atmosphere and the soil, in the proportion of three-fourths from the atmosphere and one-fourth from the soil; (2) the importance of some knowledge of the composition of the soil in which the Rose is growing; for if a soil is deficient in but one of the five essential ingredients necessary for the plant, although rich in the other four, it may become more or less barren; that is to say, the fertility of the soil depends upon the small proportion of the one, not on the abundance of the four. Just as the strength of a chain lies in its weakest link, so the minimum of any one essential ingredient, not the maximum of the others, is the measure of the soil's fertility. This is the principle in scientific husbandry known as the "law of minimum." The moral is easy to draw. The whole subject is exhaustively treated, and the chapter on "Manures" is one of the best I have read on the subject.

Planting in all its aspects is treated with the fulness that its importance deserves. Carelessness or indifference at this stage is fatal. A lack of knowledge of the necessary details is at the bottom of half the budding rosarian's disappointments. A careful following out of the directions will, I have no doubt, save the life of many a plant yet to be planted, and that is one of the strong points of this book. It is not a book written only for experts by an expert; it is that and more, for it is written by an expert for novices in such a way that they can readily grasp all the essentials. Take the stumbling-block of pruning—not quite such a big block as it used to be perhaps before the issue of that most successful of all the National Rose Society's pamphlets, that on pruning, but still a stumbling-block to many—a perusal of the chapter shows the matter put in a simple way, with such reasonable explanations that complications vanish—the difficulties too.

Mr. Pemberton has the courage to recommend the scateur in place of the old pruning-knife. I have long used the pattern with a double cutting edge. A bad cut on the thumb, which rendered that useful member useless for weeks, was the cause of my adopting the "ladies' tool," as most of my Rose friends call it, and I quite agree with his remarks thereon.

Nothing but praise can be written of the chapter on budding (with its excellent illustrations

* "Roses: Their History, Development and Cultivation." By the Rev. J. H. Pemberton. Published by Messrs. Longman and Co. Price 10s. 6d. net.

by Miss Pemberton), and the other methods of propagation by means of cuttings, grafting and layering. I should have liked to have referred at length to the chapter on hybridisation, but space will not permit. It has had the advantage of revision by Messrs. Alexander Dickson and Sons of Newtownards, Ireland; it is therefore unnecessary to say more respecting it.

Into the next three chapters Mr. Pemberton endeavours to condense all he knows about exhibition Roses—how to grow them, exhibit them and judge them. There is not a word about his personal triumphs, or that he was the first to tie Roses on the plants—a universal and necessary practice now. Nothing but what is essential, helpful and necessary for the novice to know, is here set down, and many an expert will turn to these pages and find something he had not thought of before!

No book on Roses would be complete without a chapter on growing them under glass, so one finds it there. It is a subject that I am very ignorant of. I have never grown a Rose under glass, but I have no doubt this chapter is equally deserving of the praise that I have tried to give all these chapters dealing with the cultivation of the Rose.

In his final chapter, on "Pests," Mr. Pemberton goes to the root of the matter. He says: "If the plants are in good health, there will be little or no disease; but, on the other hand, from whatever cause—from cold or wet, heat or drought, defective root-action, resulting in a lowering of the constitution and a retardation of growth, there the disease seizes its prey (and therefore we should do all we can to maintain the plant in a healthy condition)." The various insect and other pests and enemies of the Rose are dealt with and a remedy given. The book closes with an appendix, which is a descriptive list of selected Roses recommended for cultivation. It contains some 200 names, all of them, it goes without saying, good Roses. The list is subsequently divided up into best Roses for particular purposes, which will be found specially useful for reference.

This critique is a long one, but the subject deserves exhaustive treatment. The few errors, if errors they are, will be remedied when the next edition is called for, which, unless I am much mistaken, will be very soon. I can thoroughly recommend the book to all those who are Rose lovers, and still more strongly to those who are not Rose lovers, but only gardeners. It will occupy a distinct place among garden literature; it is unlike any other Rose book, in its matter, its treatment and its scope, and, I may add, its thoroughness; its illustrations reproduce for us for the most part the "old" Roses of the days when the Rose was young, but are none the less welcome on that account. Coming from the source it does, I hope I shall not be misunderstood when I say that to me its striking feature is the unexpected character of its contents; but one realises on calm consideration how much wiser is the course the author has adopted from the Rose point of view than would have been the one that might have been, nay, was, expected of him. H. E. MOLYNEUX.

NEW ORCHIDS.

LÆLIO-CATTLEYA DAFFODIL.

This is quite a unique and beautiful addition to this bi-generic race of Orchids. As its name implies, it reminds one of a Daffodil—at least, so far as its colour is concerned. The sepals are lanceolate, dull cream in colour, the two lower ones having a midrib of dull, rather pale yellow. The petals are also cream-coloured, ovate with crinkled margins, and just a flush of yellow in the centre. The labellum, which is of medium size, is deep rich yellow, with a beautifully fimbriated apex. The plant shown was carrying one flower on a very erect stem, the bloom being

about 2½ inches in diameter. Shown by Messrs. Armstrong and Brown, Tunbridge Wells. Award of merit.

LÆLIO-CATTLEYA HELENE MARON.

A very large-flowered species, the result of crossing L.-C. Impératrice de Russie with some other species not named. The enormous flowers are of a uniform pale lilac colour, with the exception of the labellum, which has almost purple markings, with a deep yellow flush in the throat. It is also very heavily fringed and crested, this giving the flower a beautiful appearance. The plant shown possessed two flowers, these being produced from a medium-sized sheath. Shown by MM. Ch. Maron and Sons, Brunoy, France. Award of merit.

MAXILLARIA LUTEO-ALBA.

This magnificent plant attracted a considerable amount of attention, chiefly on account of the enormous quantity of flowers it was carrying and the symmetry of the plant. The flowers are very curious, the sepals being a dull brownish orange, with white bases. The petals are pale yellow, with a slight blotch of dull carmine at the base. The labellum is small and white, with a deep rich yellow mark in the centre. A very fine specimen indeed. Shown by Mr. Walter Cobb, Normanhurst, Rusper (gardener, Mr. C. J. Salter). Award of merit and cultural commendation.

DENDROBIUM CHESSINGTONENSE GATTON PARK VARIETY.

A very lovely variety or form of a beautiful Orchid. It is larger than the type, the colour being rather deeper and the handsome labellum being more conspicuous. The deep crimson blotch on the latter is very fine indeed. Shown by Sir Jeremiah Colman, Bart., Gatton Park, Surrey (gardener, Mr. W. P. Bound). Award of merit.

DENDROBIUM CYBELE GATTON PARK VARIETY.

Here, again, we have a splendid improvement on a good Orchid. The flowers of this variety are large and of excellent colour, the labellum being very handsome indeed. At the base is a very rich and well-defined blotch of dull crimson, surrounded by a clean band of deep yellow. Then comes a broad band of creamy white, and finally an edging of deep lilac. Shown by Sir Jeremiah Colman, Bart. First-class certificate.

CYMBIDIUM SANDERI SUPERBUM.

A superb variety of a grand Orchid. The raceme on the plant shown was a large one, and was carrying nine fully opened flowers and two well-developed buds. The flowers are rather deeper coloured and larger than those of the type, the sepals and petals being of a uniform delicate pink and white hue. The labellum is of medium size, reflexed, the pinkish white ground colour being freely dotted over with well-defined deep crimson lines and dots. Shown by Messrs. Sander and Sons, St. Albans. First-class certificate.

CYMBIDIUM SANDERI VAR. SPLENDENS.

This, again, is a good improvement on the type, the flowers being very handsome indeed. Eight fully opened flowers and one bud made up a very stiff-stemmed raceme. The sepals and petals are very pale pink, these forming a striking contrast to the dull magenta-red labellum. Shown by Messrs. Sander and Sons, St. Albans. First-class certificate.

ODONTOGLOSSUM CLYTIE.

This is a very pretty and unique-looking *Odontoglossum*, the result of a cross between *O. Edwardii* and *O. Pescatorei*. The compound raceme is large, carrying a number of rather small flowers in a loose manner. The ground colour is very deep lilac or almost mauve, with large blotches of dull magenta-crimson freely placed thereon. Shown by Messrs. Charlesworth and Co., Heaton, Bradford. Award of merit.

All the above were shown before the Orchid committee of the Royal Horticultural Society on the 3rd inst.

RIVIERA NOTES.

IMPATIENS OLIVIERI AT LA MORTOLA.—It was a pleasant surprise the other day to see in the well-known gardens at La Mortola bold bushes of *Impatiens Olivieri* flowering freely in semi-shade at the end of the month of January, showing that this fine Balsam is much hardier and more robust than any other species known on this coast. As a plant for sheltered entrances or cool rooms it is likely to prove of much value. Its fine habit and handsome foliage would always be attractive even if the flowers failed to open freely in the house. It does not bear full exposure to the sun on this coast, so it should not be planted in the open; but with this reservation it is a valuable addition to Riviera gardens.

TREE WITCH HAZEL (*Hamamelis arborea*).—There must be, I think, considerable variation in the flowers of this excellent winter-flowering shrub. As in the case of *Chimonanthus fragrans*, seedlings vary very greatly, and some forms are much brighter than others. Speaking for myself, I had never seen anything half so bright before as a plant now in flower here sent out from England, while a well-grown bush which is covered each winter with its wiry blossoms has produced a much paler and duller flower that is only of moderate interest, comparatively speaking. It is a welcome shrub for any cool and out-of-the-way place where it is not exposed to much sun in summer, and is really beautiful when the lilac-flowered *Erica mediterranea hybrida* is planted near it, as they flower together in mid-winter—a season which this year has been entirely left out of our calendar.

ALOE ARBORESCENS VAR. NATALENSIS.—For those whose garden is on sunny rocky slopes this fine form of early winter-flowering Aloe is indispensable; it is both so much finer in the flower-spike as well as more truly winter flowering. To most gardeners "one flowering Aloe is the same as another," but to those who know their plants this form is much the best for general planting. It is longer and finer in its flower-spike, and brighter in colour than the type, which is called popularly by the French *Corne de Bélier*, and by the English generally confounded with the *Tritoma* or Red Hot Poker, which it so closely resembles at a little distance. In dry and windy situations near the sea such succulent plants are highly desirable, and with the increasing craze here and hereabouts for "sticking in a Palm" just because it is green in winter, these valuable flowering shrubs are being forgotten.

THE DOUBLE PINK DAISIES so much used for winter bedding are planted nowadays in graceful "arabesques" on the grass—never in beds of any size or regular shape—and it is a decidedly pretty fashion. These thin and prettily waving lines of Daisies or Pansies look much better than a solid mass, while bold groups of Stocks, Carnations, *Ranunculus* and similar-habited, taller-growing flowering plants break up the surface very happily. It is worth adapting to English gardens and surroundings, where often twice the number of flowering bulbs is used with less satisfactory and less lasting effect. As grass here is clipped and not mown, this plan is, perhaps, easier in France than it would be in England; at any rate, it greatly reduces the quantity of bulbs for spring gardening and introduces a fresh feature, which relieves the stiffness of bulb-bedding. Two fine old shrubs,

IOCHROMA COCCINEA and **I. TUBULOSA**, are in fine flower this winter, and are well worth a place among other shrubs. *I. coccinea* is much less hardy and less vigorous than *I. tubulosa*, but as it is not so rampant, and is a very free-flowerer in autumn and spring, it should be given a somewhat sheltered place where its clusters of brick-red, bell-shaped flowers can expand freely.

I. TUBULOSA is an excessively vigorous and rampant grower, handsome in foliage, which

is not often injured in ordinary seasons. Its bunches of violet-blue flowers of considerable size are really very handsome, but they are apt to be hidden by the abundant foliage, unless a little thinning of the shoots is practised. There are so few shrubs of so bold a habit that flower freely in winter, so it should not be forgotten by those who plant on these shores. Although these shrubs belong to the great Solanum family, the flowers are tubular or bell-shaped, and pendant rather than nodding or erect. Few shrubs this season have been more ornamental than the

ABUTILONS.—The finer hybrids, though beautiful as pot plants, are of comparatively little use in the garden. It is the old *A. striatum* and its seedlings that make an effect in the shrub garden, and this fine season they have flowered continuously without any check. Their growth is so vigorous, the foliage so gay and fresh, the abundance of vari-coloured flowers so great that no garden on this coast should be without a good batch of seedlings, which may be weeded out as they flower if inferior in any way. It is not known, I think, how necessary it is to cut them back severely in March or April; without this they are apt to get too straggling and lose much of their beauty. When grown in the open the flowering branches may be cut freely for decorative purposes, as they are particularly lasting in water. There is a large-growing

SIDA ARBOREA that is closely allied to the Abutilon, which also deserves notice, as its deep red flowers are upright or horizontal, and form large branching flower-heads that are effective among the solid and rather deep green foliage. The quantity of ripe heads of seed spoils the beauty of some of the old and largest bushes, but judicious pruning will keep this handsome shrub in order. It loves a dry and sunny situation where more tender plants refuse to grow.

Nicc.

EDWARD H. WOODALL.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

TULIPS, SPIRÆAS AND LINUM.

I am sending three specimens of flowers, with notes, as I was reading in your paper that such things are desired for your table. Tulip Standard Silver is among the newer sorts of Tulip; the colour, which is silver, feathered crimson, is very pretty, and the variety is useful for growing in pots. *Spiræa confusa* is a useful white-flowering shrub. Established plants in pots easily come into flower if put in a warm greenhouse early in the year from outdoors. *Linum trigynum*.—This old yellow-flowering greenhouse plant is not often seen. It flowers in February, and is useful for walls or pillars. It will do well in a vinery.—A. J. LONG, Head Gardener, *Myfold Court, Reading*.

HEATHER AND VIOLETS FROM GLOUCESTER.

Mr. H. Prentice of The Gardens, Hartpury House, Gloucester, sends an interesting and well-grown collection of winter-flowering subjects, about which he writes as follows: "I send you a few bits of plants which I hope will assist to brighten your table up until you are able to get the lovely spring flowers. To-day has been

warmer than many days last summer, and the outside garden is very interesting, for each day there is always something coming in flower, and it is so welcome. The Anemone (yellow) and Crocus (also yellow) were full out in to-day's sun, also two blooms on a very small plant of *Saxifraga burseriana* Gloria. The coloured Heath is a grand sight edging a bed of Rhododendrons (alpine varieties) and growing in all peat. The white form is next to it (kindly name them, as I am not certain). *Cotoneaster Simonsii* is growing on the north front of the above house, and a grand sight. It is spurred in each year, and is always well berried. Needless to say, it is very much admired, and only needs a lighter-coloured wall to show it off better. *Mahonia Aquifolium* colours best here on the clay; it is used largely for undergrowth, and makes dull and bare places interesting and cheerful. *Jasminum nudiflorum* is also very pretty on the north-west wall of the stable. Violets (*Marie Louise*) have done well again this winter, but Mrs. J. J. Astor is only now beginning to flower freely."

[The *Ericas* are *E. mediterranea hybrida* and *E. mediterranea alba*.—E.D.]

A BEAUTIFUL VIOLET.

Mr. J. Heath, the Violet specialist of Kingskerswell, South Devon, sends a plant of the Parma Violet called Perfection. Its freedom of flowering is remarkable and the growth vigorous; it is a most commendable variety. Mr. Heath writes: "I am sending for your table a plant of Violet Parma Perfection. This variety rarely produces a runner, and the plant sent is naturally grown, never having had a runner removed. It is not so early to bloom as Marie Louise, but keeps on later, and good flowers are to be had in May. Of course the plant sent has been under glass since last October, but the frost has been so severe this winter that it has been frozen hard several times."

STRELITZIA REGINA (BIRD OF PARADISE FLOWER).

Mr. Dale, Tabley House, Cheshire, sends flowers of this remarkable plant with the following note: "The *Strelitzia* is one of the most beautiful and distinct stove plants, with yellow and bright blue flowers borne on long stems issuing from a boat-shaped sheath. It should be potted in peat three parts, loam one part and a little rough sand. It is a good plan to pot the plant in 10-inch or 12-inch pots without drainage, and if possible to let the root go through the hole in the bottom of the pots into the bed or border. I have two plants treated this way and they are rarely without flowers in winter or summer. The flowers do not quite attain the beautiful colours during the winter months as in the summer. The most troublesome pest is the white scale, which should be sponged off when seen. Remove the old flower spikes as soon as they are over. The *Strelitzia* should have plenty of liquid manure water. The best time to pot is the end of February or early in March, and a little care should be exercised in watering until the plants are established."

BEAUTIFUL HARDY HEATHS.

Miss E. A. Perkins of The Limes, Stratford-on-Avon, sends sprays of two beautiful hardy *Ericas*. The letter reads as follows: "A very interesting bed and uncommon colour for winter and spring is formed by *Erica mediterranea* edged with *Erica mediterranea alba*. These have been flowering all the winter, as you will see by the flowers enclosed, which were uninjured by the sharp frosts we have had several times during the winter. A nice lot of double Daffodils coming into flower make a pleasing bed for some time, and these are followed by *Lilium tigrinum*, which is still one of the hardiest, best growing and most luxuriant in open situations in light loamy soil."

PRIZES FOR READERS. MARCH.

SCHOOL GARDENS.

A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF-A-GUINEA
are offered for the best essays on the above subject.

Competitors should describe briefly the laying out and size of the plots, crops to grow, tools required, and the best methods of teaching the scholars.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Tuesday, March 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Testing Dahlia tubers (*G. R. P., Rugby*).—If your Dahlia tubers have been frozen they will now be soft and rotten. If the tubers are sound at present and have a whitish hue when cut through, you may retain them with good results. You are probably aware that the buds, and subsequently shoots, are produced at the base of the old stem or just at the junction where the tubers are joined to it. This is the part to be taken most care of.

Using fowl manure and leaves for flowers (*Amateur*).—You can use the mixture of fowl manure and leaves for any flowers, fruits or vegetables, and we think it would be even better than farmyard manure, especially if your soil is of a rather heavy character. Of course its real manurial value will be determined largely by the amount of fowl manure that it contains. By what you say, we presume that you have kept the manure dry, and this was quite correct.

Treatment of Pampas Grass (*Oakwood*).—It would have been helpful had you given us an idea of the size of the plant; and not a little depends upon this and the actual growth made each year. Plants that are much cut by frost or cold winds would be most uncertain in their flowering, and in your district should be planted in the most warm and sheltered position available. Preferring a deep bed of rich sandy loam, with good drainage, the plant should receive copious watering during dry weather, and liquid manure if the growth is at all spare or thin. Lacking the fuller details of the past season's

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

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TOMATOES OUTDOORS.

THIS is a garden crop which is becoming more important every year as the supposed difficulties concerning its successful growth in the open air becomes dissipated by experience and practice. Last year taught us a useful lesson in this respect. It has been stated by many writers, and generally acknowledged by growers, that the crop proves a failure when the summer happens to be dull and cold, the same as it was last year. I certainly shared this belief until I was convinced to the contrary by some splendid crops which I saw last autumn in many parts round London. This fact, I think, ought to go far to inspire confidence in the possibility of securing splendid crops in warm summers, and moderately good even in bad ones, of this popular and profitable fruit. To the inexperienced there will always remain certain points of difficulty attached to the successful growth of this crop out of doors until he has learned by experience how to provide the conditions necessary, and by the help of which alone success is possible.

I scarcely think it would prove to be a lucrative crop on the north side of the Trent, but undoubtedly would be so in our Home and Southern Counties. It should be planted in warm, well-drained and generously-manured land of a light rather than of a heavy texture, facing south if possible, and if sheltered from north and east winds so much the better. In my opinion the greatest factor in bringing about the success of this crop is to have strong healthy plants when the time for planting in the quarters comes round; another important factor is the frequent application of the hoe among the plants during the season of growth. It is impossible to exaggerate the value of this work in aerating and increasing the fertility of the soil. Having selected the land on which the Tomatoes are to be planted, it should at once be bastard trenched and well enriched with farmyard manure if this has not already been done, the ground afterwards being left rough until planting time comes round. Having prepared the land, our next object must be to produce the plants.

March 20 is a good time to sow the seeds. These should be sown thinly in pans or shallow boxes in finely-sifted mould, the seeds being covered by rather less than a quarter of an inch of the mould. Place the pans or boxes on a shelf near the glass on the sunny side of a greenhouse or in a frame on a hot-bed with a slight heat. After watering through a fine rose, place a piece of glass over the pans or boxes, and let them remain on until the seedlings are up. As soon as they are about 2 inches long they

should be pricked out into shallow boxes (any old boxes will do) filled with mould of a similar description to that in which the seeds have been sown, and which should consist of loam and leaf-mould in equal quantities. Pricking out is a technical garden term, and means making a hole with a pointed stick in the soil large enough to receive the roots of the young plants, and deep enough to allow of its being pressed into the soil to half the depth of its stem, from which new roots will soon emit. They should be planted 3 inches apart, or they may be potted singly into small pots, but boxing takes less time and is least expensive. The young plants after transplanting should be returned to the positions occupied by them before. To grow the Tomato successfully, the grower must have constantly in his mind the fact that the young plants must be grown hardily and sturdily (attenuated and weakly plants are of no use), therefore the air of the house or frame in which they are grown must never be stuffy or overheated, but must, at the same time, be artificially warmed, especially at night during this cold time of the year, to ensure steady growth and to admit of a current of air at all times, excepting in very cold weather.

In the course of three weeks after transplanting the foliage of the plants will meet in the boxes, and the time has come for them to be potted, each into a 5-inch pot, using three parts of loam and one of leaf-soil unsifted. In potting, sink the young plant again in the pot to nearly half the length of its stem, filling the pot with soil into which new roots will soon emerge. The young plants must again be placed under glass as soon as potted, in a fairly warm and airy position facing the sun. By the first week in May, if all has gone well, they will have made healthy, sturdy plants from 12 inches to 18 inches high, many of them no doubt showing a few flowers, which should be encouraged to set fruit by distributing the pollen grains by brushing with a rabbit's tail. The Tomato is a tender plant, therefore it should not be exposed to frost at any time. However, the time has now come for placing the young plants out of doors in a sheltered position on a bed of ashes (about May 15). In order to protect the plants from frost at night, a temporary covering should be erected over them in the way of a skeleton frame-work of wood, over the sides and tops of which mats or some other covering could be placed at night until danger from frost had passed, leaving them exposed in the daytime.

This hardening process will have prepared the plants for planting out in their summer quarters by about June 7. They should by then be strong, well-rooted plants, many of them bearing from one to two bunches of fruit, which should be ripe by the end of July or beginning of August.

We will now return to the land in which they are to be planted, and which we left in a rough state after manuring and trenching in March. The first thing to do will be to scarify the surface either by a harrow or fork, and then draw shallow drills to mark where the rows are to be. The first two drills should be 1 foot apart, the next 18 inches, and the next 1 foot and the next 18 inches again, and so on through the piece. By thus planting in rows only 12 inches apart it is possible to fasten the two rows of plants to one support, thereby considerably reducing the expense. The 18-inch space between the rows affords adequate room for walking and working among the plants and for gathering the fruit; 15 inches should be allowed between plant and plant in the row.

PLANTING.

The holes should be dug out with a spade and made deep enough for at least 4 inches of the base of the stem of the plant to be buried in the soil, from which new roots will soon shoot forth. Plant when the soil is comparatively dry, tread firmly round the plants, and give a good watering immediately afterwards. On no account must it be forgotten to thoroughly water the plants the day before they are planted.

AFTER MANAGEMENT.

An important matter which must receive timely attention is the cutting away of the side shoots or laterals as fast as they form, or the growth will become so dense as to prevent light, air and heat circulating among the plants, to the injury of the fruit. Yet another important matter I would notice is the necessity of cutting off the top of the plant, three joints above the top bunch of fruit, as soon as four bunches of fruit are secured to each plant. This will hasten the swelling and maturity of the fruit enormously. Many growers I know, in the hope of securing a heavier crop, defer this operation until more bunches are secured. It is a fatal mistake to make. The summer is too short to ripen such late-formed fruit.

Supports for the Plants.—Many use Bamboo canes, one to each plant. This is an effective way, no doubt, but an expensive one, entailing much time to carry out and a considerable outlay for canes. The simplest and cheapest way, I think, is to fix pieces of fairly strong wood between every two rows at a distance of 20 yards apart, and to stretch one or two thin wires the length of the rows, tying the plants of both rows to this. I saw a large quarter last year, the plants on which had been allowed to lie on the ground, the grower thinking they would come to no good owing to the bad season. So far as I could see they ripened up nearly as well as those which were supported by sticks.

Watering.—The plants should be watered at least once a week for about three weeks after planting. By that time the roots will have taken hold of the soil, and no further watering will be needed.

Mulching.—A thin mulch of rotten manure placed about 2 inches deep on the surface of the soil round the plants as soon as the tops are cut off, as advised before, works wonders in helping to swell up and increase the weight of the crop.

Gathering the Fruit.—This should be done before it is ripe—that is to say, as soon as it has taken on a decided colour over, say, half its surface. It should be placed on boards or in shallow boxes, two layers deep, on a greenhouse shelf, or inside a frame under glass where there is a genial (but not too much) heat and a current of warm air passing over them. In about ten days the fruit will put on as brilliant a colour as it is to be found on most grown under glass.

Varieties.—The heaviest cropping outdoor variety I know is Sutton's Open Air, but it is somewhat corrugated in outline, and this militates against its market value. Sutton's Abundance and Earliest of All are excellent, so is Carter's Sunrise and Veitch's Frogmore Selected.

OWEN THOMAS.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

March 25.—Royal Botanic Society's Show, Regent's Park, N.W.

March 31.—Royal Horticultural Society's Hyacinth Exhibition, Vincent Square, Westminster.

"The Garden" Horticultural Show.—Our announcement last week to the effect that we intend holding a horticultural exhibition for our readers only some time during July next has created much interest, which augurs well for its success. In case any of our readers overlooked the schedule last week, we draw their attention to the fact that it is published again this week among our advertisement pages.

New varieties of Japanese Quince (*Cydonia japonica*).—M. V. Lemoine et fils of Nancy announce for distribution three new varieties of this beautiful and well-known shrub. They are Abricot, a dwarf form with semi-double flowers of a beautiful bright kind of golden hue; Grenade, large, globular, almost double flowers of a deep scarlet; Orange, semi-double flowers of a clear orange red.—H. P.

New Hydrangeas.—The name of Lemoine of Nancy is known to everyone as a most successful hybridist, and the successes that have emanated from that establishment form a very long list. Of late years attention has been devoted to Hydrangeas, and three new varieties are announced in the February catalogue just issued. They are said to be a selection from several thousand seedlings, the result of artificially crossing *H. Otaksa monstrosa*, *H. Mariesii*, *H. Souvenir de Claire* and *H. rosea*. From these a good number of plants were selected for further observation, and the three varieties were ultimately chosen therefrom. They are *Avalanche*, described as the whitest of the Hydrangeas; *Fraicheur*, enormous clusters, flowers medium, round, white, shaded rose, tips greenish, eye mauve; *La Lorraine*, large corymbs and flowers, these last having the edges slightly toothed, in colour soft rose, turning to bright rose.—H. P.

Winter-flowering Carnation Society.—The next exhibition in connexion with this society will be held in the Royal Horticultural Society's Hall, Westminster, on Wednesday, April 1. The schedule is a most comprehensive one, the section devoted to amateurs being of special interest. Good prizes are offered, and all lovers of these charming winter flowers should make a point of attending the exhibition. Full particulars can be obtained by writing to the hon. secretary, Mr. Hayward Mathias, Lucerne, Stubbington, Fareham, Hants.

Huntingdonshire Daffodil and Spring Flower Society.—The annual exhibition in connexion with the above society will be held in the Corn Exchange, Huntingdon, on Tuesday, April 21. The classes are open to all England, and some good prizes are offered. Copies of the schedule can be obtained from the hon. secretary, Miss L. L. Linton, Stirtloe House, Buckden, Huntingdon.

Compounds (poisonous) for horticultural and agricultural purposes.—It is satisfactory to find that the Poisons and Pharmacy Bill successfully passed its second reading in the House of Lords on Thursday last, and was referred to a joint committee of both Houses of Parliament. The horticultural trade is materially interested in this Bill, as by Clause 2 power is given to persons, other than chemists, such as nurserymen, seedsmen and agricultural agents, to stock and sell (under provisions to be made by the Privy Council) weed killers, insecticides, sheep

dips, &c. It will be remembered that the Traders in Poisonous Compounds for Trade Purposes Protection Society has for years past been working to this end, and it is due to the efforts of the society that this clause has been inserted in the Bill. All those interested in the sale of these compounds should assist the society in its efforts to get Members of Parliament to support Clause 2 of the Bill, so that the same may become law this Session.—G. H. RICHARDS.

"Journal of the Kew Guild."—This is an annual publication that is eagerly looked forward to by Kew men all over the world, and no doubt many will be wondering why the present number is so late in appearing. An excellent portrait of Mr. Irwin Lynch, M.A., V.M.H., Curator of the Cambridge Botanic Gardens, forms the frontispiece, a most interesting memoir accompanying it. A full page illustration of Cambridge Cottage, formerly the residence of the late Duke of Cambridge, is also given, this building having been converted into a public museum. The letters from old Kewites, chiefly from abroad, are, as usual, a most interesting feature. Death, we are sorry to say, has visited several members during the past year, portraits of five deceased members being given.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Iris luteo-alba.—This little plant is now in flower with me, and I think that if I had been able to include it in my group at the Royal Horticultural Society's meeting on the 3rd inst. it would have caused much interest. Roughly speaking, it is a white reticulata, so slightly shaded with cream and pale blue as for these colours to be scarcely noticeable, except on close inspection. It is smaller and dwarfer, too, than the reticulata type, and altogether a somewhat insignificant flower; but the unique colour makes it of great interest to lovers of this section.—F. HERBERT CHAPMAN, Rye.

A hint on Rose pruning.—There is no harm done by allowing a few buds to push into growth at the top of the shoots before pruning is commenced. This is often an advantage. When the top growth commences the roots are also active, and owing to this after the pruning is done the dormant buds quickly develop into strong vigorous shoots. The end of March is quite early enough to commence pruning the Hybrid Perpetuals, to be followed by the Hybrid Teas, leaving the Teas to be dealt with in April.—C. RUSE, *Munden Gardens, Watford.*

Autumn Snowdrops and the seasons.—The dull and wet weather which generally prevailed here during 1907 had the effect of either hindering or delaying the flowering of the autumnal-blooming Snowdrops. *Galanthus corymbosus* did not bloom with me at all, and *G. octobrensis*, *G. Elsäe* and *G. Rachelæ* did not come into flower until well into January, and some of these are still in bloom in the last days of February. *G. cilicicus* opened in the beginning of January.—S. ARNOTT, *Dunfries, February 27.*

Destroying wasps.—*Re* the article on wasps (pages 109 and 110), I have found the following very effective in destroying them: Plant batches of *Centaurea montana carnea* and *C. m. rubra*; then, when they first begin flowering, look over them every day when it is fine enough for wasps to fly. The queens are attracted to these in numbers, and with a pair of strong leather gloves they may be taken and killed. Another plan is to place jars or bottles of beer, sweetened, into which they crawl and get either intoxicated or drowned. Our firm grow large quantities of these *Centaureas*, and it was quite by chance I noticed the wasps feeding on them last spring.—GEORGE GIBSON, *Leeming-Bar.*

The sorrows of the seedsman.—

It may not be generally known, yet such is the fact, that the seedsman often has to work a great many hours of overtime during his busiest seasons, and has to crowd as much into those hours as he is physically able to accomplish. In a busy seed and bulb business there are two calls for this strenuous exertion, viz., when the bulbs are dispatched and when the seeds are sent out. The bulb season begins in earnest early in August and continues until well into November. Out of this time there will probably be some eight weeks in which the staff will have to work until 9.30 p.m., or, in exceptional cases, until nearly midnight for six days in the week. In my own case I have worked until 11 and 11.30 for some time in order to cope with orders, and this not owing to any bad management, but to a bad season and late delivery of bulbs. The seed season opens early in January and runs on to the end of March; this will generally give from one to two months of overtime, the assistants often working thirteen and fourteen hours a day. And not only are the hours long, but everyone is working at full pressure. Now, I am not grumbling at this state of things, it is what is expected by all who enter into the seed trade, whether he hold the post of office boy or manager; but what I do plead for is this, that those who send their orders to the seedsman shall endeavour to make his work as light as possible. I will first give a few instances of how work is often complicated and increased. Nearly all seedsman send out order sheets on which to write out the order, or in many cases the names of seeds or bulbs are printed with spaces for the quantities to be filled in by the customer. Now if these sheets were always used in the way intended, they would make the execution of an order very simple. Unfortunately, many people lose these order sheets almost as soon as they get them; then when making out their orders they collect a few odd sheets of notepaper, sit down and begin to jot down "impressions" for the coming season's gardening. They order a few items, totally ignoring the sequence of subjects in the catalogue from which they are working. Then follow a few interjectory remarks on cultivation or the crops of the previous year, then a few more items and so on. It is no exaggeration to say that these "mixtures" often have to be entirely rewritten before the order can be executed, and this when every minute is precious and the staff is working at highest pressure. Even when the order sheet is used it is often so carelessly filled in that it is almost impossible to say what is required. In some cases marks will be placed just halfway between two varieties, so that it is guesswork to say which to send. In other cases marks are so faint that a magnifying glass is required to decide whether an ounce or half an ounce is wanted. Then, again, marks are made and partly obliterated, so that doubts are raised as to whether the item is wanted or not. Again, when seeds are offered by the ounce, some people will persist in ordering by the packet. Or others, when they get to choice flower seeds worth anything from 2s. 6d. to £8 per oz., placidly put loz. before everything they fancy. Of course, in these cases the seedsman will at once make the corrections without much loss of time, but a little thought would have prevented even this little extra work. Another class of purchaser sends off his order early in the season, but forgets to put any name or address on it, and at the end of a week or so—according to his patience—writes indignantly to know when he may expect his goods. Some persons persist in asking questions about bulbs or seeds which have been anticipated and are fully answered in his seed or bulb list. Of course, this is want of thought. Of late years all the leading authorities among bulb growers, or rather users of bulbs, have advocated early planting. This is very good advice, but has added another trouble to the bulb merchant; for some of his clients having got this idea of early planting

firmly into their heads, they give the nurseryman no peace until their orders are executed. Having shown a few of the trials of a seedsman (a number more could be cited if space allowed), I ask that those whom he serves will do their best to make his task as light as possible. (1) By using order sheets, &c., provided for the purpose. (2) By abstaining from asking questions answers to which may be found in the catalogue of the seedsman or bulb merchant. (3) By writing or marking the orders distinctly so that there can be no doubt as to what is required and how much of it. (4) By making out the orders in proper sequence from seed or bulb list, and writing questions or other remarks on a separate paper. (5) By exercising as much patience as in you lies, believing that the seedsman will attend to your wants as soon as he possibly can, if for no higher motive than to make room for other work which is needing his attention.—A SUFFERER.

A VISIT TO MR. F. HERBERT CHAPMAN'S GARDEN.

WE recently had the pleasure of visiting the garden of Mr. F. Herbert Chapman of Guldeford Lodge, Rye, who is, perhaps, best known to the horticultural world as the raiser of the beautiful yellow Freesia named Chapmani. The garden in question is situated immediately beneath a very steep and high cliff that breaks all north and east winds, so that it is most favourably placed for plant life of all kinds. Horticulture, it should be mentioned, is really a hobby of Mr. Chapman's, bulbous plants, and particularly Freesias, being his pet subjects, the crossing of these and Narcissi being extensively carried out by him.

Freesia Chapmani was naturally largely in evidence, and it certainly is a charming plant, the deep rich yellow flowers possessing almost as much fragrance as the well-known *F. refracta*, while in size they also compare favourably with the last-named species. Much has been written and said as to how Mr. Chapman secured such a splendid novelty, but, needless to say, a greater part of this has been merely surmised, hence it may be of interest to record the exact crosses made. At the outset, *Freesia refracta alba* was used as the seed parent, the flowers of this being fertilised by pollen from *F. aurea*, a little-known species that possesses dirty yellow flowers. The result of this cross was plants with flowers of varying shades of yellow, none of which satisfied the hybridist, hence the deepest yellow blooms were selected and the pollen from these used on *F. refracta alba* again, *F. Chapmani* being the result. It will, therefore, be seen that a double cross was necessary for the production of the handsome yellow Freesia that is already a general favourite.

Among other forms of Freesia that we noticed was one named Lemon Drop, a pale lemon-coloured form of *F. refracta*, and an improved form of *F. refracta alba*, the flowers being pure white instead of cream, with the usual yellow markings. A new break in colour is provided by a plant or two with a rich apricot tint suffusing the flowers.

A box of seedlings that were flowering was most interesting, the whole of the plants being the result of one cross. Among them were deep yellow, white, apricot and pale yellow hues, thus proving that the Freesia, like many other plants, is most variable when crossing is resorted to. Seed is sown during June in shallow boxes and the bulbs are allowed to flower in these before they are transplanted. The age that the seedlings attain before they flower varies considerably, some producing blooms the first year and others needing a period of four years to reach the flowering stage. The deep lilac Freesia Tubergeni, of course, finds a home here, and

Amethystine, a pale lilac form of it, is also grown. When we remember that the crossing of Freesias, at least in this country, is at present only in its infancy, we may safely predict that many other beautiful forms will be produced ere many years elapse.

Narcissi seedlings abounded everywhere, and no less than fifty distinct crosses were made by Mr. Chapman last year, records of all being carefully preserved so that the parentage of any prizes that may result will be known. Some seedlings of *N. calathinus*, only about an inch high, had the characteristic twisted leaves of this species, even in this early state. Seeds of Narcissi are sown as soon as ripe in shallow boxes and given cool treatment from the first, the young bulbs being transferred to beds in the open after the second year's growth has been completed.

Irises of the *reticulata* section were just in flower, and some very charming things were among them. We particularly noticed some substantial improvements on *I. Krelagei* and *I. melusine*, the first-named being especially variable, a form of it named *grandiflora intensa* being, as its name implies, larger and deeper in colour than the type. Considering the hardness of these plants, and the early period of the year in which they flower, it is surprising that they are not more widely grown.

Some Cyclamen seedlings, resulting from a cross between *C. ibericum* and a variety of *C. persicum*, were rather disappointing, little improvement on the first-named being noticed among them at present. However, a further cross has been made, the results of which may, perhaps, prove more satisfactory.

Besides hybridising, Mr. Chapman is a very capable cultivator of Narcissi, and visitors to the Midland Daffodil Society's show held at Birmingham last year, will no doubt remember the excellent group of fifty varieties that won for him the first prize and gold medal of the society. A silver-gilt Banksian medal was also awarded him last April by the Royal Horticultural Society for a splendid group of Daffodils shown at Vincent Square. Undoubtedly, Mr. Chapman is a coming man in the horticultural world; certainly he is an enthusiastic hybridist, in which he is greatly assisted by Mrs. Chapman, who apparently has a natural gift for colour selection.

VIOLET PLANTS IN POTS.

USUALLY Violets are grown in frames throughout the winter when an early supply of flowers is required. There are few persons who do not love Violets, and I suggest that a few nice clumps be lifted and placed carefully in flower-pots for the decoration of the conservatory and dwelling-rooms. I have grown many pots of Violets for this purpose, and they have always been much appreciated. Procure a number of 7-inch and 8-inch pots, put in good drainage, and then pot the lifted clumps much in the same way as you would an ordinary Zonal Pelargonium.

Do not bruise the roots, but press the soil—which should be of a light nature and in a medium condition as regards moisture—gently around the roots. Then place the newly-potted plants in a cool, airy frame for about ten days. New roots will quickly take possession of the fresh soil, and when the flower-buds commence opening take the plants to the conservatory. It is only necessary to have the plants in the dwelling-rooms while the flowers are fully open. Careful watering must be the rule, and manure water is not necessary. Dead and fading leaves should be regularly removed, because they would, if left on the plants, not only mar their beauty, but cause the loss of many flowers. Princess of Wales and La France (single-flowered) and Mrs. J. J. Astor and Marie Louise (double-flowered) are good, reliable sorts to grow. AVON.

THE KITCHEN GARDEN.

SOME VALUABLE CLIMBING FRENCH BEANS.

FREQUENTLY it happens that the amateur can devote some space to climbing Beans, but the best results are not always obtained from the old Scarlet Runner. These at times are late in bearing, and require more room than often can be given them. My note concerns a very different type of Bean, which should greatly interest amateurs, and not only be more valuable on account of the compact growth, but more so for their excellent quality. The variety July is a very distinct sort as the pods are stringless. This is a great gain in the cooking; but this I will refer to later. They bear so freely that quite forty pods have been seen on a single stalk. Another important point is their earliness. Last season—by no means an early one—July gave pods the second week in July from seed sown the last week in April, whereas the runners of the older type were quite a month later. The plants do not need tall stakes—3 feet to 4 feet—and the pods are long, thin and straight, averaging about 6 inches in length, and produced in pairs or clusters. The seeds are

require little preparation. If cooked when quite young, then served with butter, they are delicious.

Another way of serving this Bean when cold is to mix it, whole, with salad. Served thus the good quality of the pod is not lost. The July Climbing also has other good points: it keeps longer when fit for use than others. Doubtless its small seeds and fleshy pods are in its favour in this respect.

Successor is an excellent Bean to follow the July; it has larger pods and is of excellent table quality. Though not so early as the first-named, it is valuable for its long cropping and the large quantity of fine pods produced. This, in my opinion, is one of the best of the climbing French varieties, a superior form to those first introduced, and a reliable Bean for amateurs who have none too much space for the Scarlet Runner group. It should be sown late in May for a succession; indeed, last year I made two sowings, one in May and another a month later. By so doing I got good pods well into October, and in quantity. It variety also sets very freely and does well against a fence or wall. Grown thus it does not require sticks and gives a good return. Feeding in dry seasons should not be overlooked. It is an easy matter to feed with any good food and well water it in afterwards.

Those who have liquid manure would find this one of the best foods for the purpose. Another point worth attention is to avoid crowding the plants. It is well to give plenty of room. If the seed is sown too thickly, thin out when a good plant is secured. Amateurs may also forward a crop by sowing in boxes in frames and planting out early in May. This done, I have had July fit for table in June. Both these varieties were raised by Messrs. Carter and Co. of High Holborn. G. WYTHES.

SOWING MISTLETOE

JUDGING by the vast quantities that are sent to the London markets every Christmas, chiefly from France, the Mistletoe (*Viscum album*) is as popular as ever in this country. Although generally regarded as a parasite it is not strictly so because, owing to its possessing green leaves, it is capable of absorbing carbonic acid gas from the air, and

forming from this, in conjunction with the moisture and minerals derived from its host, starch, which is the principal of plant foods. Another erroneous idea entertained by many is that Mistletoe will only grow on Apple trees or those closely related to Apples. Undoubtedly it is most frequently met with on these trees, but it will also grow on the Ash, Lime, Poplar, Whitethorn and occasionally on the Oak.

Generally speaking a moist locality suits it best, but it may sometimes be induced to grow under more arid and dry conditions. The seeds, which are ripe early in March, may be sown at once, choosing the under side of a branch where the bark is smooth and living. The berries may simply be squashed on the bark so that the seeds are held there by the sticky substance contained in the berries, or slight cuts can be made and the seeds inserted therein. Whichever system is adopted means must be taken to prevent birds stealing the seeds, this being most effectively accomplished by hanging pieces of fish or wire netting over the spots where the seeds are sown. No further care is necessary. Very little growth will be made the first summer, and even when fully established the plants are of slow growth. As the male and female flowers are produced on separate plants one of each at least is necessary to secure a crop of berries. The illustration portrays a fine bunch of this semi-parasite that has affixed itself to an Apple tree. Although its presence cannot be beneficial to the tree it is doubtful whether any appreciable harm is done; at least, trees that have large bunches growing on them seem little the worse for it.

THE GREENHOUSE.

WATERING AND VENTILATING GREENHOUSE PLANTS IN SPRING.

IT is a very easy matter for the amateur to err in the watering and ventilating of his plants during the spring months. At no other season of the year is it so necessary to pay close attention to both points in the cultivation of plants under glass. In the autumn the foliage and wood are both fairly well matured and will withstand the changes in the weather, in the summer it is possible to ventilate and give water freely without causing any serious injury to the contents of the house, but in spring we have cold east winds, alternating spells of bright sunshine and cloud, and as the new growths of the plants are very tender any neglect in regard to airing and watering may cause irreparable damage.

In the depth of winter there is usually quite enough moisture in the greenhouse without sprinkling water on the floor; indeed, we try, or ought to try, to keep the interior of the structure dry for the benefit of the plants. But as the sun gains in power and new shoots grow on the plants more moisture is required. Our aim should be to produce a temperature and an atmosphere which will induce the healthiest growth of the plants. If the interior of the greenhouse be very dry in the afternoon when it is closed, and the hot-water pipes are heated in the usual way, the plants will suffer and insect pests be favoured. It is the wisest plan to slightly damp the floor at closing time, especially if the sun shines at the time; then if you enter the house an hour afterwards the temperature will be higher but the perceptible moisture in the atmosphere will feel agreeable. Open the ventilators slightly early enough in the morning to prevent the temperature rising unduly, but do not cause a chill to the plants through excessive ventilation. As a rule on clear days the ventilators should be gradually opened wider—according to the strength of the sun's rays—till noon, then it should be the rule to gradually close them. Furthermore, damp the floor at noon on bright days, as well as when the house is closed. If you find the temperature too high, and at the same time a cold east wind is blowing, it would be wiser to syringe more water on the floor and walls of the house than to open wide the ventilators at once.

The watering of plants, especially newly-potted ones, requires to be carefully done at this season. If the soil be moist a syringing of the foliage will be more beneficial than watering the soil, but all leaves should be dry by sunset. AVON.



MISTLETOE GROWING ON AN APPLE TREE. (Now is the time to sow the seed.)

small; the pod fleshy and stringless. It is certainly the earliest climbing French Bean I have grown, and adheres well to the sticks. The quality of the pods when cooked is not unlike that of the Butter Beans; they are delicious. Here I would ask amateurs to adopt a different way of cooking to that usually followed; that is, to gather before the pods have become old. Cook them whole, and, being stringless, they

THE FLOWER GARDEN.

MISTAKES MADE IN SOWING SEEDS.

AMATEURS will now be busily engaged in sowing seeds in the open borders, and, although they will probably cover the seeds properly, they will make the surface of the soil very smooth with the hack of the spade or rake down the lumps of earth to a fine powder. At this season cold east winds are prevalent, and when the tender seedlings are fully exposed to such winds a serious check is the result. Instead of making the surface of the border quite smooth, leave it somewhat lumpy; these lumps of soil, averaging the size of Walnuts, act as a natural shelter to the tiny seedlings, breaking the force of the wind. Some finer soil may be scattered on the seeds, so as to secure proper germination; but the surface itself should not be beaten down flat. There is another mistake very generally made, and that is neglect in the treatment of the subsoil, or that portion immediately below the surface. When ground is dug in the autumn and winter, clayey soils especially are left in a rather lumpy condition, and the mere breaking up of the top crust for the reception of the seeds is not sufficient. Make good use of the garden fork and thoroughly break up the subsoil before putting in the seeds. Especially is this necessary where seeds are sown in quarters where the resultant plants are to remain to come to maturity. AVON.

HELLEBORUS PETER BARR.

THIS is, perhaps, the darkest-flowered variety of *Helleborus colchicus* yet seen, and will doubtless find favour with those who appreciate at their full worth this interesting section of the Lenten Rose. The plant possesses all the good attributes of the species from which it springs, and, apart from that deeper tone of purplish plum colour characteristic of these plants, the blossoms are larger and the sepals more widely separated, thus giving a less cupped character to the flower than is seen in some forms. The vigour and freedom of growth and flowering are all that could be desired, and for the rest the accompanying illustration will afford our readers a good idea of its bearing. It was exhibited before the floral committee of the Royal Horticultural Society on the 3rd inst. by Messrs. Barr and Sons, Covent Garden, when it received an award of merit. E. J.

MUSCARI (GRAPE HYACINTHS).

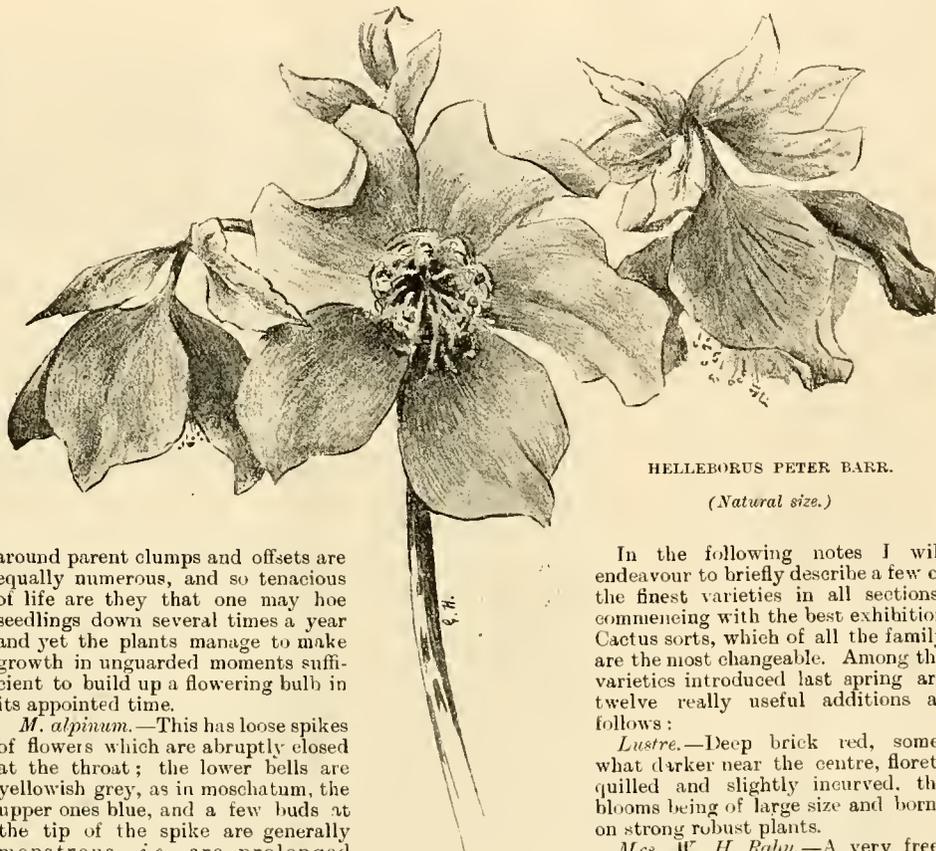
THE Muscari, Starch Hyacinths or Grape Hyacinths, are familiar bulbs hailing from Eastern Europe, where they inhabit mountain slopes in the drier regions. They vary little from one another, and the group has proved a puzzling one to systematic botanists, and still more puzzling to the cultivator who has no herbaria at hand to help him in determining his specimens. There are, however, two distinct groups; one, of which the Musk Hyacinth is an example, has closed flowers with flattened tips, and which are mainly of grey or brown colouring with blue tops; the other group are mainly of blue colouring, the flowers being nearly spherical and closely aggregated in dense spikes. The members of the first group may be dismissed from consideration (with the exception of the Musk Hyacinth) as being of no garden value; the second group contains many useful garden plants.

The characters which separate the species are so minute (or wanting altogether, being lost in a host of geographical forms and seedling variations) that it is impossible for a monographer to accurately describe each plant's superficial details so that it may be readily determined, and as these details contain no cultural lesson, and the plants have no garden value as units, it will perhaps be more helpful to describe the prevailing colour of

masses and to remark such features that appear constant and easily recognised when they occur.

Muscari require no special treatment; all are hardy in the strict sense of the term, and they possess considerable hardihood in that they are able to live and thrive under harsh conditions, holding their own with grasses when naturalised, enduring droughts unharmed, surviving prolonged floods so long as they can maintain root-hold, and they appear to do just as well on a wind-swept hillside growing in hungry soils of limestone formation as in the richer soils of moist valleys and well-tilled gardens. Their increase is rapid, seedlings crop up by the thousand

purpose they are intended. In the Dahlia, as in *Chrysanthemum* and other subjects, it is not always the finest exhibition varieties that are the most popular when it comes to rough treatment. At the same time, it does not follow that a Cactus Dahlia should be condemned as a failure simply because it fails to give a good return when treated merely as a shrubby plant, when perhaps it is one of the most telling varieties on the show bench if properly cultivated. As each succeeding year there are a good number of new varieties added, and as old ones deteriorate, it is necessary, if the grower would keep his collection up to date, that he should add and discard accordingly.



HELLEBORUS PETER BARR.
(Natural size.)

around parent clumps and offsets are equally numerous, and so tenacious of life are they that one may hoe seedlings down several times a year and yet the plants manage to make growth in unguarded moments sufficient to build up a flowering bulb in its appointed time.

M. alpinum.—This has loose spikes of flowers which are abruptly closed at the throat; the lower bells are yellowish grey, as in *moschatum*, the upper ones blue, and a few buds at the tip of the spike are generally monstrous, i.e., are prolonged coloured pedicels which never bear open flowers.

M. armeniacum has small spikes bearing a small inflorescence of dark blue colouring, the outline of which is bluntly cone-shaped. The flowers are quite round, and they appear like the "pips" of well-formed Blackberries.

M. atlanticum has slender spikes of sky blue flowers, pretty in the mass and delicately fragrant.

M. botryoides.—A familiar blue Grape Hyacinth, the flowers of which are arranged in a loose spike, becoming widely separated from each other as the spike attains its full length. A pretty species for massing and a very prolific plant.

Var. album.—The dainty Starch Hyacinth. A neat-growing, white-flowered form whose leaves are pale green and whose stems are also whitish near the summit.

Var. pallidum.—A lilac-tinted azure blue form or selection, very refined in colouring and a capital rockery plant. Grandiflorum is a new form with larger flowers on spikes 6 inches to 8 inches long coloured a deeper azure blue. G. B. MALLET.

(To be continued.)

THE BEST DAHLIAS.

To grow suitable varieties is half the battle in exhibiting, and in a lesser degree success in any other branch of horticultural work is dependent on using those varieties most suitable for the

In the following notes I will endeavour to briefly describe a few of the finest varieties in all sections, commencing with the best exhibition Cactus sorts, which of all the family are the most changeable. Among the varieties introduced last spring are twelve really useful additions as follows:

Lustre.—Deep brick red, somewhat darker near the centre, florets quilled and slightly incurved, the blooms being of large size and borne on strong robust plants.

Mrs. W. H. Ruby.—A very free-flowering Cactus Dahlia, the plants being of dwarf and healthy growth. The blooms are of average size but unusually deep. Colour, creamy white in the centre shading to white at the tips. Probably the best all-round white to date.

Caraloc.—A pure yellow possessing extra strong, erect flower-stems. Yellows being still very scarce this is well worth a trial, although possibly not seen quite up to expectation last autumn.

Ruby Grinsted.—One of the loveliest colours, i.e., a soft salmon fawn. The flowers are large and almost globular, but of the finest form, and although sparingly produced they last well and have very stout stems. To ensure getting a good bunch of this for exhibition several plants should be grown.

Hyacinth.—This variety flowers very much in batches, but is a beautiful flower and a telling one in competition. The form is very incurved and the florets narrow. The colour is yellow at the base but quickly shading to a mauvy pink. The plants are tall and of fairly good habit.

Kathleen Bryant.—Deep crimson and a dwarf, free-flowering variety of good form. It is very useful, and greatly needed on account of its colour.

Rev. Arthur Hall.—This variety was very disappointing, as it did not flower until quite late in the season; still, it is doubtless a good

thing. It is one of the narrowest-petalled Dahlias, and when good is difficult to beat. The colour is bright ruby crimson.

Flag of Truce.—Here we have a good white, but an uncertain one as regards flowering. Several excellent bunches were exhibited last autumn which possessed grand form and petals. The plants are very sturdy and have very stiff flower-stems. Like many other sorts, the cold, backward season may have been particularly detrimental to this variety.

Eureka.—This is a very large flower of most distinct colour, perhaps best described as a purplish plum colour, somewhat lighter at the tips of the petals. The blooms are very deep and they are freely produced on long stems.

Daisy Staples.—Mauve-pink, flowers freely, and has good stems; medium size.

T. A. Havemeyer.—A large-flowering variety; colour, yellow at base, shading to deep red, the tips of the petals being lighter.

Clincher produces huge flowers, but on pendent stems; colour, a beautiful shade of heliotrope on the outer florets, shading to almost white in the centre.

Coming to older varieties, I can but briefly describe them. The best of these are:

Nelson.—A grand flower when in form, but very uncertain as to depth; colour, purplish crimson.

Mrs. Macmillan.—One of the most reliable Dahlias; form neat, stems good; white in the centre, quickly deepening to pink.

Wm. Marshall is another very reliable exhibition variety, and one of the largest. The plants are of very strong growth; colour is orange to yellow in the centre. It is best shown not too large, when it is much more refined in the florets.

Mrs. Geo. Stevenson.—Pure yellow, a variety of very upright growth, with stiff flower-stems. The blooms are star-shaped.

Mrs. F. Grimsted.—A very dwarf variety, making very little wood, yet flowering freely and producing large blooms of good form; colour, deep rich crimson, with purplish shading.

Star.—Yellow to light orange, a striking colour; form star-like, habit of the best, and an easy variety to grow.

The Pilot.—Colour, bright yellow, shading to bright terracotta. The flowers are carried on stiff stems; a reliable Dahlia.

Faunus.—A variety above the average in size, with long narrow florets. Useful and constant.

Oscar.—The plants are dwarf and sturdy, and the blooms are carried perfectly erect. They are of medium size and neatly formed. The colour is bright crimson scarlet.

H. Shoemith.—Deep crimson, very narrow florets indeed. Plants very dwarf, free and of erect habit.

Regarding the plants only as suitable for cutting and garden decoration, the following are the best new sorts not mentioned above:

E. Cadman.—Deep red, florets straight and evenly arranged, the flowers being deep. A good Cactus.

Countess of Malmesbury.—A lovely light pink, the flowers being well away from the plants on stiff stems.

Thomas Challis has an erect habit, producing neatly made flowers on good stems. Colour salmon.

Acrobat.—A sturdy strong-stemmed bi-coloured Cactus. Not very free but a striking variety.

Of older sorts and sorts already mentioned, Caradoc, Daisy Staples, Lustre, Mrs. W. H. Raby, Mrs. Macmillan, Primrose, Star, The Pilot, Delight, Thomas Parkin, W. Jowett, Sirius, Mrs. H. L. Brousson, Floradora, Eva, General French, Spotless Queen and Britannia.

Almost every year witnesses the introduction of another new section, and thus the Fancy Cactus, since they have a class devoted to them at the National Dahlia Society's shows, must be recognised here. The best six of these are:

Meteor.—Pinkish white ground, speckled and striped with crimson and purple. Form very incurving, almost ball shaped.

with white. A bouquet composed entirely of this at the National Dahlia Society's show was a perfect picture.

Nain.—Dark chestnut, a free-flowering variety, the blooms keeping good in the centre.

Mignon.—Although not really small enough to be classed as a Pompon Cactus, this is a useful and beautiful Dahlia, being a strong healthy grower and producing quantities of perfect blooms. The colour is deep pink with lighter centre.

Coronation.—Crimson-scarlet, one of the best.

Peace.—White, a sturdy grower and just the type needed.

Tomtit.—One of the smallest, not over free-flowering, very fine petalled and neatly formed.

Little Dolly.—Another pink, somewhat smaller than Mignon, which it otherwise resembles.

P. P.

(To be continued.)

THE QUEEN OF SAXIFRAGES FROM SEED.

Saxifraga longifolia is not inappropriately named the Queen of Saxifrages, inasmuch as the individual rosettes are the largest of all the encrusted section, which give it a singularly ornamental appearance when not in flower.

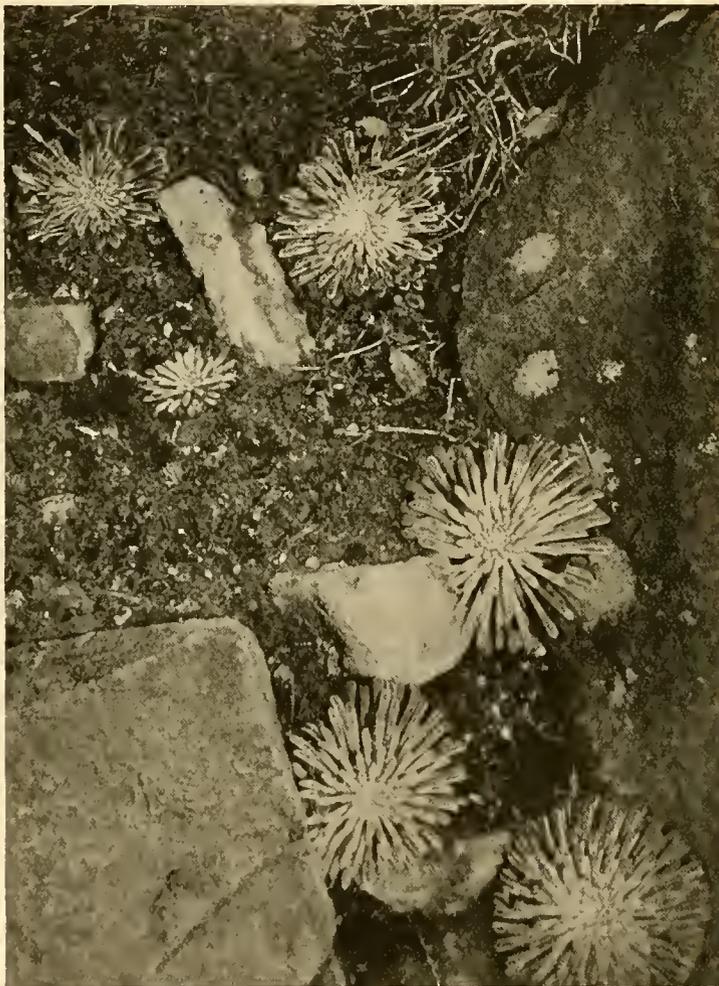
From the seedling stage it slowly gains strength and increases in size and beauty throughout the years till eventually the accumulated vigour of the plant finds expression in a pyramidal head of blossom composed of hundreds of flowers; this crowning event, when it occurs, terminates the life of the individual. Unlike the majority of encrusted Rockfoils, *S. longifolia* never produces offsets, so that it can only be raised from seed, which ripens readily in the open air, but owing to insect agency in cross-fertilising the flowers, the progeny will often exhibit a multitude of forms; to ensure the type coming true, the flowers must be fertilised by their own pollen, which can be best secured by enclosing a part of the flower-spike in a fine muslin bag.

The seed may either be sown in autumn or in spring, as it germinates readily at any of these seasons; the soil should consist of sharp grit and loam, to which is added a small quantity of old mortar rubble, unless the loam is natural limestone soil. Germination may be accelerated in mild warmth, but as soon as the seedlings are evident a cool treatment is much safer owing to the risk of damping off, and as soon as the little seedlings are large enough

to handle they are pricked off into pots or boxes, allowing a distance of 1½ inches between them and using a compost similar to that named already.

The following summer the plants are large enough for potting singly, which is the most convenient system to adopt; the pots require liberal drainage at all times, and from this time forward a small quantity of peat in the compost imparts a degree of coolness which the roots particularly delight in, though no amount of sunshine ever comes amiss to the vegetative parts.

When large enough for permanent planting, a vertical position, such as illustrated, should be given, as then superfluous moisture rapidly drains away, while a cool root run should be the



THE QUEEN OF SAXIFRAGES (*SAXIFRAGA LONGIFOLIA*) THREE YEARS FROM SEED.

Mrs. Caselton.—A tipped variety, being reddish salmon at the base with white tips. The plants are not very free, but the flowers are neat and pretty.

Victorian.—Probably the best all-round Fancy Cactus. White ground thickly striped and speckled crimson.

Cockatoo.—Unique colour, yellow tipped with white; pendent habit.

Columbia.—Red, tipped white; very reliable.

Sirius.—Yellow ground, striped crimson. An old but very reliable fancy.

In the Pompon Cactus we have a section which, as it becomes better known, will be a very popular one. The best of these are

Gracie.—A most lovely little flower, the base of the florets being bronzy yellow, then tipped

cultivator's aim at all times, selecting a sunny exposure, for in such positions the lime incrustation upon the leaves is fullest developed.

THOMAS SMITH.

Walmgate Gardens, Louth, Lincolnshire.

TULIP PRINCE OF AUSTRIA.

I AM led to write these lines from finding that a friend who is well up in gardening matters, and who every year grows a nice collection of spring bulbs both indoors and out, does not know Tulip Prince of Austria. One has read of a devotee of Sir Walter Scott who said that he wished he had never read any of his novels, so that the pleasure of reading them for the first time might be something which he had yet to enjoy. Just so with this Tulip. I almost wish I did not know it, for I can hardly imagine a more pleasant surprise than to come across it for the first time. Jenny, Princess Helen, Proserpine, Duchess of Parma, Vermilion Brilliant and Coleur Cardinal are each in their way lovely flowers and special favourites of mine; but not one of them has so many good points, all as it were combined in one single plant. It has a splendid habit, a good constitution, a peculiarly taking colour and a most delightful perfume. As a catalogue now before me says: "Prince of Austria may be called 'the forcing Tulip' par excellence." The same almost might be said of it as a "bedder." This last spring I had a large bed in front of my dining-room window. Not far away was one of Duchess of Parma, and there were good-sized clumps of Arlis, Cottage Maid, Chrysolora and several others. I thus had a good opportunity of making comparisons. Two things were most noticeable—first, Prince of Austria retained its petals for a longer time than any other; and, secondly, owing to this characteristic, and also because the warm orange red of its first opening gradually passed with advancing days to a real orange, it practically made two beds. Its thin, wiry stems carry the long, sweet flowers without any support even under glass, and the particular shade that they then assume is just as pleasing, if not more so, than when it flowers in the open border. I have some pots and boxes in my greenhouse now (February 3), which will be in full glory before many days are over. On second thoughts I

begin to wonder, would the surprise of seeing them for the first time be more than the pleasure of anticipation with which I now look forward to seeing again well-tryed and too-long-absent old friends.

JOSEPH JACOB.

TWO OF THE BELL-FLOWERS.

(*CAMPANULA PUSILLA ALBA* AND *C. ALPINA*.)

IN "Nicholson's Dictionary of Gardening" *Campanula caespitosa* and *C. pusilla* are given as two distinct plants; but in practice it is impossible to distinguish any difference between them. Their dissimilarities, if any, are so minute as to have no importance in horticulture. The plant is the commonest as well as one of the loveliest of all the little *Campanulas*, thriving in sunny or shady places among rocks or on level ground. Its culture involves no difficulties, it being one of the easiest of plants to grow, in this respect differing greatly from the majority of alpinas, many of which are exceedingly capricious plants. It flowers from June until October, and may be used indiscriminately for edgings, carpets, or the rock garden. It is very close and erect in growth, rarely forming flower-stems over 5 inches in height. The lanceolate leaves are light green, and are carried on thin, wiry stems, with small, drooping, pale blue flowers. The pure white variety is even more charming, and has a freer habit than the type. Of this there are two forms, one almost entirely disappearing in the winter, while the other is evergreen, keeping the ground carpeted during the dark days of the year with emerald foliage. It is easily increased by division or seed and rejoices in a calcareous soil, so that limestone chips should be added in quantity to the loam in which it is grown.

C. alpina is a rare plant in cultivation, but a very beautiful one and closely allied to *C. barbata*. It forms a small, dense tuft of narrow, grey, downy leaves, and sends up a flower-spike rather over 6 inches in height bearing drooping bells of a deep purple-blue tint. It flowers in May and June. It appreciates rich soil, and should be given a compost of leaf-mould and loam in equal proportions mixed with an abundance of limestone chips. It often proves a difficult subject to grow, in some gardens dying out after flowering.

S. W. FITZHERBERT.

THE ROSE GARDEN.

MULCHING FOR ROSES UNDER GLASS.

ROSES, like Vines, revel in a good mulching, not of cold and wet manure, but a good reliable mixture, something that will attract the young fibrous roots to the surface. It frequently happens that a border of Roses will flourish admirably for a year or two under glass and then show signs of exhaustion. The skilled cultivator will anticipate this state of things and provide his plants, be they pot grown or planted out, with some nourishing food. An excellent mixture is as follows: Two parts pulverised sheep's manure, three-fourths of a part of wood ashes, a fourth of a part of fine bone-meal and four parts good soil. Give a liberal application of this now before the plants become too far advanced.

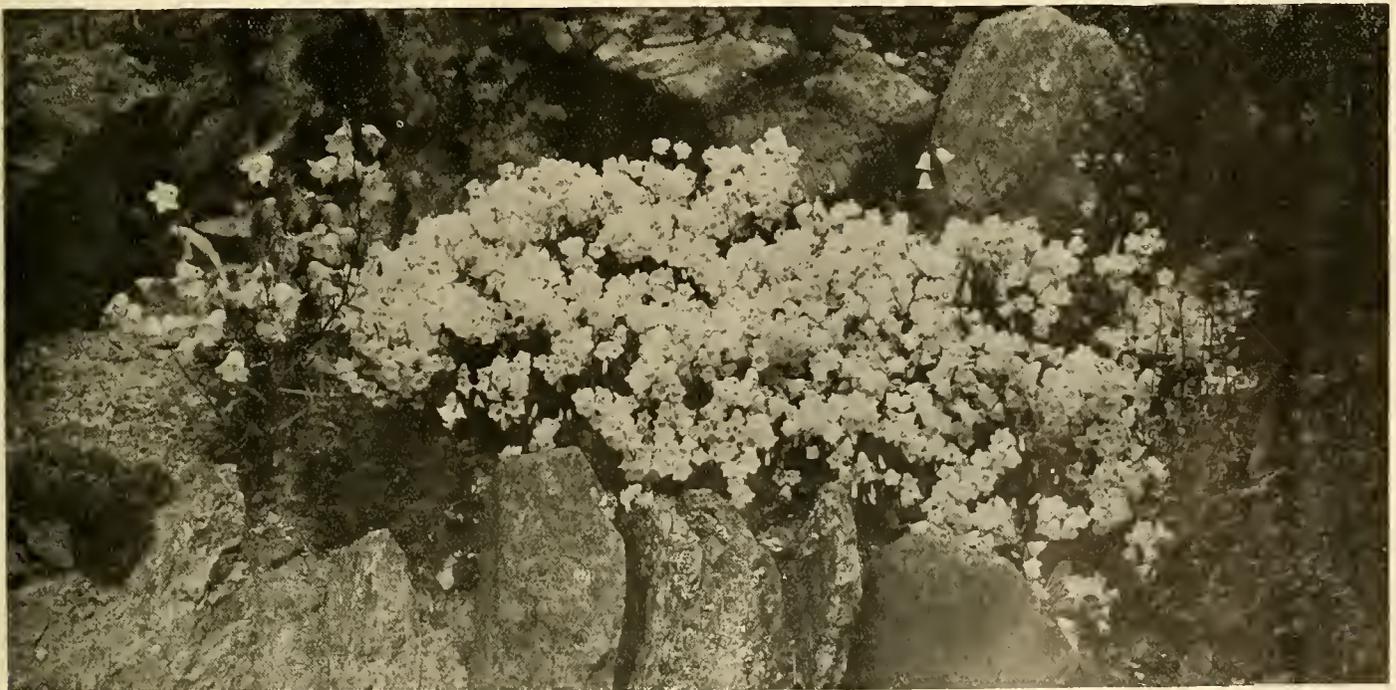
Where possible let this take the form of a top-dressing rather than remove existing soil, but where the pots will not allow of this some pieces of slate stuck around the pots will give additional space. In a week or two it will be found that the fine roots have not been slow to find out the food. Such a mulching as this would be most beneficial to outdoor Roses that seem to need help in the growing season, say, about May.

P.

WICHURAIANA ROSE DEBUTANTE.

ALTHOUGH not profusely produced, there is something charming about the late sprays of bloom which this Rose yields. Even as late as the first week in December pretty little flowers could be cut, and they are particularly welcome when upon most of the pillars there are few, if any, Roses to be seen. There can be no question that raisers will soon be giving us a group of late-flowering rambler Roses of the wichuriana tribe, and considering the readiness that this tribe can be mingled with other groups by crossing, we are hopeful that such lovely gems as René André and Alberic Barbier will be produced as autumnal bloomers.

P.



TWO OF THE BELL-FLOWERS (*CAMPANULA PUSILLA ALBA* AND *C. ALPINA*).

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

HARDY FLOWER GARDEN.—Although it is getting late, hardy creepers may still be planted. I am just finishing planting the Clematises, Passion Flowers and Honeysuckles. The beautiful *Crocsmia aurea* and *C. imperialis* may be planted now; when the bulbs are planted about 4 inches deep and from 4 inches to 6 inches apart I find they invariably do well. This subject should have a nice warm border with a sunny aspect. The different forms of the Pansies should be planted forthwith; for a free and interesting display, however, I plant the Tufted Pansies. These plants revel in soil that has been deeply dug and enriched with a heavy dressing of good, partially rotted manure. Hardy Ferns succeed well when planted at the present time. I find it a good plan to plant them in both shaded and partially shaded positions.

The Window Garden.—My window plants are responding generously to the extra attention they have received of late. The rule is to periodically sponge the leaves of foliage plants to cleanse them from accumulations of dust, their appearance being much enhanced by using tepid milk and water occasionally. Old Geraniums and Fuchsias may be repotted with advantage just now. Fresh, sweet soil and clean, well-drained pots are important factors in successfully treating



2.—SOME OF THE OLD AND USELESS GROWTHS.

these plants in the spring. In a little while new and vigorous shoots will develop, and these will make the window gay throughout the summer. Bulbous subjects, such as Hyacinths, Tulips, Daffodils and Crocuses, as they go out of flower should be removed to a cool shed or spare room, and the soil kept just moist only until the foliage becomes seared, then they may be shaken out and stored away until next autumn. In this way I make use of the bulbs a second time, planting them in spare corners outside another season.

Vegetable Garden.—There is plenty of work to do here just now. Many seeds have still to be sown for both summer and winter vegetable supplies. Sow the following seeds without further delay: Broad Beans in drills 3 inches deep and from 2 feet to 3 feet asunder; Parsnips, in deeply-dug quarters, in drills 15 inches apart and about 1 inch deep; main-crop Potatoes about 7 inches deep and in drills rather less than 3 feet asunder. The "sets" should be placed about 15 inches apart in the rows; vigorous growing sorts require rather more space between them. Available quarters I am now sowing with Early

Milan Turnips, Carrots, Onions, Radishes and Lettuces. I am taking advantage of fine days when the soil is friable to make any sowings of



1.—OLD PANSY PLANT LIFTED FOR DIVISION.

second early Peas. Peerless Marrowfat, Duke of Albany, Telephone, Daisy and Telegraph should be sown forthwith; these should come into bearing just as the earlier varieties have finished.

The Greenhouse.—Glass houses, in which Azaleas and other spring-flowering plants are blooming freely, should be shaded from bright sunshine or their display will not last very long. I find that by tacking a breadth of tiffany to the inside of the roof an effective shade can be provided. This must be done where there is no roller blind, and I do not care to make use of a permanent shading of the nature of a wash.

Roses.—Pruning is the all-important work at this period. I commence with what are known as Hybrid Perpetual varieties. Prune these Roses back moderately and well thin the branches, retaining shoots having a firm, hardened appearance, each of which has conspicuous "eyes," from which the subsequent growths are to be obtained. By these means I procure many very handsome flowers in late June and early July. Where a quantity of blooms are desired rather than a limited number of those of good quality, the trees must be pruned less hard. Varieties differ, making it necessary to cut away extra grossness of growths that spoil the even formation of a tree. The less vigorous shoots should be cut back to within about 9 inches. Roses of medium growth, such as, say, Charles Lefebvre, should be shortened to about 6 inches. The Tea-scented Roses must not be pruned for a week or two yet. The present is a good time to top-dress the beds and borders, using well-decayed manure and forking this in. D. B.

INCREASING PANSIES IN THE SPRING.

The orthodox method of raising new plants of the named Pansies is by cuttings in the late summer or during the autumn months. The summer insertion of the cuttings is carried out with the object of planting the resulting plants in the succeeding autumn, usually during the earlier half of October; and this for producing a free display of blossoms in the spring and early summer is, without a doubt, a most satisfactory rule to follow. However, it is not always possible to deal with them in the autumn; but Pansies may be easily increased in the manner described below.

Lifting the Old Plants for Division.—Anyone who possesses a garden frame, or who can make a temporary structure that will answer the same purpose, may lift and divide Pansies with the greatest ease. Four small planks or boards, 6 inches to 8 inches in width and of a length to suit the requirements of the grower, may be nailed together in the form of a frame, and this covered with a spare frame-light or old window-sash. Throughout March and April the old plants that were cut back late in the autumn should be represented by plants of tuft-like form, and each with a large number of sturdy little shoots that divide up into useful pieces very readily. In some gardens this cutting back of the Pansies may have been neglected, and the old plants may even now have the old coarse, elongated growths still adhering. Should this be so, cut back these old, useless shoots forthwith, and after leaving the old plants for a time, say, a week or a fortnight, lift and treat them as we now prescribe for plants that were cut back last autumn. Fig. 1 represents an old plant lifted from the hardy border. The plants vary in character considerably, some being more tufted in form than others. If the old clumps are lifted with care, many of the roots may be preserved intact, and quite a large number of pieces may be obtained with a quantity of roots adhering.

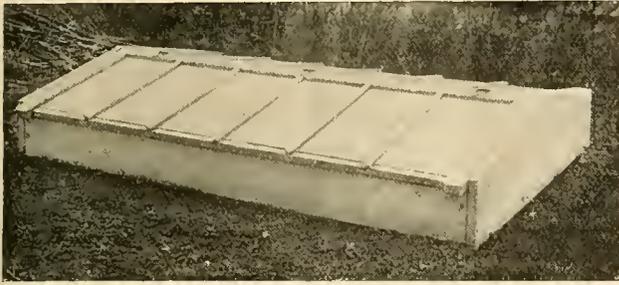
Dividing the Old Plants.—If the old plant is firmly gripped with both hands in the first instance, and the thumbs and fingers pressed well into the base of the growths, they will divide quite easily. See that the division takes place among the roots rather than among the growths. A few of the shoots will be useless for perpetuating the stocks, and for the guidance of the inexperienced such pieces are illustrated in Fig. 2. It will be noticed that these growths are coarse, and, although some of them may root, they cannot be regarded as desirable, as they would ultimately lack the vigour that younger growths with roots adhering almost invariably evolve.

The Best Divided Portions.—Fig. 3 represents the varying character of Pansy growths. The biggest piece in the centre may be planted intact, or each of the young growths may be detached



3.—GOOD GROWTHS THAT SHOULD BE RETAINED: NOTE THAT EACH HAS SOME ROOTS.

and these inserted with the others in some light sandy soil. Shoots without roots should not be discarded, as they will, at this period, root in a comparatively short time. Some of the cuttings will need to be trimmed of seared or decaying foliage. This treatment will enhance the success of root formation, and enable the grower to raise a large number of plants.



4.—AN EXCELLENT PANSY OR VIOLA FRAME.

Suitable Soil for Propagating Purposes.—Light sandy soil is suitable for the cuttings. We make up a mixture of loam, leaf-mould and sand in equal quantities, and pass this through a sieve with a half-inch mesh. Subsequently, the heap is given a thorough mixing and then it is ready for use. The quarter in the garden allocated to the frame is then dealt with, being dug over and levelled, if this has not been done already. A warm aspect should be selected if possible.

A Good Type of Viola Frame.—The shallow, span-roof frame represented in Fig. 4 is an ideal one. For all hardy plants and for bringing on other less tender subjects it is almost indispensable. We prefer it to the ordinary cold frame, because ventilation is so easily carried out, and the plants derive so much benefit from light all round. It is 10 inches at the sides and 20 inches at its apex; because of this the plants are always kept so stocky, and are always so very easily controlled. The frame-lights are hinged and can be opened on either side as a protection or otherwise, whichever way the wind may be blowing. Fill in to the depth of from 4 inches to 6 inches with the prepared soil, level, and make firm. Insert the pieces in rows, starting first with a label bearing the name of the variety being dealt with, and following on with each variety in similar fashion. The rows should be about 3 inches asunder. Dibble in carefully and see that the soil is firmly pressed at the base of each one. Water in with clean water from a fine rosed can when the work is done, and keep the frame rather close for a time, *i.e.*, until root formation is denoted by growth at the apex of each shoot. Fig. 5 shows a frame filled with divided pieces that are doing well. When rooted, give the plants abundance of air.

REPOTTING ROOM AND WINDOW PLANTS.

POSSIBLY more mistakes are made in the repotting of these plants than in any other phase of their culture, with the exception, perhaps, of watering, and much harm may easily be done in this direction by those who are not conversant with a plant's likes and dislikes and its period of growth. The best time of all to repot practically all plants is just when new growth is commencing after a period of rest, and this especially applies to those now under notice. It may be taken as a good general rule that plants grown in rooms and windows rest more or less during the winter months, new growth commencing with the advent of spring; hence it will be seen that the best time of the year for repotting these is in April.

The first question that will arise is that of suitable soil, and although different plants may prefer different soil mixtures, practically all those grown in rooms and windows will thrive in the following: Good fibrous turf that has been stacked for at least six months two parts, leaf-mould or well-decayed and flaky manure one part and sand one part, with a quart of bone-meal added to every barrowful of soil. The loam or turf is best pulled to pieces with the hands, lumps about the size of Walnuts being preferable.

The leaf-mould must have any sticks or other rubbish removed, and it or the manure may with benefit be passed through a three-quarter-inch meshed sieve. Mix the whole well together and use when it is moist, not wet. A good test is to take a handful of the mixture, squeeze it tightly and then let it fall a distance of 2 feet to the ground. If it breaks up it will not be too wet, but should it remain in a ball it will need some drying. Very dry soil must also be avoided.

The size of pots must next be considered, and, generally speaking, those 2 inches more in diameter than those in which the plants are at present growing will suffice. In some instances pots of the same size or even smaller may be advisable. All must be scrubbed quite clean, both inside and outside, and on no account use them until they are dry. New pots must be soaked in water for about ten minutes, and the inner and outer surfaces allowed to dry before using. If this is not done, and the new pots are very dry, they will absorb the moisture from the soil to the detriment of the plants. Place a good-sized piece of broken pot, concave side downwards, over the hole in the bottom of the pot; then over and around it place some smaller pieces so as to get nearly an inch of drainage. Over this place a little rough soil, and the pot is then ready for the plant.

Turn the latter carefully out of its pot by placing the fingers across the surface of the soil and turning it upside down, giving the rim of the pot a smart tap on the edge of the bench. If the plant is healthy and needs repotting it should be a mass of roots, and care must be taken not to injure these. With a pointed stick carefully unwind the roots that are among the old drainage material and remove the latter. Then loosen some of the most healthy-looking roots round the sides, remove any loose soil from the surface, and place the ball of roots and soil in the new pot, taking care to get the plant in the centre. The depth to pot is a point where many beginners go astray; a good rule is to pot not more than a quarter of an inch lower than the plant was in its old pot. A potting-stick or rammer will be necessary, and this may be made from a 1-inch or 1½-inch wide lath, making it level at the end. Place some soil round the old ball of soil and roots and ram it with the potting-stick, keeping the latter close to the side of the pot so as not to injure the roots. Moderately firm ramming only will be required for most

plants. Make the surface level and tidy, leaving half an inch space for watering. Give one good watering with a rosed can, and for the next two or three weeks water very carefully indeed, keeping the plants away from bright sunshine until established.

Where sickly plants are being dealt with, the above procedure must be varied. It will usually be found that when a plant is sick its root system is in a bad condition, and to repot it as advised above would only make matters worse. Turn the plant out of the pot, carefully shake or pick away as much of the old soil as possible, and then wash the roots quite clean under a running tap. Most likely many of them will be dead and decaying, and these must be cut away, retaining only those that are alive. This is a

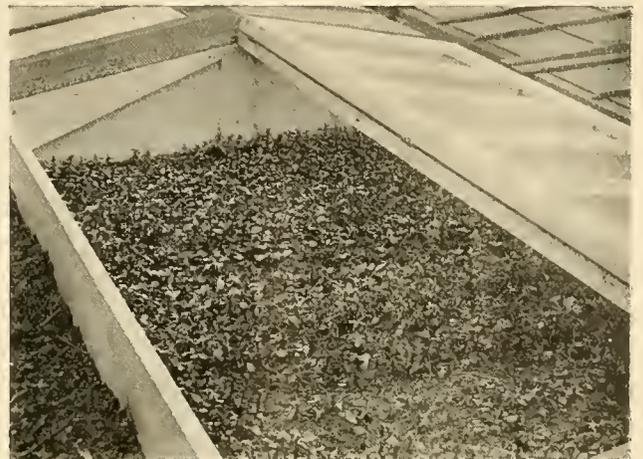
case where a smaller pot will most likely be best, and instead of 1 inch of drainage provide 2 inches or even 3 inches for good sized pots. Also leave out the bone-meal and manure from the soil, making up a mixture of two parts decayed turf, two parts sand, and one part leaf-mould. Use only the fibrous lumps of the loam or turf. In repotting these sickly plants a potting stick is not usually required, the soil being best tugged moderately firm round the roots with the fingers. The watering must be very carefully carried out for a considerable time, so as to encourage new roots to penetrate the fresh, sweet soil. A light syringing overhead daily, the plants being taken to the kitchen sink for the purpose, will prove of great benefit.

EARLY LETTUCES WITHOUT GLASS.

It often happens that the owner of a garden where no glass structure exists would like an early crop of Lettuces from a spring sowing; and his or her wishes may be gratified with little trouble or expense. Select the warmest position available in the garden, and, if the soil is heavy or composed chiefly of clay, add a liberal amount of road scrapings, leaf-soil, or well-decayed manure, so as to lighten it up somewhat. Then draw a few shallow drills 1 foot apart and sow seeds of a quick-growing Cos variety, such as Giant White Cos, scattering them thickly in the drill. Cover with half an inch of fine soil, and no more attention will be needed. When the seedlings appear growth will be comparatively rapid, owing to the plants standing close together. When from 2 inches to 3 inches high they may be cut the same as we cut Mustard and Cress, and a very tender and welcome salad will be provided. A sowing may be made for this purpose at once.

THINNING ANNUALS.

ALTHOUGH writers in the horticultural press have for years been trying to impress upon their readers the absolute necessity for thinning the seedlings of annuals as soon as the work can possibly be done, one still encounters patches of these plants, especially in amateurs' gardens, that look as though the owner desired a mass of greenery instead of the beautiful flowers that many annuals, under proper treatment, are capable of producing. It is of little use to allow the seedlings to remain crowded until they attain a height of several inches, because the mischief is then accomplished. Early thinning must be resorted to, giving each seedling plenty of room so that it may develop into a sturdy plant that will be a pleasure to behold. Should any sceptics read this note, perhaps they will try both ways this summer and note the results.



5.—FRAME FILLED WITH DIVISIONS: NOTE HOW EASY IT IS TO VENTILATE SUCH A STRUCTURE.

THE TOWN GARDEN.

SINGLE DAHLIAS FROM SEEDS.—Those who desire to have an abundance of blooms of single Dahlias for the adornment of their rooms and who do not want the trouble, or have not the convenience, for winter storage of the clumps are not debarred entirely of their fancy, for they can grow any quantity from seeds. Strong plants raised in the spring will flower the same season if planted out on deep, thoroughly worked ground early in June, and though they may not yield flowers good enough for exhibition, they will prove invaluable for decoration. The seeds can be purchased quite cheaply, and should be sown at once in boxes or pans of light soil—such, for example, as a mixture of equal parts of loam and leaf-mould, with enough sharp sand to keep it open. Put this in the receptacle, make the surface firm and level, thoroughly soak with water and after the lapse of an hour or two sow the seeds very thinly. Either a greenhouse or a warm frame will serve admirably to start with, and as soon as the seedlings are through and large enough to handle, let them be pricked off into rather stronger soil singly in small pots. From this stage a frame where they will be perfectly safe from frost is preferable to a greenhouse, as there is not the same liability to drawing up and consequent weakness. Except for watering, which must be done with the greatest care after moving, the plants will not make much demand upon the time of the grower, and the returns in flowers will most generously compensate him for the trouble taken.

THE GRASS PLOT.—The town garden without its lawn or grass plot is scarcely worthy the name of a garden at all. At this season of the year it is possible to give such help as will prove beneficial to the grass right through the summer, and the satisfaction derivable from the lawn will be proportionately greater. If there are any bare patches, scratch them over with an iron-toothed rake and sow seeds rather thickly. This done, spread over the entire surface the siftings from old potting compost—it is, of course, imperative that all corks or stones shall be removed—and this will cover the seeds and at the same time make the grass somewhat unsightly. This condition will, however, be only temporary, for the succeeding growth will be stronger, greener, healthier and brighter as a result. If it is not possible to use the material named, quite as much good will be done by dressing on the refuse from an old hot-bed. Most amateurs make up a little bed for raising seedlings in the spring, and the old material that has done service for this purpose should never be wasted. In either of these cases the rains will soon wash the material away and the lawn will become clean again. Failing these things we may have recourse to concentrated plant foods, and for March and April application there is nothing to excel nitrate of soda or sulphate of ammonia, according to convenience, provided that care is used not to apply more than 1oz. to the square yard. The soda may cause a little browning, but this will soon pass off and leave a beautiful sward. Whenever the weather is favourable the grass should be thoroughly rolled with a machine of medium weight, while cutting must be done as soon as necessary, setting the knives rather high for the first and second cuttings, which may be left on the surface.

SURFACE SOIL.—Now that practically all the plants are pushing their growths through the surface of the ground it will be safe and markedly advantageous to loosen the top soil so as to allow of the free admission of warm air, as this will encourage growth. In many cases it may not yet be quite safe to use the hoe; but a planting fork attached to a long handle will do the work splendidly. This should be one of the routine operations, as it can never do harm.

H. J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

PLANTS raised from seed during the past month should receive attention as soon as they are large enough to handle, pricking them out into pots or pans which have been prepared with some rich fine soil, this being carefully looked over for grubs and worms. When pricked out shade from bright sunshine for a few days, but keep them in a light position, and now that the days are getting longer the house or pits where these are grown should be damped down several times daily.

Caladiums that have filled the pots with roots must have a shift into a larger pot, and at this potting use coarser material with plenty of sharp sand. The little variety known as *Argyrites* should now be potted up into small pots, as it is very useful for decorative purposes, but must not be overpotted.

Cucumbers.—Top-dress these plants as soon as the roots are discovered coming through; little and often is the best method to ensure success. Keep the bines nicely tied in and cut the fruits as soon as large enough. Stop the plants at the next joint to the fruit.

FRUITS UNDER GLASS.

Melons.—Allow the plants to run up the root its entire length before stopping, and get a good set before allowing any to swell. Sow for succession. There are endless varieties now, but growers should rely for the main-crop on some approved variety. As regards flavour, green-fleshed varieties seem to be the most popular with our employers.

Figs.—Trees, whether planted out or in pots, when swelling their fruits must have abundance of water at the roots, or the fruits will probably drop. Trees in pots should have manure every week. Tie in enough young growths, but do not overcrowd them. Any barren or misplaced shoots must be cut out and replaced with new ones. Pinch the leading shoots at about the fifth leaf, as this will mean the production of the second crop. Keep plenty of moisture in the house, syringe twice daily, and shut up with a good solar temperature.

Vinerias.—Continue to thin and tie as recommended in the last calendar. A little more heat may now be given the Muscat house. All Vines ought to be started now, as the latest Grapes require a long season to ripen well, especially for late keeping.

KITCHEN GARDEN.

Asparagus Beds.—The manure that was put on in the autumn has now done its duty, and the roughest portion may be raked off. Then give a dressing of some artificial manure, and with a fork prick it all over and make tidy. In about a fortnight an application of common salt will be found beneficial, both as a manure and a weed killer.

Seakale may be sown or planted at any time if the ground is ready. I prefer planting sets, those prepared from long, straight roots or thongs, as advised in a former calendar, being the best, as extra good crowns can be got in six months under skilful treatment.

LAWNS.

Prepare ground for the reception of grass seeds, as these must be sown during the next fortnight. Lawns of cricket or golf grounds must also be kept swept and rolled frequently with a heavy roller.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardlee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CALADIUMS.—These are not difficult plants to cultivate. Heat and moisture are the two chief essentials to success, and given these the rest of their treatment is easy enough. If not already done, no time should now be lost in starting the corms into growth. In regard to soil, I find that the best of leaf-soil, with a little good loam and road scrapings, are as good a choice as can be made, two-thirds of leaf-soil to one of loam being a good proportion. Failing good loam, I have added old Mushroom-bed manure with excellent results. Firm potting is not needed. All the work may be done with the hands, unless it is a large plant to which a shift is being given during its growth, then a potting-stick may be useful, but it should be used sparingly.

Begonia Gloire de Lorraine.—When shoots can be obtained about 3 inches or 4 inches long they should be inserted singly in small pots filled with loam and leaf-mould in equal proportions, with plenty of silver sand, care being taken that the soil is made firm round the cuttings. Water and place them in a propagating frame with bottom-heat of about 80°, plunging the pots to the rims in Cocconut fibre and shade from sunshine.

FRUIT UNDER GLASS.

Melons.—The earliest Melons are sufficiently advanced for planting out, and it must now be determined whether they are to occupy ordinary mounds on beds or to fruit in pots. Where time is a consideration, the pot system is to be preferred, as the roots, being confined to a narrow limit, are more under the control of the cultivator. In potting use a good sound calcareous loam, adding a portion of old mortar rubble as a corrective. Let the collar of the plant stand well above the soil and ram firmly. When the holes are made, and before plunging, place a piece of slate in the bottom of each for the pots to stand on.

KITCHEN GARDEN.

Tripoli Onions.—The first favourable opportunity should be taken to transplant these, it being better to get them established in the ground while the latter is in a moist condition and before the sun has too much power. The plants may be put out about 6 inches apart, and the rows should not be closer than 1 foot. Each plant should be made quite firm in the soil.

FLOWER GARDEN.

Tufted Pansies.—Apart from their value on the border, these make charming pot plants, and as such may be recommended to the notice of those whose space is limited for planting them out. Cuttings inserted early in August and wintered in cold frames should now be potted into 4-inch or 5-inch pots, using a compost of nice sandy loam with which a small portion of spent Mushroom soil, well rubbed to pieces, has been incorporated. The plants will bloom early and continue to flower all through the summer if seed-pods are promptly removed and they get the help of a little weak manure water when the pots are full of roots.

ORCHIDS.

Lycaste Skinneri is still one of the best and most easily-grown Orchids for cutting, and what makes it more useful is the long time its large fleshy blooms remain good on the plants and in a fresh state in water. Grown cool it is surprising what a lot of bloom a strong plant will produce. I find good turfy loam mixed with peat gives stronger flowers, but if loam is used more drainage is required, adding a few lumps of charcoal to keep the compost sweet.

T. B. FIELD.

(Gardener to the Baroness Berners.)
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ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Position for *Lychnis Haageana* (*Subscriber*).—This plant prefers a sunny position and a moderately light well-drained soil. If to the soil of the bed of which you speak you could add a good proportion of leaf-mould, grit and very short manure, we think the plants would be quite a success therein. In planting keep the semi-tuberous rootstock not less than 3 inches below the surface. In some soils and localities the slug is a most troublesome pest during winter, eating both crowns and rootstock. In winter time you might mulch the bed with fine ashes to keep the pest at bay.

To grow large Sweet Peas (*S. P. Oxted*).—You cannot do better than follow out the instructions given in Mr. Horace J. Wright's article that appeared in THE GARDEN for January 4. It is rather late to commence operations now, but if you trench and manure your soil well it should give you good results. Whether you will be able to secure flowers as large as those depicted in the coloured plate is very doubtful, as light soil is not ideal for these plants. But you should have no trouble in getting stems at least 9 inches long. On really good soil and under first-class cultivation we have seen stems 30 inches long.

Blue-flowered Hydrangeas (*Spero*).—Blue flowers may be produced on the Hydrangea by means of sulphate of iron. It may be mixed with the soil before potting or it may be applied in solution afterwards at intervals while the flowers are being formed. The exact proportion necessary depends to a great extent on the nature of the soil used, for if there is a certain quantity of iron in the soil less is needed than if it is almost absent. It is only by experiment that the correct proportion is arrived at, but in mixing soil for potting a tablespoonful may be added for each peck of soil. For watering the plants afterwards about twice a week a pinch may be added for every two gallons of water.

Plants for pond (*Ashdown*).—The old pond with its rich mud soil and damp bottom should afford ideal conditions for the lovely group of *Kæmpfer* Irises, also *Iris sibirica* in variety, *I. ochroleuca* and many others of the flag and allied sections. The Willow herbs would also be good, and you might with advantage add such *Spiræas* as *Aruncus*, *giganteus*, *venusta*, *palmata*, *p. alba*, the taller *Thalictrums*, *Acanthus latifolius* and *Telekia speciosa*. By the addition of peat soil here and there mingling with the present soil, such Lilies as *canadensis*, *pardalinum*, *superbum*, and others, as *L. Henryi*, *L. auratum platyphyllum* could be grown. For autumn effect the herbaceous *Lobelias*, and particularly *L. fulgens*, *L. syphilitica*, *L. cardinalis* and their following, should be seen, while in spring fine plantings of such *Narcissus* as *Emperor*, *Incomparabilis* in variety, *Poeticus fl.-pl.* princeps and others would be delightful. By a little arrangement an ideal spot could be

created. The Daffodils could not be planted before September; all else could be planted at any time now.

Moving Winter Aconites (*E. M. L. B.*).—It will be better to wait until the growth is well matured before you remove them, and at that time it will be to their advantage and future success if you divide the plants quite freely. When replanting make allowance for the future development of the tufts.

Exhibiting alpine (*Amateur*).—"Three alpines in pots, distinct genera," is by far the more finished and explicit term in this case, and cannot in any sense be misconstrued. "Three alpines in pots, genera" is an incomplete and unfinished phrase, and the addition of the word "only" is necessary to an intelligible rendering. Brevity and clearness are the points to be aimed at by flower show committees and schedule-makers, and this cannot be improved upon in the present case so far as it goes. Its weak point, assuming you have given us the full and complete wording of the class, is that the plants may be shown in or out of flower, and, though flowering plants may be inferred, it is not so stated. A more complete rendering, therefore, would be: "Three alpines in pots, in flower, distinct genera." The last word has not our fullest sympathy, because in spring some genera—*e.g.*, *Saxifraga*—are strongly represented, and greater latitude to exhibitors, and a wider sphere of usefulness generally, should follow if the word "genera" were deleted, the class then reading: "Three alpines in pots, in flower, distinct."

Plants for bank and stream (*Furness*).—It were better to avoid the stone and plant the more picturesque of the moisture-loving plants to be in keeping with the pretty scene. You do not give the height or the extent of the bank, and these would have enabled us to decide as to the better plants for the purpose. The following, however, are all moisture-loving and would be suitable: *Acauth latifolia*, *Tritoma uvaria*, *Camassias*, *Spiræa palmata*, *S. p. alba*, *S. venusta*, *S. Aruncus*, *S. giganteus*, *Monarda didyma*, *Hemerocallis* or *Day Lily* in variety, *Bocconia cordata*, *Iris abricica*, *I. Kæmpferi*, *Telekia speciosa*, *Flag Irises*, *Primula japonica* (so that its roots may reach moisture), *P. denticulata casimiriana*, *P. Sieboldii* in variety, *P. rosea*, &c. *Caltha palustris fl.-pl.* and *Picearia grandiflora* may be placed against the stones in the stream, and such things as *Lent Lilies* (*Narcissus Pseudo-narcissus*), *Narcissus poeticus ornatus*, *N. p. fl.-pl.*, *N. Emperor*, *N. obvallaris*, *N. princeps*, with many others, may be finely grown in the bank. The finest *Narcissus pallidus praecox* and *N. Queen of Spain* we have seen were just in such a cool spot as the picture portrays. Do not omit the common Primrose, the Wood Anemone, and the English Bluebell (*Scilla utana*) for thin carpets or fringes to other plants. There is nothing so fine in woodland scenery or suchlike places as this delightful trio. All but the bulbs could be planted at once.

THE GREENHOUSE.

Plants for a greenhouse (*A. B., Belfast*).—You may grow *Gloxinias*, *Primulas*, *Cyclamen* and *Begonias* in the structure named by you, as well as many other plants. None of the above require much heat; in fact, no artificial heat is needed throughout the summer months, when a free circulation of air is necessary. Such being the case, it is not well adapted for Orchids, though that well-known *Lady's Slipper* (*Cypripedium insigne*) would prove satisfactory therein. Other greenhouse flowering subjects that you might grow are *Clivia* (*Imantophyllum*) *miniata*, *Lantanas* of sorts, *Cannas*, *Streptocarpus*, *Fuchsias*, *Javanese Rhododendrons*, *Epiphyllums*, *Kalanchoe flammea* and *Achimenes*. There is also a considerable choice of foliage plants that would do well in such a structure, particularly *Araucaria excelsa*, *Aspidistra lurida variegata*, *Eurya latifolia variegata*, *Grevillea robusta*, *Ophiopogon japonicum variegatum* and the following Palms: *Chamærops excelsa*, *C. humilis*, *Corypha australis*, *Kentia belmoreana*, *K. forsteriana*, *Lantania borbonica*, *Phoenix canariensis* and *Rhapis flabelliformis*. Ferns, too, must not be omitted, among the best being *Adiantum cuneatum*, *A. decorum*, *A. elegantissimum*, *Asplenium bulbiferum*, *A. dimorphum*, *Cyrtosium falcatum*, *Davallia bullata*, *D. Mariesii*, *Lastrea aristata variegata*, *L. varia*, *Neprolepis exaltata*, *Onychium japonicum*, *Pteris arguta*, *P. cretica* and varieties, *P. serrulata* and varieties and *P. Winsettii*. The plants above enumerated will thrive in a structure with a minimum winter temperature of 45° to 50°, rising 10° or so during the day. As the season advances the temperature will, of course, rise. During summer no fire-heat will be needed.

Carnation leaves diseased (*R. W., York*).—The leaves that you send are affected by a fungus commonly

known as rust. Spray the plants with methylated spirits and water, one part of the former 100 parts of the latter, using a very fine nozzle for the purpose.

Hyacinths and Tulips in pots failing (*A. G. H.*).—We have met with several instances of comparative failure this season in the case of bulbs that have been forced, and have come to the conclusion that most, if not all, of the trouble arises from the dull, cold summer experienced last year. In some districts it was also very wet, and these various adverse conditions would account for the bulbs being insufficiently ripened. This theory is also further borne out by the fact that the bulbs were so slow in rooting.

Cleaning a Palm of scale (*S. B.*).—We have never seen a Palm leaf in such a state from scale, and you have certainly plenty of work before you to clean it. Perhaps the most satisfactory way would be to put it on the fire; but, still, you may try to remove the scale without injury to the leaves. The better way will be to make a very strong lather of soft soap, and thoroughly paint the leaves on both surfaces with it. Then, after three or four hours, sponge the leaves well, a fair amount of pressure being necessary. Should any insects be left after this, repeat the painting and sponging. Another method may, perhaps, suit you better, and that is to paint over the leaves with methylated spirit, taking care that no part is untouched. Then, after two or three hours, sponge the leaves with soft soap. We have found methylated spirit very helpful in many cases, but have never had the opportunity of practising on anything so bad as the leaf you sent. The small black scale with which it is practically covered is the most difficult of all to dislodge.

House for Orchids (*Orchis, Manchester*).—We think such a house as you have built a very good one for an amateur. Your better way will be to grow what are usually termed Mexican or intermediate house Orchids; that is to say, those which can be successfully cultivated in a house with a minimum winter temperature of 50°, rising 10° to 15° during the day. As spring advances it will, of course, be kept somewhat warmer, but in very hot weather in the summer fire-heat may be discontinued. Even at that period, should the weather be cold and wet a little heat in the pipes is helpful. From this it will be understood that the temperature maintained is a fairly comfortable one at all seasons. The following is a selection of easily-grown kinds suitable for an amateur: *Cattleya labiata*, *C. Loddigesii*, *C. Mendelii*, *C. Mossie*, *C. Trianae*, *Ceogyne cristata*, *Cypripedium insigne*, *C. leucum*, *C. apicerrimum*, *Dendrobium nobile*, *D. Pierardii*, *D. wardianum*, *Leelia anceps*, *L. purpurata*, *Lycaste Skinnerii*, *Oncidium marshallianum*, *O. varicosum* and *Zygopetalum Mackayi*.

Information about boiler pipes (*Miss Jones*).—There would certainly be considerable danger to the plants by reason of the near proximity of the pipes, were the latter heated to any extent, for then the arid conditions generally, or the excess of steam when watering was being done, might do much harm. In such instances a close stage is best. Slate over the ordinary lath staging, and with sand or ashes thereon, or corrugated iron sheets also covered in the same way, would afford at once a cool and far more natural—base for the plants, while dispensing with much watering and the usual host of insect pests delighting in, and inseparable from, great dryness. Even though the pipes be not unduly heated, there is ever present that greater aridity and lack of moist atmospheric conditions that play a great part in the successful cultivation of the plants themselves. By all means cover the staging over without delay with finely-sifted ashes or sand, or fine shell shingle if procurable. Thus arranged a spray now and again from the syringe will materially assist in the diffusing of those more genial conditions to plant life within the house.

ROSE GARDEN.

Pruning Rose Conrad F. Meyer (*F. W. D.*).—Sometimes this very vigorous Rose is grown more as a shrub than as a bush plant, and in this case the plants would attain a larger size more quickly if not pruned the first year after planting. Should you desire to grow it as a strong bush or pillar, we recommend cutting back most of the growths about the middle of March to within about 2 feet of their base, but retain two or three growths from 3 feet to 4 feet long. It is evidently a clerical error on the part of the National Rose Society in describing Paul Neyron in their official catalogue as a Hybrid Tea. It is quite as much a Hybrid Perpetual as *Victor Verdier* one of the reputed parents of the variety. We believe we are correct in saying Paul Neyron was the result of a cross between *Victor Verdier* and *Anna de Diesbach*. Root action does not commence with the growing out of the eyes or buds, as you may see if you examine one or two. Many varieties exhibit signs of great vitality until the spring, when they die off. If you could select good ripe wood and endeavour to induce them to callus before final planting, you would have greater success in rooting the cutting. This callus is a secretion

formed at the base of the cutting, and from this the roots appear. Some growers put the cuttings in pure sand in the autumn and then, when callused in the spring, they are finally planted, and those not callused are discarded. Sand for the cuttings to rest upon is an excellent aid to free rooting.

Climbing Roses with weakly growths (H. J. C.).—Your plants will produce vigorous growths, although somewhat severely pruned last spring. Providing the roots were healthy and planted in good soil well prepared, there should be this summer some fine long growths produced from the base of the plants. Doubtless, last season there was more activity going on at the roots, which, of course, was not visible, and it is no unusual thing for these vigorous climbers to apparently stand still the first year. We advise you to do but little to them; just shorten back the laterals to two or three eyes and mulch the plants with some short well-decayed manure. If weather is dry during May and June, help the plants by an application of water now and then. This would apply more if they are planted against a wall.

Utilising Rose prunings as cuttings (J. G. K.).—We fear you would have very little, if any, success with the growths pruned away at this season of the year. It seems contrary to Nature for such cuttings to form a "callus," from which the roots are produced, as they do this much more readily when the sap descends in the autumn. We have ourselves experimented with these growths and the result has not warranted us in recommending it. Of course in the autumn the hard summer growths made into cuttings will root readily of most varieties, especially if some Cocoanut fibre or road sand be placed about and beneath the cuttings. Such cuttings examined a few days ago had formed nice little roots. An excellent mode of rooting Rose cuttings is to make them in the autumn, tie in small bunches and immerse them in moist sand until the spring. On examination only plant those that are "callused" over at the base, and such are almost sure to send out roots. Of course many may have small roots upon them, but if carefully planted in gritty soil they will soon become established. This plan is much better than planting out a lot in the open ground in the autumn, because we are more sure of a crop of plants. If the weather happens to be very severe during winter, and the cuttings are raised up, this seems to have a deleterious effect on them, whereas if they are kept in sand away from the frost they escape this.

Rose garden alterations (Britannia).—As you have now rearranged the beds there will be only two beds less than before. We would suggest the centre bed as previously advised, and the other beds as follows: Standards—2, Billiard et Barré; 3, Hugh Dickson; 4, Grüss an Teplitz; 5, Gustave Regis. Half-standards—6, Caroline Testout; 7, Mme. Abel Chatenay. Dwarfs—8, Frau Karl Druschki; 9, Le Progrès; 10, Antoine Rivoire; 11, Grüss an Sangerhausen; 12, Paul Ledé; 13, Lady Ashtown; 14, Liberty; 15, Mme. E. Metz; 16, La Tosca; 17, Richmond; 18, Pharisæer; 19, Melanie Souper; 20, Mme. Leon Pain; 21, Lady Battersea; 22, Earl of Warwick; 23, Betty. Six good varieties for the arches would be Carmine Pillar, Blush Rambler, Félicité Perpétue, Flora, Tea Rambler and Electra.

Penzance Briars on a fence (P. M. D.).—Three feet is a very low height to restrict these charming Briars to, but you may safely prune them so that the hedge is made tidy without fear of losing their blooms. We should advise you to tie in as much of the growth as you can without overcrowding, and cut the other away. If some of the growths are trained horizontally they will bloom all along the growth. Where they enter your neighbour's garden they may be cut away, and it would certainly be best if you keep the growths all on your side. A few uprights with wire stretched between, and the growths tied to them, would give you a more effective partition and, at the same time, provide you with more blooms. It does not matter how the growths are bent, providing they do not break; in fact, the more they are tied down the more bloom is obtained. In making any ties see that they are not very tight. You could plant a single row of the dwarf Polyantha Roses along the border, and they would give you their pretty little blooms nearly all the summer and autumn, such sorts as Perle d'Or, Oloire des Polyantha, Perle des Rouges, Aschenbrodel, Eugénie Lamesch, Petite Constant, K. Zelmet and Mme. N. Levavasseur being among the best.

Sulphate of ammonia for Roses (Rose).—In order that the greatest good may be obtained from this chemical there should be a sufficiency of lime in the soil. It is a good practice to apply about half a pound of lime per square yard in November, then in the spring give a dressing as follows: Sulphate of ammonia, 2lb. to 3lb.; superphosphate, 8lb.; both well mixed together and applied at the rate of about a quarter of a pound to a square yard. If you are uncertain as to whether your soil needs lime, we advise an application of bone-meal instead of the sulphate this season, allowing about a good handful for each plant, but well distributing it over the surface. The following is also an excellent compound for Roses: Superphosphate of lime, twelve parts; nitrate of potash, ten parts; sulphate of magnesia, two parts; sulphate of iron, one part; and sulphate of lime, eight parts, applied in February and March at the rate of a quarter of a pound to a square yard. The ordinary dressing of good farmyard manure is also given, and liquid manure during May and June.

FRUIT GARDEN.

Covering for fruit trees as a protection from birds and spring frosts (H. Hampshire).—You do not give the size of your bushes or pyramids, and therefore we cannot very well give even an approximate idea of the cost. The most effective and cheapest way we know of to protect the buds of such trees from birds is to fix some rough rather strong poles (four or five, according to the size of the trees) round the trees a little distance from them and one in the middle, all slightly taller than the tree, placing over these poles 1-inch mesh repaired herring nets, double thickness. These are to be bought very cheap. They may be left on the trees day and night until the buds are safe. These nets placed double thickness will be found to be an effective protection against birds, as they will also be against ordinary frost, say, from 5° to 7°, but should harder frost be anticipated, it is easy to throw over the nets some further protection in the way of cheap tiffany, mats, or any other covering available.

Fruit trees and Roses for new garden (F. A.).—1. Apples, dessert: James Grieve, ripe September; Cox's Orange Pippin, October to Christmas; King of Tomkin's County, December and January. Pears, dessert: William's Bon Chrétien, ripe September; Doyenné du Comice, November; President Barabé, February and March. Plums, dessert (Gages): Dennison's Superb, ripe August; Golden Drop, October. 2. Apples, dessert: Irish Peach, ripe August; Allington Pippin, November and December; Duke of Devonshire, February and March. Pears, dessert: Beurré Giffard, ripe August; Marie Louise, October and November; Le Lectier, January. Plums: Oullin's Golden Gage and Green Gage. 3. Apples, dessert: Worcester Pearmain, September and October; Ben's Red, July and August; Cox's Orange Pippin, October to Christmas; Christmas Pearmain, December and January; Rosemary Russet, February to May. Apples, kitchen: Early Victoria, August and September; Grenadier, October and November; Blenheim Orange, November and December; Lord Derby, December; Lane's Prince Albert, January and February. Pears, dessert: Jargonelle, August; Louise Bonne de Jersey, October; Fondante d'Automne, September and October; Doyenné du Comice, November and December; Beurré de Jonghe, January; Josephine de Malines, February and March. Pears, stewing: Vicar of Wakefield, Christmas and January. Plums: Rivers' Early Prolific, The Czar, Belgian Purple, Green Gage, Victoria and Reine Claude de Bavay. Cherries: Elton Whiteheart, early; May Duke, early; Black Eagle, midseason; Frogmore Bigarreau; The Noble, late; Waterloo Heart, late. 4. Currants: The best Red Currants are Fay's Prolific, Scotch and Victoria regina. The best White Currants are Dutch and Transparent. The best Black Currants are Baldwin and Boskoop Giant. Gooseberries: The best green Gooseberries are Green Gage and Langley Green. The best reds are Crown Bob, Lancashire Lad, Red Champagne, Warrington and Winham's Industry. The best white Gooseberries are Cheshire Lass, Bright Venus and Whitesmith. The best yellow Gooseberries are Képsake, Golden Lion, Champagne Yellow and Golden Gem. They should be planted in rows across the east end of the kitchen garden. 5. Climbing Roses for rustic fence A: Bennett's Seedling, Dorothy Perkins, Crismon Rambler, William Allen Richardson, Aimée Vibert, Alistair Stella Gray, Gloire de Dijon, Carmine Pillar, Electra, Reine Olga de Wurtemberg, Reine Marie Henriette, Lamarque, Ards Pillar and Climbing Caroline Testout. For planting against the house we recommend the following: Gloire de Dijon, William Allen Richardson, Mme. Lambert, Reine Marie Henriette, and in a warm position with slight protection in winter, Mâchall Niel. 6. Standard Roses for B B B as for plan—Hybrid Perpetuals: Alfred Colomb, Ben Cant, Boucenne, Captain Hayward, Charles Lefebvre, Clio, Duke of Edinburgh, Dupuy Jamin, Etienne Levret, Fisher Holmes, Frau Karl Druschki, Hugh Dickson, Margaret Dickson, Mme. Eugene Verdier, Mme. Gabriel Luizet, Marchionness of Londonderry, Marie Baumann,

Mr. Cocker, Mrs. R. G. Sharman Crawford, Reynolds Hole, Suzanne Marie Rodocanachi, Ulrich Brunner and Mrs. J. Laing. Hybrid Teas: Augustine Guinoisseau, Caroline Testout, Charles Graham, Dean Hole, Earl of Warwick, Florence Pemberton, Grüss an Teplitz, J. B. Clark, Kaiserin Augusta Victoria, Killarney, Lady Battersea, La France, Liberty, Mme. Ravary, W. J. Grant, Richmond, Souvenir de Mme. Eugene Verdier and Viscountess Folkestone. The above are among the cream of the varieties, and are all of vigorous growth. The colours will be found in any good Rose catalogue. 7. Bush Roses for C C in plan—Hybrid Perpetuals: A. K. Williams, François Michelin, Annie Laxton, Baroness Rothschild, Countess of Oxford, Countess of Rosebery, Crown Prince, Duchesse de Morny, Duke of Teck, General Jacqueminot, Helen Keller, Her Majesty, Jules Margottin, Mme. Victor Verdier, Marchioness of Downshire, Marie Baumann, Marie Verdier, Maurice Bernardin, Merveille de Lyon, Mrs. John Laing, Mrs. R. G. Sharman Crawford, Paul Neyron, Rev. Alan Cheales and Senateur Vaise. Hybrid Teas: Antoine Rivoire, Captain Christy, Caroline Testout, Countess of Caledon, Countess of Derby, Dean Hole, Dorothy, Exquisite, George Laing Paul, Gladys Harkness, John Ruskin, Killarney, Lady Moyra Beauclerc, Liberty, Mildred Grant, Mme. Abel Chatenay, Papa Gontier and Rainbow.

Apple twigs with red eggs (J. Wilson).—The red eggs on the twigs of your Apple tree are those of one of the beetle mites belonging to the family Oribatidae. These mites are very common on trees, and, I believe, are perfectly harmless. They are said by those who have studied them to feed on the minute vegetable growths found on the bark of all trees. The black eggs are, I believe, those of one of the aphides, but I am not certain. Most of the winter washes will not kill the eggs of insects, but one lately devised and known as V.I. is said to. I believe it can now be obtained from the vendors of such things, or from Messrs. Cooper and Nephew's chemical works, Berkhamstead.—G. S. S.

Pruning young Pear trees (A. E.).—From your description we take it that your young Pear trees are horizontally trained. The leading shoot in this case must be cut back in the same way as that recommended for the Peach in order to secure another layer of side shoots, as well as a new leader for next year. In the case of the side shoots, if the leading growths of last year are only of moderate length, they need not be shortened at all; but should they be from 15 inches to 18 inches long, then they had better be shortened to 10 inches. If the wood-buds on these shoots break freely, they should be disbudded and left 5 inches apart. The shoots emanating from these buds should be stopped during the summer (about the middle of July), cutting them back to within seven buds of their base, and in winter pruning to two buds of their base, when in due course fruiting spurs will form at the base of these cut-back shoots.

Pruning young Peach trees (A. E.).—We presume your young Peach trees are fan-trained and are growing against a wall. Last year's growth on the centre or leading shoot should be shortened by one-third its length. This will result in the wood-buds below breaking strongly. Three of the best of these must be retained to grow into shoots during the coming summer, one to form the leading upright shoot, and the two others to form side shoots, one on either side to be trained obliquely. All the remaining wood-buds on these shoots must be rubbed off. Each leading side shoot of the tree must be served in the same way as the leading shoots. By doing this you will be adding two branches to each existing shoot, thereby helping to make your young trees well furnished at their base, or more bushy as you term it. If there are more of these than can be got in at 6 inches apart, they must be cut back to within two buds of their base, when they will form fruit-spurs and produce fruit the following season.

MISCELLANEOUS.

Plants for mound beneath Pine trees (Tectis).—You will not be able to get many plants to thrive beneath Pine trees, especially in such a position as you describe. You cannot do better than plant the mound with common British Ferns, and among them place Snowdrops, Daffodils, Anemones and similar plants. You might, of course, experiment with likely shrubs, such as Gaultheria Shallon, G. procumbens, Berberis Aquifolium and Butcher's Broom. Many plants that thrive well beneath the shade of deciduous trees refuse to grow beneath Pine trees, and it is rarely that grass thrives satisfactorily in such a position. We think, however, that you will find the Ferns, Snowdrops, &c., a success, and the combination is a very pretty one, especially when the dead Fern fronds are left on the plants and the Snowdrops come through among them.

Gravel for garden paths (L. Earle).—The best material for paths such as you speak of is good clayey gravel. This should be spread while in a damp state and be well rolled before it has a chance to dry. Before being wheeled on it should be allowed to set on the surface, and after each heavy rain a good rolling should be given. The worst period for gravel paths is a light rain after a dry period and a thaw after a frost. In each case the effect is the same—the lower part is hard and the upper soft, consequently the upper part lifts. The only thing to do in such a case is to use the paths as little as possible for a few days. It is quite probable that some local nurseryman will be able to tell you of the nearest place where you can obtain suitable gravel, or if you write to the Park's Superintendent at Liverpool he will probably give you the desired information.

THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

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AN ENEMY TO SWEET PEAS.

AN enemy to Sweet Peas, to some extent common, and yet very rarely saddled with its crime because of its cunning, is the Pea or Bean weevil (*Sitona lineatus*). It was my misfortune last season to receive a visit from these destructive pests, and it was more by accident than good management that I discovered the identity of the invaders. The first indication I had that the plants were attacked was on April 4, when they were about 3 inches high, and I noticed that tiny notches were being nibbled in the leaves. The conclusion came to me that slugs had been at work, and I therefore dusted all the rows well with soot. It was not, however, until a month later that matters really became serious. During the first week in May I found that the leaves of a number of young plants had been eaten away so that nothing but the midribs remained, and although the lead had not been interfered with, I was considerably exercised in mind as to what was the cause and how to remedy it. A visit to the gardens of two of my friends showed the same state of affairs in a somewhat lesser degree, and in each case the slug or sparrow was named as the culprit.

From the frequent dustings of soot I had given with no apparent check on the depredations, it was evident that some other measures would have to be taken, and I therefore, on the evening of May 7, went out armed with a lantern to hand-pick, as I expected, the slugs. There was not, however, a slug to be found anywhere; but I discovered a small brown beetle with a very hard skin or shield which I subsequently ascertained was the Pea weevil, and it was evident that these were the invaders. Having discovered their identity I was, I am thankful to say, able to effectively check their depredations.

In appearance the weevil is a tiny striped beetle from one-fourth to one-fifth of an inch in length. It is of a dark colour, the body being covered with grey or greenish grey scales. The antennæ are of a dull red colour, very slender, and with club-like terminations. Its legs are ferruginous. The under surface of the beetle is clay coloured, so that when it falls on its back to the earth it can scarcely be detected. Its plan of attack is to eat small notches in the leaves of young plants, and so interfere with their growth; in severe infestations the leaves may be eaten to the midribs, such being the case last year with two of my rows, viz., King Edward and Dorothy Eckford. The notches are semi-circular and very similar to the nibble

of a slug or peck of a sparrow, and for this reason these are often innocently accused where the weevil is to blame. The weevil feeds after nightfall, and when alarmed readily falls to the ground, feigning death until the danger is past. Its eggs are laid either upon or just beneath the soil, close to the roots of the plants. These hatch into small white, footless, wrinkled grubs, with brown heads and biting jaws. The larva bores a channel along the main roots of the plants and also appears to feed on the nodular growths found on the roots of Sweet Peas and other leguminous plants. When full grown it is about one-fourth of an inch in length and pupates in an earthen cell at a depth of about 2 inches below the surface of the soil. At first the pupa is pale creamy white, later its eyes become black and the proboscis-sheath darkens. The adult weevil hibernates in the hedgerows, Barley stubble, &c. It appears early in spring and attacks the young Peas as soon as they are above ground, laying its eggs on or near the roots. From these eggs we get a summer brood of the weevil, which appears about the middle of June. This in turn lays eggs, which hatch into larva in the autumn and feed all winter on leguminous roots. The winter larva matures in May and appears as an adult weevil in June. In some cases it has been known to come from the pupal condition as early as March. Thus the weevil may live in one or two ways during winter, either by hibernating in adult form or by feeding in the larva stage on leguminous roots.

The method I adopted to check its ravages was to dust the ground and plants with fresh slaked lime and soot mixed, after dew or rain, repeating the process at intervals of four or five days. I also had the surface soil finely broken up and tightly pressed round the plants to prevent the weevil coming up. This was found to be an effective check, and although the rows of King Edward and Dorothy Eckford had suffered so severely they ultimately made a good show. The check they had received, however, made them somewhat late. During the winter, in the hope of finally exterminating the pests, I have given all my garden a good dressing of ground lime, and left it rough so that the frost may have full play, but whether this will prove effective remains to be seen. Other remedies which are recommended are as follows: Finely powdered guano dusted over the plants after rain, spraying the rows with arsenical washes, and the application of a weak mixture of paraffin water and a little soft soap, which makes the leaves of the plants distasteful to the weevil; with the last-named, however, there is some

danger of injuring the growth of the plants, as paraffin is inimical to vegetable life and must be very sparingly employed.

Much useful information on the subject is to be obtained from a pamphlet (Leaflet No. 19) issued by the Board of Agriculture, to which I am indebted for many of the data here given which relates of the life history of *Sitones lineatus*.

J. STAVELEY HARPER.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

March 31.—Royal Horticultural Society's Hyacinth Exhibition, Vincent Square, Westminster; Lecture at 3 p.m. on "The History of the Cabbage Tribe," by the Rev. Professor G. Henslow, V.M.H. Horticultural Club, Hotel Windsor, 6 p.m., the Rev. Joseph Jacob on "Tulips."

April 1.—Winter-flowering Carnation Society's Exhibition, Royal Horticultural Society's Hall, Vincent Square, Westminster.

April 7.—Bournemouth Horticultural Society's Show; Brighton and Sussex Horticultural Society's Show; Cornwall Daffodil Society's Exhibition.

Gardeners at cricket.—Mr. and Mrs. Harry J. Veitch have again invited the various committees of the Royal Horticultural Society to Burnham Beeches during the coming summer for the purpose of playing a cricket match.

Royal Botanic Gardens, Edinburgh.—The conversion of the old glass houses in the Royal Botanic Gardens, Edinburgh, which were for long quite out of date, has been in progress for some years, and they have generally been replaced by others of larger size and of the most improved types. An important addition has just been effected by the completion, so far as the structure itself is concerned, of a new Fern house, with a couple of annexes, this occupying the east end of the main range and entering from the main pathway. The structures are most convenient and commodious, and will afford space and conditions suitable for the cultivation of the choicest Ferns. The main building, which is about 70 feet long and terminates in a domed part higher than the remainder, is being furnished with sandstone blocks in the form of rockwork, among which the Ferns will be planted so as to give it a natural appearance. The annexes are about 60 feet in length and are at right angles to the main house. The contractors for the building were Messrs. Mackenzie and Moncur, Limited, and Professor Bayley Balfour and the contractors are to be congratulated on the design and execution of this important addition to the gardens. Some outdoor alterations, which will add greatly to the amenity of the gardens, have also been in progress for some time.

An uncommon Marsh Marigold (*Caltha polysepala*).—In a recent ramble through the glass houses of Veitch's Royal Nurseries at Exeter I came across a fine example in flower of *Caltha polysepala*. My attention was drawn at the same time to an account of the plant as given by Mr. Reginald Farrer in his recently-written book "My Roek Garden," which, as it will probably commend itself more or less to most plant collectors, but some of whom, however, may not see it, I copy it in its entirety. He says, "The Marsh Marigold or Kingcup of our bogs has a double form that you may admit if you like; but a very different person is *Caltha polysepala*, newly introduced, and now selling for about a guinea a plant. This, to describe it briefly, is the ordinary Marsh Marigold, multiplied by three—in all its parts, leaf, flower, stem—a tropical-looking aquatic of unequalled glory. The plant has a curious history, which may or may not be legendary.

Report says that an Italian peasant found it in some unknown corner of the country, and, in consideration of its marvellous size, brought it to Rome and laid it at the feet of Pope Leo. The old Pope benignly accepted the offering, and *C. polysepala* established itself in one of the fountains in the Vatican Garden. But the Pope would never let anyone else possess bud or seed or baby of it, and there year after year it wasted its sweetness on the desert air, being seen by nobody except an aged gentleman, who, presumably, had other things to think about. This policy survived Pope Leo, and continued until the English gardener (all honour to his name; he is a male Antigone, daring a formal sin to secure the Higher Holiness) resolved that such a scandal should no longer endure. So he took with him into the Vatican Gardens a covey of his sisters and his cousins and his aunts, and while they engaged the custodian in a conversation on Renaissance Art, our hero hooked out a root or two of *Caltha* with his umbrella. And now Pope Pius is none the poorer, and the whole world is the richer. I cannot but think or dimly hope that horticulture has a code of ethics to itself. Why should a friend's seed-pod fall neglected, or a prey to slugs, when one has a pocket ready to receive it? However, I hasten to reassure all my acquaintances; my own spirit is far too meek for such adventures, I merely admire the law-breaker from afar. I cannot steal, though to beg I am by no means ashamed." This is a pretty and well-told little story, and may be taken as an example of Mr. Farrer's style throughout an interesting and readable book.

—JOHN R. JACKSON, *Claremont, Lympstone, Devon.*

The Veitch Memorial Trustees offer the following prizes for competition at the shows of the Royal Horticultural Society. On October 15 and 16 next a first prize of £10 and a silver medal, a second prize of £5 and a bronze medal, and a third prize of a bronze medal for the best collections of five distinct varieties of Grapes, three bunches of each, to include two distinct white varieties, grown by the exhibitors only. On December 8 next and at the first meeting in April, 1909, one medal and £5 on each occasion for the best group of winter and spring-flowering Carnations, either in pots or as cut flowers, or a combination of both, to occupy a space of 100 square feet, and grown by the exhibitors only. All these prizes are open for competition by amateurs only.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

"The Garden" Flower Show.—As an old reader of THE GARDEN I feel I must write and congratulate you on the good news which appears in your latest issue. I, like many others, have read THE GARDEN for many years, and its arrival by post week after week, year in and year out, has been very eagerly looked for. Having benefited so largely from what I have read and having put into practice the excellent precepts laid down from time to time by your much appreciated contributors, my garden has become most interesting to me. It is particularly gratifying, therefore, to read that we readers are to have a horticultural show all to ourselves. This surely is quite a unique event, and cannot fail to stimulate us all to make a great effort to excel during the ensuing summer season. There is nothing like friendly rivalry to stimulate interest and whet one's appetite for higher achievements, and a flower show in which lovers of flowers, &c., can exhibit the products of their garden in competition with others who have culled their knowledge from the same source cannot fail to be an event of more than ordinary interest. I hope you will be able to publish the

actual date of the show soon, and trust you may also be able to secure a well-known building in London for the purpose. You are very generous in the number of competitions provided, and, most important of all, you have made classes to suit readers having either large or small gardens. Whether I shall be a fortunate winner of a silver medal I know not, but I shall try my best to win one. I am glad you are providing a series of classes exclusively for amateurs. Wishing you every success in this interesting venture.—AN OLD READER.

Winter Salads.—A few weeks ago there was an article in THE GARDEN on "Winter Salads." It may interest amateur readers to hear how I have a constant supply of delicious salads all through the winter. About the end of July I sow in the open curled and round-leaved *Batavian Endive*. Nice plants are formed by the middle of October. I then take them up and plant them in close "packets" with good balls of earth in a well-dug piece of open ground, pressing them firmly in. I then place over them empty boxes as large as possible and not more than a foot high, and press them down closely so that no light can get in. In about six weeks I find the *Endive* is beginning to bleach and is fit to eat. I keep reserve plants picked out ready to go under the boxes when required, and until well into February I get nice salads. I also sow *Lamb's Lettuce* in long lines in July for winter use. The little wild *Cress* makes a very nice addition to a salad; it grows in most gardens as a weed and in damp lanes.—J. G. A.

Destroying queen wasps.—This question is one of great importance to all fruit growers. As "G. S. S." points out, queen wasps can often be caught in late autumn when they are looking for a place in which to pass the winter. A good trap for them at that season can be made by shredding up old Russian mats and placing loose-wads of this material in the roofs of outhouses. On wet days the wads may be taken down and the wasps, usually in a drowsy state, killed. "G. S. S." states that the queen wasp or mother feeds her young in spring for a short period, and also that the grubs are fed at first on the juice of fruits and the nectar of flowers. As fruits are not plentiful in spring, we may take it for granted that the first brood is fed on the latter food. This is probably the reason that queen wasps are often to be found hovering around Gooseberry bushes when the latter are in flower, though I have never observed them collecting honey from the flowers. Has the practice of placing bottles of syrup in likely places at that time had a fair trial? I intend to test it this season, and if the Editor thinks it likely to be of general interest, will communicate the result. [Yes, do please.—Ed.] As to destroying the nests, cyanide of potassium, though most effective, is one of the most deadly poisons. Coal tar is very generally used for the purpose, but there is not the slightest need to light it. We use a water-can having a long spout and pour in about half a pint of tar and close up the hole. The fumes from the coal tar are quite sufficient to kill all wasps in a few days and the grubs as they emerge from their cells.—J. COMBER, *Nymans Gardens, Crawley, Sussex.*

— I was very interested by the article on wasps by "G. S. S." and the destruction of the same by killing the queens and destroying the nests. A most simple and effective method of destroying the nests, I have found from long practical experience, is by procuring an ordinary wine or spirit bottle and filling the same with paraffin. After dark proceed to the nest, and with a light discover the entrance hole, then pour the contents of the bottle into the hole and push the neck of the bottle in to make a plug, and I can assure readers that there will not be a wasp alive in two days, the fumes of the oil having destroyed them. It would be wise to inspect the nest during daylight, as sometimes there are two entrance holes, but this is not often the case.

Occasionally, too, the hole takes an upward course.—H. H., *Box Road Nurseries, Bathford, Bath.*

— In connexion with the article on wasps in THE GARDEN for the 7th inst., I should like to mention that last year I caught thirty-two queen wasps in April and May. The method employed was very simple. I hung in various parts of the garden American glass fly-traps filled with cider or beer and treacle. Whether the wasps were attracted by the flies caught or by the smell of the contents of the glasses I do not know; but the fact remains that they came readily to their doom. As far as I remember we had not one wasp in the house all through the summer, and very few in the grounds; but as there was a scarcity of wasps in the neighbourhood, our immunity may not have been entirely due to the spring destruction. I must also join issue with the writer of the article as to the advice given about destroying nests by cyanide of potassium. No turf should be put over the nest for at least twenty-four hours. The mixture, if strong enough, retains its deadly qualities for quite that length of time, and as there are always a certain number of wasps away from the nests it should be left open for them to return to it, when they will die with the others. In a couple of days the nest should be dug up or turfed, to prevent any chrysalids coming to life. For the past twenty years I have been in the habit of destroying all the nests found in our grounds by a strong solution of cyanide of potassium poured into the nest from a watering-pot with a long spout. It has always been effectual. The wasps die instantly, and I have never been stung.—M. WILLIAMS.

— May I bring to the notice of readers of THE GARDEN a method of destroying queen wasps, as advocated by Sir George Kekewich in a letter to the *Field* last summer, in which he details his experience. He says: "I have been in the habit of hanging on the walls of my garden, under the eaves and in sheds or summer-houses, or any other protected place, a number (say a dozen) of wide-mouthed glass jam jars half filled with well-sugared beer, each year during March, April and May. I killed in the first year seventy-five queens and two queen hornets, in the second fifty-six and in the third twenty-five. I then moved to another locality, and this year I have killed seventy-one." As this is such a simple method compared with chasing them with a syringe or other weapon, and has the merit of being very effectual, we are giving it a trial in the gardens here this spring in the hope of reducing the wasp plague, which has been very virulent of late years.—R. W. DEAN, *The Gardens, Audleys Wood, Basingstoke.*

— There is a very simple way of destroying wasps' nests which is not mentioned in the interesting article on wasps in THE GARDEN for the 7th inst. If you think it of interest to your readers, it is as follows: Having located the wasps' nest, go to it after dark armed with an old wine-bottle into which about a tablespoonful of turpentine has been put. Thrust its neck downwards into the mouth of the nest, ramming it round with bits of turf or wads of grass to keep it firm and exclude the air. By the next morning you may take the bottle away, as the fumes of the turpentine will have killed all the wasps. If the hole is too small for a wine-bottle, an old Harvey sauce bottle is as effectual, only do not leave the cork in, as one clever person I knew did, and was much astonished at finding the nest as strong as ever the next day. Everybody has, or can get, turpentine (spirits of), while many people do not like to have as dangerous a poison as cyanide of potassium about.—MILDRED E. DOBBS.

White Water Lilies.—This picture of the wild Water Lily, from a photograph kindly sent by a reader in Ireland, is interesting as showing the beauty of the Water Lily on our lakes and rivers. We hope to publish soon some advice about planting the hybrid *Nymphaeas*, those raised by M. Latour-Marliac and others.

Hardiness of *Incarvillea Delavayi*.—In your "Answers to Correspondents" recently I saw a reply to "Balmacarron" on the hardiness of *Incarvillea Delavayi* and its not being a long liver. I wish to state that if they are taken up in the autumn, washed quite clean, dried, and then put in dry Cocoanut fibre or dry soil and stored away in a cool place till spring, they will keep healthy and right for any length of time. It is being left in the cold, wet ground that kills them through the autumn and winter. By taking them up they can be retarded, if desired, for several weeks, keeping them dry and planting any time in spring. I have no doubt that a lot of our fleshy-rooted herbaceous plants would be better treated this way.—E. SMITH, *Cheshire.*

Forcing *Incarvillea Delavayi*.—We cannot hear sufficient of that valuable introduction *Incarvillea Delavayi*. Its long-flowering period, the elegant outlines of its blossoms and their dainty colouring, its hardiness (it endures here Arctic temperatures without any protection), the wonderful ease with which it is raised from seed and flowers the second season, are



A BEAUTIFUL GROUP OF WHITE WATER LILIES.

surely enough to make it dear to one's heart. To all this, however, by an accident comes to me the revelation that it can be forced as easily and as quickly as Rhubarb, and with proper treatment may be had in bloom at Christmas. On February 20 I was startled by loving hands bringing a cut flower and leaf of *I. Delavayi*; it was brought to my bedside, where I was stricken down with influenza. Never in my life had anything in the way of cut flowers given me so much pleasure before. Catching first sight of the colour I thought it was a *Cattleya*. To look out of the window and see the fields covered, as at present, with 12 inches of snow, and then look back on this bright *Incarvillea* is a pure delight. In the autumn of last year I cleared a bed upon which I was in the habit of throwing any spare seeds, and with other things came up three thick roots of *Incarvillea*. Having plenty elsewhere, they were left in a basket in a shed, quite dry, till winter came. Then they were taken to the cellar of the dwelling-house, where until Christmas they still remained in the dry, hot air of the boiler-room of the house central heating apparatus. When at last pity was taken upon them, they were potted and put into the greenhouse, where within seven weeks they produced their lovely flowers

from the dry state into which the roots had got from the rough treatment they had received. Why, by retarding and forcing it would seem one could have these lovely blooms all the year round!—E. HEINRICH, *Plönegg, near Munich (Bavaria).*

THE HOE IN THE GARDEN.

HUMBLE though it may be, it is very doubtful whether any tool, excepting the spade, is as useful in the garden as a good steel hoe, at least one being absolutely necessary even in the smallest garden. It is equally doubtful whether many wielders of this tool get the utmost amount of good that it is possible to obtain by a proper and intelligent system of using it. Hoes, like many other things, vary considerably in shape and size, many of the so-called improvements that are on the market being almost useless for the purpose they are intended for. One, however, that is not met with nearly so frequently as its merits demand is the sproughton, invented, I believe, by the Rev. Foster-Melliari, and if I were limited to one only this would be my choice. It can be worked either by pushing or drawing, while the sharp lance-like point is most useful for digging out weeds of a deep-rooting nature, such as Docks and Nettles.

In most gardens, however, several hoes at least will be allowed, and where this is the case the Dutch hoe and the swan-necked draw hoe must be included. The former is a most valuable tool for destroying small weeds in beds and borders without disturbing the surface to any great extent, and the latter is most useful for heavier work in the kitchen garden, where it is frequently desirable to stir the soil to a good depth. The best type of this hoe that I have ever seen was the ordinary swan neck fixed to a handle, a thread and nut being provided at the extreme end of the neck. Steel blades of varying sizes were made to fit this neck, so that the user had half-a-dozen different sizes at his command, which, when not in use, took up but very little room.

But it is the benefits to be derived by the constant use of the hoe in the garden during the greater part of the year that we are most concerned, and the one that stands out from among the many others is the preserving of moisture in the soil. There is no gainsaying

the fact that where soil is frequently hoed during hot weather the moisture is retained therein to a much greater extent than it is in soil that is left untouched, simply because the natural tubes or ducts in the soil are broken and the ends protected by a layer or mulch of fine soil. Were the hoe used more frequently and the hose or water-can less better results in many instances would be obtained than have been hitherto. This is a point that many otherwise good gardeners are apt to overlook. Then, again, air is admitted freely to the soil, and as pure air is of the greatest benefit to the roots of plants, the good done in this direction will be very great indeed. Grubs, too, of many kinds are exposed and placed at the mercy of birds that are ever on the look out for them. Cultivators, generally, are too often apt to regard the hoe as a tool for destroying weeds only, and, although this was probably its primary mission, we should not be backward in availing ourselves of its services for the purposes named above. Of course, there are many other uses to which forms of this humble tool may, with advantage, be put, such as earthing up Potatoes and other plants, and one can only hope that its value will in future be recognised to the full. H.

TREES AND SHRUBS.

ACCLIMATISATION OF FOREIGN SHRUBS.

SOME experiences, extending over a number of years, in the acclimatisation of foreign shrubs and trees may perhaps be of service to persons living, like ourselves, in the South-West of England. Our garden, though situated as described, stands in a rather exposed position at the top of one of the low chalk hills of the Dorset downs, some 320 feet above sea level. In spite of this, and of the fact that as many as 20° of frost have been registered during the present winter, we have several kinds of delicate foreign shrubs and trees doing very well out of doors.

The first secret of successful acclimatisation appears to be the thorough seasoning of the woody stem before trusting the plant outside during the winter. Many years ago the seed of a beautiful New Zealand shrub, locally known as Matipo (*Pittosporum undulatum*), was sent to me from that country. Having reared a number of young plants and grown them to a height of about 18 inches, I, one winter, allowed ten of these to remain on an outdoor shelf behind the greenhouse, facing south. One frosty night I lost every one. Supposing this shrub to be too delicate to bear our climate I kept the remainder under glass for

the next few years; but as they grew larger increasing difficulties in the way of housing put me to the necessity of trying to harden them. With this end in view I began planting the shrubs out during the summer in the beds, lifting and potting them late in the autumn and storing them in a cold house or in a fireless room within doors. After a year or two of this treatment they acquired firm, woody stems with a more robust habit of growth. Two years ago I determined on the experiment of leaving them out for the winter, and the result has been entirely satisfactory, as they have safely endured two of the coldest spells that we have experienced since 1894. This shrub is well worth trying by anyone living in the South or West of England. It has black stems, which contrast charmingly with its shiny, prettily waved, Holly-like leaves, the young shoots displaying a most delicate shade of malachite green in the spring. It is evergreen, and I find it most useful for cutting in winter. The flowers are dark red with yellow stamens, inconspicuous but very sweet scented. A hedge of this shrub is to be seen at Falmouth, in Cornwall, growing luxuriantly.

Cabbage-tree Palms from New Zealand have been successfully hardened with us by the same process as the Matipos, and have borne the severe frost of this January without hurt. I am now putting a Loquat from Rio Janeiro through the same course of training, and hope to plant it out for good this summer. The second point in acclimatisation is the choice of situation, and this is not quite so simple as it seems, owing to the fact that dangerous draughts or currents of cold wind are sometimes directed by surrounding objects into apparently sheltered nooks. Such a current exists in our own garden, and its path may be easily traced across the bed of Wall-flowers and through the Forget-me-nots. The south-east wind, kept off in the main by a belt of shrubs, enters through a narrow opening, strikes against the wall of the house, and swirls back into an otherwise well-protected corner. A Myrtle placed there was absolutely shrivelled during the frost-wind of January, while another which had never stood a winter out of doors before, but whose position was carefully chosen last autumn, is quite unhurt. Everyone can by observation discover these dangerous currents in his own garden, and must avoid them in planting delicate shrubs. A position facing due south is often trying to plants, owing to the great variation between the night and day temperatures,

and I prefer one looking west or south-west if possible. I once lost a number of Cabbage-tree Palms in an open shed facing south, notwithstanding a partial screen of hurdles and straw, and I doubt the advantage of open sheds in general, as I think the slight movement in the free, unroofed air often saves plants from frost-bite, and that therefore a carefully-chosen position in the open is preferable. It must be said that we have very little snow in this part of England, and practically none has fallen during these last two winters. As a final word, I may add that delicate plants are very much safer with their roots in the open soil rather than in pots or tubs, and, of course, a mulching round them in autumn is an advantage.

Blandford, Dorset.

E. H. G.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

LILAC AND CINERARIAS.

Mr. H. Henderson, head gardener at Brookhams Park, Hatfield, Herts, sends very fine sprays of Lilac and good Cineraria flowers. He writes as follows: "I enclose a few sprays of Lilac, which may be interesting. About six plants were lifted on January 1 of the present year with good balls of soil attached to them and placed in a cool greenhouse close together. The soil was placed round them just to cover the roots. A good watering was then given and the plants syringed twice a day till the flower-spikes appeared. During the last fortnight they have been beautiful for decorating the drawing-room and also the dining-room table. I also enclose a few Cineraria blooms which have been very good. The strain is that of Messrs. Cutbush's, Barnet."

SPRING-FLOWERING IRISES.

Mr. Perry, Hardy Plant Farm, Enfield, Middlesex, sends several spring-flowering Irises, comprising *Iris Tauri*, a sweet smelling sort of a wonderful satiny purple colour with a yellow line down the fall, and at the apex very deep purple variegated with white; *Iris galatica*, which is of strange beauty, blue, purple and yellow in subdued shades, making this flower one of the most interesting of its section. Mr. Perry also sends *Iris Heldreichi*, *I. histrioides*, *I. Vartani* (which are now becoming more known) and the richly-coloured form of *I. reticulata* or the netted Iris, called *purpurea*.

STREPTOSOLEN JAMESONI.

Mr. W. Bee sends us splendidly-grown sprays of this grand old greenhouse climber. He writes: "This is an excellent plant for flowering in the winter, and one that is often grown to cover a pillar or some unsightly corner, for which it answers very well; but it is seen to far better advantage when grown as a pot plant. Early in March is a good time to insert the cuttings, which root readily, and when struck should be potted on as required, never allowing the plants to get pot-bound. It should be grown near the glass, and frequently turned in order to get a well-balanced plant. Loam, leaf-mould and sand make a good potting soil, and for the final potting 8-inch pots are quite large enough. A warm greenhouse suits it best. If kept to a single stem and tied up it is quite easy to grow



A TENDER PLANT ACCLIMATISED: PITTOSPORUM UNDULATUM IN BLOOM IN A POT.

the plants 7 feet or more in height, and when clothed with graceful sprays of orange-coloured blossoms they are very effective for the greenhouse or grouping in the conservatory. The sprays are also very useful when cut. The plants require plenty of syringing to keep red spider in check, and should never be allowed to get dry or the leaves soon turn yellow and drop off. As soon as the pots are well filled with roots after the final potting they require liberal treatment in the way of manure and soot water."

THE KITCHEN GARDEN.

A USEFUL SEED-SOWING TABLE FOR AMATEURS.

A REGULAR supply of vegetables throughout the summer months is always much appreciated. When a person knows how long it will take for certain kinds of vegetables to come to maturity from the date of sowing the seeds or planting the tubers, he also has a very good idea as to the quantity of seeds he ought to sow each time in order to obtain a supply of produce sufficient for his requirements. Furthermore, the following table will prove a good guide when it is the intention of the owner of the garden to exhibit the produce from it. In the southern counties the respective crops will come to maturity about a week or ten days earlier than in the northern, so that due allowance must be made, as the table of sowing refers to the southern part of the country. Maturity means the condition of the particular kind when it is fit to use—at its best for the table.

Name of Vegetable.	Date of Sowing.	Date of Maturity.
Beans, Broad	March 1	June 25
" Runner	April 20	July 25
" Dwarf	April 20	July 25
Beetroot	April 10	August 20
Cabbage, early	March 10	July 10
" late	March 1	July 25
Cauliflowers, early	March 1	July 1
" autumn or late	March 20	September 1
Carrots, Horn	March 1	June 20
" Intermediate	April 1	August 25
Cucumbers	April 1	July 1
Celery	March 1	August 15
Leeks	March 1	November 1
Lettuces, early Cabbage	April 1	June 10
" Cos	April 20	June 20
Onions, spring-sown	March 1	August 10
Parsnips	February 20	October 20
Peas, early varieties	February 20	May 10
" late	March 1	June 15
Potatoes, early varieties	February 20	June 1
" medium	March 1	July 10
" late	March 1	August 10
Radishes	March 20	May 1
Turnips, early varieties	March 20	May 10
" main-crop	April 10	June 10
Tomatoes, outside grown	March 1	August 10
Vegetable Marrows	April 1	August 1

Of course, seeds of vegetables which are sown in boxes in frames, and the resultant plants put out later in open borders, are Celery, Tomatoes, Cucumbers (in frames entirely) and Vegetable Marrows. The other kinds named in this list are raised entirely outdoors. AVON.

LÆLIO-CATTLEYA PIZARRO.

THIS beautiful new hybrid is the result of a cross between *Lælia joughiana* and *Cattleya dowiana aurea*. The flower on the plant exhibited was a very large and handsome one, the petals and sepals being of a uniform rosy carmine colour. As may be seen in the illustration, the petals are broader than the sepals and the edges are prettily crimped. The labellum or lip, however, is the most beautiful portion of the flower, the colour of this being deep orange streaked with the richest purple. It was shown before the Orchid committee of the Royal Horticultural Society by Major G. L. Holford, C.I.E., C.V.O., Westonbirt, Tetbury, Gloucester (gardener, Mr. Alexander), on March 3, when it received an award of merit.

THE FLOWER GARDEN.

MUSCARI (GRAPE HYACINTHS).

(Continued from page 141.)

MUSCARI BOURGAEI.—A blue-black species. The spikes are dense and rounded, and they appear early in the season. It is more fitted for rockeries than for grass planting. *M. comosum* (the Tassel Hyacinth) bears loose spikes of dull blue flowers; its upper buds are attenuated, forming a kind of

flowers are abruptly contracted at the mouth and they are a dirty yellow in colour, borne in loose spikes. Var. *flavum* is a more refined plant, coloured clear yellow, and the spikes are as large as the var. major, an improved and giant moschatum.

M. neglectum.—A familiar plant with large bells arranged in short spikes. Those at the summit of the spikes are blue, those at the base black, and the small throat is faintly lined white. The var. major of gardens is *M. racemosum*.

M. pallens.—A delicately beautiful Muscari, long known to cultivation but now quite neglected. Its flowers are small, arranged in-



LÆLIO-CATTLEYA PIZARRO. (About two-thirds natural size.)

tassel. It is grown by many, but it is scarcely so interesting as the

Var. monstrosus (the Feathered Hyacinth).—A curious and beautiful monstrosity. The stems support a feathery mass of prolonged pedicels and flowers, which are transformed in curled, twisted and tasselled wiry processes, forming a mass of pale purple, rosy lilac or sometimes pink filaments.

M. commutatum.—An old-time plant with long spikes of purplish blue fragrant flowers in attenuated cones, very variable in colouring and size.

M. conicum.—A strong-growing species, with stems nearly 1 foot high bearing large cones of flowers of a beautiful shade of cerulean blue. This is quite the best Muscari for naturalising and border planting. Its rich colouring has earned for it the popular name "Heavenly Blue."

M. Heldreichii is a dainty plant, coloured a pale shade of blue, the spikes are short and the inflorescence compact, forming an abrupt cone. More suitable for planting in the rock garden than for naturalising; early.

M. latifolium.—A splendid Muscari with dark violet flowers arranged in a well-furnished spike 5 inches to 6 inches long; rare.

M. moschatum (the Musk Hyacinth).—A dull-coloured plant valued only for its fragrance. The

dainty cones, and they are the palest blue in colour. A choice rockery plant.

M. paradoxum.—A giant Grape Hyacinth with large bulbs, strong glaucous leafage, and black-purple flowers in dense cones nearly a foot high, known as the "Black Hyacinth." A striking plant of novel colouring; it can hardly be called beautiful.

M. polyanthum.—A rare and beautiful Muscari. The spikes are 8 inches to 10 inches long, and the flowers are arranged in a graceful raceme of considerable length, the whole coloured rich azure. It lasts a long time before the flowers wither and the spikes do not "spindle," as is the case with *M. conicum*. A splendid rockery plant; it will rival *M. conicum* for purposes of naturalising when available in sufficient quantity for that purpose.

M. racemosum (the common Starch Hyacinth). An old-time species of variable colouring, whose flowers are in compact spikes, generally true blue; but there are various colour forms that are made to do duty for other species, and from which they can hardly be distinguished even when grown side by side.

M. szovitsianum is a very dainty little plant, and distinct from most of its kind in its late season of flowering and very pale blue, slender spikes of small flowers. The shade of colour is

that peculiar to *Hyacinthus azureus*. A refined Muscari and one of the prettiest bulbous plants, fully deserving the best place the rockery affords.

Most of the Muscaris make exceedingly pretty pans for the alpine house, and they are charming when associated with other bulbs in pots and pans for the decoration of apartments in their season.

GEORGE B. MALLETT.

THE BEST DAHLIAS.

(Continued from page 142.)

DOUBLE fancy Dahlias alter so little from year to year that it is almost needless to name the best, as some of them have been leading varieties for many years. I will, however, just give the names of a few, say, twenty-four, which are second to none, although by no means the only useful sorts: W. Powell, light yellow; R. P. Rawlings, yellow; Mrs. Gladstone, soft pink; Mrs. Slack, blush, edged purple; Chieftain, light purple; William Rawlings, deep purple; J. T. West, yellow, edged purple; Dr. Keynes, buff, tinged red; T. J. Saltmarsh, yellow, suffused red; Prince of Denmark, maroon; Colonist, dark fawn; Gracchus, orange buff; Warrior, scarlet; Shirley Hibberd, dark crimson; George Rawlings, very dark; Mand Fellows, pink, tinted purple; Goldfinder, yellow, edged red; John Hickling, deep yellow; Duke of Fife, cardinal; Henry Walton, yellow, heavily edged; Harry Keith, purple; John Walker, white; and Mrs. Langtry, cream, edged crimson.

Pompons show a decided inclination to increase in popularity, and they richly deserve to, as few flowers give a better return for the work expended on them. A few of the best are as follows: Thalia, rosy pink; Tommy Keith, red, tipped white; Neriassa, soft silvery pink; Rosebud, white, edged pink; Bacchus, bright crimson; San Toy, white, edged carmine; Sunny Daybreak, pale yellow, edged red; Ideal, deep yellow; Emily Hopper, yellow; Adelaide, blush; Daisy, amber; Darkest of All, very dark; Lilian, primrose, edged peach; Ganymede, amber, tinted lilac; Jessica, yellow, edged red; Censor, soft plum; George Brinkman, pure white; Queen of Whites, white; Kitty Barrett, yellow, tipped red; and Neatneas, pale salmon. Nearly all of the Pompons and doubles are good varieties for all purposes, so it is hardly necessary to give separate lists as in the case of the Cactna varieties. Practically all those named above are good exhibition varieties, and they are equally valuable for decoration. P. P.

THE ROSE GARDEN.

A FINE NEW POLYANTHA ROSE.

OF the novelties of the year 1907, Aennchen Müller will certainly prove to be one of the most distinct and, I may say, useful. It is a break; and that is what we want. There are scores of good Roses put into commerce each year; but their resemblance to existing sorts is so very close as to make one doubt whether they should have been introduced. Therefore, when one

obtains a distinct variety, naturally it is made much of. In growth I believe this Rose will prove to be about equal to Leonie Lamesch. The clusters of bloom constituting individual sprays are really enormous, frequently numbering from twenty to twenty-five individual flowers, and each flower has three rows of petals, which are curiously twisted something like a Cactus Dahlia. The colour is a lovely cherry pink or almost coral red, with a distinct white centre to the flowers. When grown outdoors the colour is a richer pink than when grown as a pot plant. It has rather a bad tendency to mildew, which may hinder its culture for pot work, but outdoors this tendency seems to vanish. I think there must be a close relationship between Aennchen



ROSE AGLAIA OVER ARCHES.

Müller and that lovely semi-rambler Tausendschon, for they both came from one raiser, J. C. Schmitt, in the same year. Reputedly, Aennchen Müller is the result of a cross between Crimson Rambler and Georges Pernet. P.

ROSE AGLAIA.

THIS is a free-growing climbing Polyantha Rose, which, when well established, produces masses of small canary yellow flowers. It is a charming companion to the better-known white Rose Thalia—its counterpart, except in colour—both being distributed in 1896. Trained on an arch, pergola, or tree stump it is at its best. Against a wall and in dry positions it is liable to mildew and red spider. J. COMBER.

COLOURED PLATE.

PLATE 1344.

PERPETUAL-FLOWERING CARNATIONS.

A VISIT TO MESSRS. HUGH LOW AND Co.'s NURSERIES.

THE winter or perpetual flowering Carnations are a comparatively recent introduction to this country, that is, so far as the newer types are concerned, but there is no doubt whatever that they have come to stay, the splendid exhibits that are staged at the Royal Horticultural and other exhibitions during the winter months doing much to popularise them. Hitherto these Carnations have been regarded by the ordinary grower with some awe, the erroneous idea having been circulated that special glass houses were needed for their culture, and that the plants were of a tender nature. We recently paid a visit to the extensive nurseries of Messrs. Hugh Low and Co. at Bush Hill Park, Enfield, for the purpose of inspecting their stock of these beautiful and exceedingly useful winter-flowering Carnations; and although we anticipated a grand sight, we were not prepared for the magnificent spectacle that confronted us. Out of the ten acres or so of glass structures situated in this wonderful nursery nearly one acre is devoted to these plants. In one house, at the time of our visit, were no less than 70,000 cuttings inserted in sand, and in another house we observed some 65,000 rooted cuttings potted off into 2½-inch pots. To give our readers some idea of the extent to which these plants are propagated here we made a rough calculation of the number of cuttings that are rooted during the propagating season, i.e., from October to May inclusive, and the number was not far short of 500,000. The cuttings are made from sturdy side-shoots, and these are inserted in beds of pure sand, these being formed on raised stages within 3 feet or 4 feet of the glass, the bottom temperature ranging from 50° to 55° and the atmosphere from 45° to 50°. We particularly noticed, in all the houses, the abundance of fresh air afforded the cuttings and plants, no coddling being the maxim.

THE HARDINESS OF THE PLANTS.

We mentioned at the outset that an idea seems to have become general among many growers that these plants need warmth and special houses, hence it may do much to explode this theory if we mention an experiment that Messrs. Low have conducted at their nursery. In some fully-exposed beds plants of border Carnations and others of the perpetual-flowering type were planted side by side last September. Notwithstanding the fact that these plants were exposed to 23° of frost early in January, they came through it quite unharmed, and at the time of our visit the perpetual-flowering sorts could have given the border varieties several points as far as appearance was concerned. Even the owner of a cold greenhouse can successfully grow these plants, or they may be grown entirely in the open. Thus young plants ought to be set out in

open beds in May to flower all the summer. If it is desired to leave them out all the winter, cut them back in the autumn when flowering is finished. If, however, a slightly heated or cold greenhouse is available, lift the plants during August or September, pot them up, and transfer them to the greenhouse, where they will continue to flower during the winter. This is a phase of culture that is at present in its infancy, but one that we venture to predict will become exceedingly popular in the near future.

A mistake that is often made in growing these Carnations is in the cutting back of the plants at the end of the flowering season or late spring. They should be cut back hard, so as to induce the formation of sturdy shoots during the summer months for flowering the following winter.

GROWING FLOWERS FOR CUTTING.

Although Messrs. Low do such an enormous amount of business in young plants, their energies are by no means confined to these, large quantities of plants being grown for providing flowers for cutting. In one house measuring 250 feet by 35 feet, and about 14 feet from floor to ridge, are fixed two large wooden tray-like benches about 1 foot from the ground, these running the entire length of the house. Each is about 8 feet wide, and these are filled entirely with flowering plants. These plants were set here in June last in about a 3-inch layer of soil, each plant standing, roughly, 1 foot from its neighbour. The soil used for this purpose is good loam, with a fair percentage of burnt garden refuse incorporated. To do away with staking, wires are stretched tightly the entire length of the house about 1 foot from the surface and the same distance apart, and then string is threaded across these so as to form squares of about 1 foot each. Through these the flowers are pushed and held almost erect.

Some of the varieties that we noticed doing particularly well here were Britannia, a magnificent scarlet, raised in this country; the old but still useful white Lady Bountiful; Mrs. Burnett, the new salmon pink that created such a stir last year; White Perfection, a superb white variety that will take a lot of beating, the stems being remarkably long and the calyces non-splitting; Enchantress, the superb pink variety that is a universal favourite; Robert Craig, a good scarlet of vigorous habit; Winsor, the new deep pink variety, the stems of which are scarcely so long as some, but the habit is good; Victory, a deep or dull scarlet that is a great favourite in America; and Harlowarden, the well-known deep crimson variety.

We also noticed in this house a two year old plant in a pot of the unique buff-coloured, flaked with scarlet variety, Oriflamme, that was carrying no less than fifty buds. Enormous quantities of plants are also grown in pots for providing cut flowers, and we noticed a large number in 5-inch pots that are for sale, these being the size most recommended by the firm. Messrs. Low advise giving the plants plenty of pot room, and warn growers against potting the young plants too deeply. An ideal soil mixture for the general potting is one composed of rather stiff yellow loam, one-sixth part well-decayed (preferably cow) manure, one-twelfth part wood ashes, a good sprinkling of sand, and a 5-inch potful of bone-meal to each barrow-load of the foregoing.

RAISING NEW VARIETIES.

This is usually done by means of crossing the best varieties and then sowing the seeds. A

maxim of the firm is that nothing new shall be sent out unless it is an improvement on existing varieties, and to give our readers some idea of how rigorously this is carried out, we may say that out of 7,000 seedlings raised last year only about forty plants in all were retained for further testing; from these only six or seven new improved varieties are expected, and these are the only result of a year's work in handling 7,000 plants.

The general cleanliness of the plants was particularly noticeable. Should any rust appear Messrs. Low find it easily checked by spraying the plants with methylated spirits and water, one part of the former to one hundred parts of water.

MALMAISON CARNATIONS.

These are also cultivated here extensively, no less than 50,000 plants being layered last summer. Contrary to general ideas, Messrs. Low find that there is a rapidly increasing demand for the best varieties of this type. Large quantities of seedlings are raised annually for the purpose of securing something new, but, like the perpetual-

PLANTING ROCK FLOWERS.

EARLY spring is a most suitable time for planting alpine and rock plants generally, as at this season root-growth is slightly in advance of the top, so that they readily take to the soil and become established before the extreme of summer drought. When stones of a considerable size are used in building rock gardens, ideal conditions are offered by planting behind; the roots come in contact with the cool surface in the soil, while the vegetative growth rests upon the exposed surface of the stone. New works will, of course, require careful supervision for a season, as extreme shrinkage and subsidence generally follow where soil has been recently moved. There is often some difficulty in selecting plants for new rock gardens, and the temptation to overdo variety requires careful guidance. The best rock gardens sustain interest not in variety alone, but in masses also. Saxifragas offer a ready example. A single specimen of *S. longifolia*, will give a clear idea of the beauty and utility of these large forms, but it is scarcely possible to



SOUTH-EAST PORTION OF ROCK GARDEN IN THE WALMSGATE GARDENS, LOUTH, Lincs.

flowering varieties, they have to undergo very severe tests before they are even exhibited. We noticed a large number of stock plants in 8-inch and 10-inch pots, each possessing from eleven to thirteen fine shoots, for flowering next summer.

In concluding it may be well to emphasise a few points in connexion with the perpetual-flowering type. Thus we have seen that the plants are quite hardy and may be grown in the open or in a cold greenhouse; plenty of air is needed at all times; cuttings root easily in pure sand; plants for flowering may be either planted out in the house or grown in pots; rust may be held in check by spraying with methylated spirits and water; and after flowering the plants should be pruned hard back. Orchids, hard-wooded plants, Cyclamen, Roses and fruit trees are also extensively and well grown at these nurseries, the stock in every instance being remarkably clean and vigorous. Visitors to the Royal Horticultural Society's fortnightly meetings will be familiar with the fine exhibits of hard-wooded plants, Cyclamen, Carnations and Orchids that are exhibited by this firm.

conceive the beauty of the small species unless we grow a good colony of them.

From the illustration, which shows the south-eastern portion of the rock garden here, some idea may be gathered of the general effect produced by the more vigorous rock plants in the month of June. On the right hand side of the path *Erinus alpinus* alba freely intermingles with the Winter Heath (*Erica carnea*), and skirts a patch of the Sandwort (*Arenaria balearica*), and finally joins hands on the summit with *Saxifraga Cotyledon pyramidalis*. Immediately below the Sandwort is seen the *Erinus* crossing the path under the shelter of a rock step. The crevice at which it terminates is occupied with the Wall Bellflower (*Campanula muralis*), while alternate crevices are planted with *Achillea umbellata*. *Draba aizoon*, *Antirrhinum glutinosum*, *Acæna Buchananii* and *Dianthus neglectus*. Higher up occur Rock Roses, double *Dyers Greenweed*, &c., while prominent in the foreground are *Hypericum reptans*, *Onosma alba rosea* and a flowering plant of *Saxifraga Cotyledon pyramidalis*.

THOMAS SMITH.

Walmsgate Gardens, Louth.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

VEGETABLE GARDEN.—I am now making up new beds of various kinds of herbs, as this may be done very successfully at this period. These subjects are increased by seed sowing and by either dividing the old roots or by the insertion of cuttings. In the case of Mint, I prefer to detach pieces of sucker-like growths about 4 inches in length with roots adhering, planting these 4 inches apart in prepared beds. From these pieces I invariably gather a supply during the summer. Second early Potatoes are still being planted, but I am leaving the main-crop sorts for another fortnight. Radishes do well at this period when a sowing is made on warm sheltered borders outdoors. I am now making a sowing of winter greens for next autumn and winter supplies. Brussels Sprouts, Kale in variety, Broccoli, Cabbages and Savoys should be grown in all gardens. Select a warm situation if possible and sow thinly.

Fruit Garden.—A newly-planted bed of Raspberries is now having attention. I am cutting back the canes to within 6 inches of their base, as by these means they will get well established and make capital fruiting canes for the succeeding year. My established canes I usually shorten back slightly; most of them are 4 feet or thereabouts. Keep the surface soil between Strawberries loose, thus aerating it and at the same time keeping the weeds under. Use a Dutch hoe for this stirring of the soil.

Hardy Flower Garden.—There is much to be done at this season. Hardy perennials that have not yet been planted should be seen to without delay, as it is getting rather late to plant them in the hope of obtaining good results this year. Seeds of the popular hardy annuals may be sown forthwith, and at any time during the next few weeks. Of the better hardy annuals I sow the Sweet Pea, Cornflower, Candytuft, Clarkia, Godetia, Gypsophila elegans, Sunflower, Larkspur, Lupin, Shirley and other Poppies, Mignonette and the Eschscholtzia, besides several other most interesting subjects. It is well to remember to have the quarters well prepared before sowing and to sow the seeds thinly.

Chrysanthemums.—Plants that are to produce large flowers next autumn should be well hardened off by this time. My plants are standing in the cold frame with the top of each plant near to the glass to prevent them getting drawn and weakly. On fine days and in the absence of frost at night, I am ventilating the frames quite freely. On sunny days, when the wind is not in



1.—PART OF A FROND OF ASPLENium BULBIFERUM SHOWING NUMEROUS BULBILS THAT HAVE FORMED UPON IT. BELOW ARE SHOWN A FEW OF THESE BULBILS DETACHED.

the cold and cutting quarters, I am pulling down the framelights so that the plants get an abundance of air. In this way they are kept sturdy and short jointed. Pot up singly into pots 3 inches in diameter rooted cuttings of the decorative Chrysanthemums. Use soil of a lasting kind, such as loam, two parts, and half a part each of rotten manure and leaf-mould, with plenty of coarse silver sand. Mix well.

The Greenhouse.—For the next month or two the greenhouse should be used for the purpose of bringing on backward plants, and for raising numerous plants for conservatory embellishment and for flowering outdoors in the summer. Half-hardy annuals may be sown at this time, using pots, pans and shallow boxes, filling them with carefully-prepared light sandy soil. I always wash the pots and pans scrupulously clean, and make the drainage perfect. This is covered with some of the rougher siftings of the prepared soil, and the latter is then filled in and made perfectly level before sowing the seeds. Balsams, Nemesis, Nicotiana, Phlox Drummondii, Salpiglossis, Marigold, Schizanthus and the Zinnia are among the more popular of the half-hardy annuals. The soil should be rich and fine, and the seed sown thinly and covered but very slightly. When watering is necessary stand the pans or boxes in a vessel of slightly tepid water, never allowing this to over-run the surface of the soil.

Orchids.—My small collection of Orchids is being overhauled just now. Those that are making new growths I am about to repot. My Odontoglossums are now very interesting. I am taking the trouble to shade the plants from bright sun, at the same time ventilating very judiciously. Draughts are always a source of trouble, I therefore avoid them if possible, at the same time circulating air freely between them.

D. B. C.

FERNS FOR AMATEURS' GREENHOUSES AND ROOMS.

AMONG the very large family of Ferns there are a few which rival Palms and Aspidistras as serviceable plants for room decoration, also for growing in greenhouses where little or no heat is provided. In a room they should not be stood near a fire or in any position where the atmosphere is hot and dry. During the summer they require a fair amount of water, in winter much less will be necessary as growth is not very active; anything approaching a parched condition must, however, be avoided. As a rule Ferns succeed best in moderately small pots.

PROPAGATION.

There are several methods of propagating Ferns—by spores, the counterpart of seeds, being the most general. Davallias, Polypodiums and others with creeping rhizomes are propagated by division. Asplenium bulbiferum is increased rapidly by means of the young plants on the fronds. Pteris and Maidenhair Ferns are propagated by division of the rootstocks.

SOIL.

Most of the Ferns mentioned below can be grown in soil consisting of two parts fibrous loam and one part leaf-mould, adding plenty of coarse sand. For Davallias peat and leaf-mould should be used. In the following notes, when speaking of several Ferns, the word "hardy" is used. This does not refer to its standing outside unharmed in this country, but to its being fitted to survive the varying and trying conditions usually prevailing in rooms and passages.

VARIETIES.

Hare's-foot Fern.—This Fern, Davallia canariensis, is found wild in the warmer parts of Europe. The plants require very little heat to cultivate them successfully. I have seen the Hare's-foot Fern grown for a number of years in a fairly light position in a room. The rhizomes as they hang over the side of a pot are very suggestive of the name Hare's-foot Fern. A smaller-growing plant from Japan named D. Mariesii, to which the name of the Squirrel's-foot Fern is sometimes applied, is almost or quite as hardy. This is the plant which the Japanese



2.—BULBILS OF ASPLENium PRICKED OFF INTO SANDY SOIL ON THE LEFT; ON THE RIGHT IS SHOWN A YOUNG PLANT POTTED OFF.



3.—A GOOD SPECIMEN OF ASPLENium BULBIFERUM.

twist and grow into all manner of queer shapes, quantities of which are imported into this country.

Maidenhair Ferns.—These include some of the most popular Ferns, the fronds of *Adiantum cuneatum*, the best-known sort, being especially valuable for cutting and arranging with cut flowers. Some ladies are very successful with this Fern in the window of a warm room where no gas is burned. Our British Maidenhair, *Adiantum Capillus-veneris* and its varieties, are very suitable for the cold greenhouse one often finds attached to the suburban house. Another position for this plant is the window of a cool room, one facing north for instance. Maidenhair



4.—A PLANT OF POLYPODIUM AUREUM, ONE OF THE BEST GREENHOUSE FERNS, DIVIDED.

Ferns are readily propagated by division of the roots, preferably in spring. March is a good month. They may also be easily grown from spores, but it is not often necessary to sow any, sufficient young plants being found in the crevices of the bricks, under the stages, or on the surface of the pots of other plants growing in the house.

The Holly Fern.—This is a very distinct Fern and one of the best for a room or cold greenhouse. The dark, shining green fronds being somewhat leathery in texture, the plants stand the varying conditions of a room better than most Ferns. *Aspidium* or *Cyrtomium falcatum* is the Latin name of this Fern. It is a native of South Africa and some parts of Asia, being especially abundant in Japan. Young plants are readily raised from spores, but it is seldom necessary to do this, sporelings coming up under the stage or elsewhere in the greenhouse.

Polypodiums.—These Ferns are very widely distributed throughout the world, several being natives of Britain. For greenhouse and room decoration the Golden Polypody (*Polypodium aureum*) is the most largely grown. The plant obtains the name from the creeping rhizomes, which are covered with golden yellow scales. The arching fronds are bluish green in colour, 2 feet or more in height. During winter the plants may lose one or two of the older fronds, but plenty of young ones will be produced in spring to replace them. A native of America and Australia, it was one of the first Ferns introduced into this country. Propagation in a small way can be most readily carried out by division

of the rhizomes, as illustrated. Spores germinate freely when large quantities are required. In addition to being grown as pot plants, they are highly ornamental when cultivated in baskets and suspended from the roof of the greenhouse. The variety *Mayii*, which occurred as a chance seedling in the nursery of Messrs. H. B. May and Sons of Edmonton, has crested fronds.

Ribbon Ferns.—Thousands of these Ferns are grown annually in the large market nurseries and sold in Covent Garden. These are mostly grown from spores, this method, with one or two exceptions, being more satisfactory than propagation by division. The two species most largely grown are *Pteris cretica* and *P. serrulata*; both plants have numerous varieties, *P. Wimsetti* being perhaps the best of the crested sorts. A variegated form named *albo-lineata*, with green fronds freely margined with creamy white, is a desirable and fairly hardy plant. An Australian *Pteris*, *P. tremula*, is very distinct from the foregoing and taller in growth, being often 3 feet in height. In the matter of soil, *Pterises* are perhaps the least fastidious of all Ferns, as they thrive in ordinary potting soil such as that used for *Geraniums*.

Spleenworts.—There are quite a number of *Aspleniums* or *Spleenworts* suitable for the town or suburban greenhouse, of which *A. bulbiferum* and its varieties are the best known. These are natives of Australia and New Zealand. The illustration plainly shows the young plants developing from the bulbils produced on the fronds. These, if severed from the parent plant and pegged on pans of sandy soil, soon make sturdy little plants.

Ladder Ferns.—During the last few years the *Nephrolepis* or *Ladder Ferns* have developed a large number of interesting crested and tasselled varieties. Most of them are very suitable for hanging baskets suspended from the roof of the greenhouse or in the bay window. Another suitable position for them is the top of a Bamboo stand, where the long, slender fronds will hang down and show to advantage. Large plants of *Nephrolepis* can be grown in comparatively small pots, provided they receive plenty of moisture. They are readily propagated by division of the crowns, by buds produced on the wiry stolons or runners, which develop into young plants, and by spores. *Nephrolepis* should be potted in a lumpy fibrous soil in preference to a fine compost. Useful plants for the amateur are *N. cordifolia* and *N. c. compacta*, *N. exaltata*, *N. Fosteri* and *N. Piersoni*.—A. N.

HOW TO GROW GOOD CARROTS.

To grow good-sized Carrots of excellent shape is, or ought to be, the aim of every beginner, because there are very few households indeed where the roots are not required, and the growing of shapely solid roots is a moderate test of an amateur's proficiency in vegetable culture. As the time is now past for sowing for early crops, we must devote ourselves to the more important main crop, and even this will depend, to a great extent, on work that has been previously performed. The ideal soil for Carrots is one that contains a preponderance of sand; but good roots can be grown in almost any soil providing it is well cultivated and the proper types are selected.

As stated above, very much will depend on work previously done, and this work consists in digging the soil 2 feet deep and working, if the ground is poor, some well-decayed manure in the bottom spit. A better system is to select a site that was well trenched and manured for a crop last season, and, where this exists, all that will be necessary now is to fork it over a good spit deep and allow it to remain a week or two to settle. The best Carrots the writer has ever seen were grown on an old Celery bed without any additional manure whatever.

About the second week in April will be the time to sow the seeds, and the beds will need some preparation before this operation is performed.

The surface must be well firmed, preferably by treading, doing this, however, when the soil is so dry as not to adhere to the boots. Then rake the surface level, and remove stones and any other rubbish that may be present. For this crop, as for most others, the most convenient method is to sow in drills, as weeds can then be easily kept down by means of the hoe. As a general rule, 12 inches from row to row is none too much for the long-rooted types, but 9 inches will suffice for the stump-rooted varieties. These drills should be made 3 inches wide and flat at the bottom, 1 inch deep being sufficient. Many beginners make the mistake of drawing the drills wedge-shaped, so that when the seed is sown only a very narrow line is made, the result being a crowded mass of seedlings. With the flat-bottomed drill this is avoided, the seeds being scattered thinly all over the bottom and covered in with nearly 1 inch of fine soil. Lightly rake the surface level, and finally tread the whole firm. Carrots delight in soil that has been moderately compressed.

With the seedlings, which are rather slow in appearing, will also come weeds, and these must be removed as soon as possible, else, being of quicker growth, they will smother the young Carrots. Hoe well between the rows, and when the plants are large enough to handle, thin them so that each stands 2 inches from its neighbour. When large enough for cooking alternate roots must be drawn out so that each of those remaining stands 4 inches from the next. In thinning care must be taken to promptly fill up all holes that are made, firming the soil at the same time, else the Carrot fly will be almost certain to find the exposed crowns of those that remain and lay her eggs therein, the roots thus attacked being spoiled by the larvæ that hatch out. Useless thinnings, too, should be removed and burned, instead of being thrown down on the bed as is frequently done.

Where wireworms are suspected, a dressing of Vaporite or Kilogrub should be given according to directions before digging over the bed, these substances giving off fumes that are fatal to wireworms and other grubs but not injurious to plant life. Where the soil is very heavy the



5.—A GOOD PLANT OF POLYPODIUM AUREUM.

addition of burnt earth, road scrapings, leaf-mould or similar substances will be of great assistance. On heavy soil the long-rooted sorts ought not to be grown, stump-rooted varieties giving much better results. Where the soil is very sticky or clayey good roots can be grown by making deep holes, 4 inches apart in the rows, with a crowbar, filling these in with good lighter soil and sowing the seeds therein. When the seedlings appear, thin so as to leave one at each station. The long-rooted varieties do best in rather sandy soil that has been deeply cultivated. Some good varieties are: Stump-rooted—Early Nantes and Sutton's Favourite; long-rooted—Sutton's New Red Intermediate, Long Red Surrey and James's Intermediate. H.

THE TOWN GARDEN.

HALF-HARDY ANNUALS.—The amateur gardener who has a frame or a greenhouse can find among the half-hardy annuals plants of superb beauty that will flower profusely from July until well into September, and all of them can be raised from seeds with the utmost ease, provided that reasonable care be taken at all times. When strong plants are brought steadily forward with a view to planting towards the end of May they will thrive satisfactorily in any fertile soil, and succeed almost as well in town gardens as they do in the purer air of the country. While there is not the smallest doubt as to the desirability of sowing either at the end of March or during the first half of April, it is not imperative, for capital results may be secured by sowing the seeds thinly in the positions in which the plants are to bloom some time from the middle to the end of May, but, of course, the display will be much later than that from earlier-raised plants.

SOWING THE SEEDS.—This is a far more important operation than many cultivators appear to suppose, if one may judge by the careless manner in which it is often carried out. As a matter of fact, the success of the plants depends largely upon the manner in which the seeds are sown and how they and the subsequent seedlings are treated. The first essential is a compost consisting of about equal proportions of flaky leaf-mould and light loam, and to these ingredients may be added a little sharp road-grit or coarse sand, so as to keep the soil open and porous. This should be thoroughly mixed a few days in advance of use. Next we must prepare some shallow boxes, pans or pots, according to convenience, but in most cases the first-named are best. Some little provision for ventilation is desirable, and the receptacles should then be filled to within an inch or so of the top with soil, the surface of which must be made moderately firm and quite level; if the soil is dry soak it and the seeds can be sown an hour or two later. In distributing the seeds strive for evenness and thinness, as these things encourage better progress and relieve the necessity of much thinning out. The box should be placed in a frame or a greenhouse until the seeds have germinated.

TREATMENT OF THE SEEDLINGS.—As soon as the seedlings are large enough to handle thinning out must commence, for it is in the best interests of ultimate success that the young plants shall never touch each other. When the plants are grown thus from the earliest stages they keep stocky and strong and develop their full, and in some instances remarkable, powers of branching. As soon as necessary they must go into other boxes, and gradually they should be accustomed to more and more air, until at last the lights can always be kept open, except during torrential rains; or, if it is desired to have especially fine plants, each one can be placed in a 2½-inch pot until the time arrives for planting out in the garden.

SOME OF THE BEST KINDS.—In making selections it is always well if each grower can be persuaded to choose for himself, as tastes vary so widely that what may be most pleasing to one will be the reverse to another. At the same time it may be well to make one or two suggestions as to those that are generally accepted as the most useful kinds of all. A start may be made with Asters, and while no one would desire to deprecate the charms of the older types, it can scarcely be disputed that the modern Comets and Ostrich Plumcs are superior; they can be procured in distinct colours if required. Of the older forms Victoria and Chrysanthemum flowered are splendid. Ten Week Stocks either mixed or in separate colours are superb, and in addition to being beautiful are delightfully perfumed. Then, too, there are Zinnias, Phlox Drummondii, African and French Marigolds, Nemusias, Salpiglossis and others worthy of attention, and all responding to the treatment outlined above.

H. J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

VIOLETS IN FRAMES.—The propagation of these should now be done. If some fine leaf-soil is placed around the plants, the runners will soon take hold of this mixture and quickly form sufficient roots, when they should be separated from the parent plant. In some cases it is well to take cuttings a little earlier and strike them in boxes, but for a quantity I have found the former the best method. The ground on which these are to be ultimately planted should have plenty of manure and leaf-soil and a dressing of soot, and be got ready at once so that time is not wasted when the runners are ready. The most popular varieties are: Amiral Avellan, reddish crimson, comes rather late, but is very useful for house decoration; Comte de Brazza, white; La France; Marie Louise, lavender-blue; Lady Hume Campbell, blue; Mrs. J. J. Astor, heliotrope; Princess of Wales; and wellsiana, purple.

Rhododendrons, Azaleas, Conifers and Camelias may be propagated by seed, and this should be sown at once in seed trays or boxes. Provide ample drainage and good substantial soil that will last a year in condition if necessary. Sow thinly and cover with moss till germination takes place. Stand the boxes in a warm frame of about 55°.

Lobelias and other bedding plants raised from seed should be boxed off as soon as the plants are large enough; grow them on in warm frames or low span houses where they will be near the glass. Shade the seedlings for a few days after disturbance. Grevilleas, Torenia, Saintpaulia and the like should be pricked off into small pots as soon as large enough, and place them on shelves in the stove or other warm house near the glass.

KITCHEN GARDEN.

Onions.—The main crop should now be sown. Rich soil is necessary, and this should have been well prepared and exposed. Choose a fine morning for seed-sowing, rake the ground down fine, and give a good sprinkling of soot all over. Sow in drills about half an inch deep, label correctly, and make the ground as firm as possible. In addition to exhibition varieties sow Brown Globe, James's Keeping and Bedfordshire Champion; these will be found of good quality when many others have passed their best.

Turnips.—Good sowings of these should now be made, and Broccoli, Brussels Sprouts and Cauliflowers must also be sown in quantity.

HARDY FRUIT GARDEN.

See that Apricots, Nectarines and Peaches have sufficient protection from frost. Draw down the blinds the last thing at night and remove early in the morning if frost is not present. Prepare stocks of Apples and Pears for grafting. Sow alpine Strawberries in boxes and prick out as soon as large enough; these fruits are better raised from seed than layers. Sutton's Large Red is an excellent variety. Look over and examine the fruits of Apples and Pears in the fruit-room and eject those that are unsound.

FLOWER GARDEN AND ROCKERY.

Keep the beds that are filled with spring-flowering plants and bulbs clean and tidy. Stake any that require support before they fall over. Sow seeds of alpine and plant out from the reserve. Clean and top-dress all those plants that have been dormant, using good open soil. Prune Hybrid Perpetual Roses, and in doing this cut out all the small weak growths; strong growers should be cut back to two or three eyes.

See that the stakes of standard and half-standard varieties are good; if not, replace them.

FRUITS UNDER GLASS.

Vinerias.—Continue to tie down and regulate the shoots. Thin the berries as they become large enough. Muscats starting should now have a temperature of 55° to 60°. Later vinerias should be damped down on all bright mornings and afternoons, with just the smallest amount of fire-heat at night.

Peaches and Nectarines swelling their fruits must have ample supplies of liquid and be sharply eyringed twice daily.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CROTONS.—These are far more generally used in a small state for table decoration and for filling bowls and other receptacles. For this purpose the plants, of course, soon get too large, and annual propagation has to be made according to the demand. Old stock plants are kept in some places, and the present is a good time to commence operations with these, as the top buds are still dormant, but yet just on the point of bursting. It is better to propagate now than later, when the leaves from these buds have commenced to unfold. If left until these start, the leaves in many cases are checked and never attain to their proper size.

Bouvardias.—Plants that were cut back should now be starting into growth and producing shoots that will form cuttings. When about 2 inches long these should be placed in 5-inch pots in a mixture of loam, leaf-mould and sand in equal parts, care being taken that the soil is made quite firm round the cuttings. Water and place them in a propagating frame with a bottom-heat of about 80°, plunging the pots to their rims in Coconut fibre and shading from sunshine.

HARDY FRUIT.

Fig Trees in the Open.—These have in many gardens been closely covered, and it is well now to gradually uncover them. The trees should now be pruned, lightly cutting out dead wood and naked branches. By this means the centre of the tree is kept well furnished with young fruiting wood and there is less loss in severe seasons. I do not advise laying in much sucker growth, but hard, firm shoots, which spring from the leading branches. In training keep the trees close up to the walls. It is well to restrict the leaders to a certain space, as they bear little fruit when not kept in check.

KITCHEN GARDEN.

Cucumbers.—Early-sown plants will now be coming on apace and will soon supplement the winter crop. If any extra early fruit is formed on the main stem or on the first laterals, it will be wise to remove it. If there is ample room for the plants, do not pinch too rigidly, but allow the growths to extend somewhat, reducing their numbers if too crowded. This will encourage the foundation for free and continuous cropping. A night temperature of 70° when mild weather prevails will be suitable, closing early and damping the foliage over with tepid water. The floors also must be kept moist by sprinkling two or three times daily.

FRUIT HOUSES.

Peaches and Nectarines.—At this season great care is necessary with late houses, for untold mischief is annually wrought in late Peach houses by the common practice of throwing open both top and bottom ventilators while the trees are expanding their blooms and onwards till the fruit is set. In sheltered situations and on calm

sunny days little or no harm may result from the practice, but to expose the delicate petals of Peaches and Nectarines to the force of cutting winds and draughts is simply to court disaster. Assist at midday in the usual way all shy setting varieties, and damp down moderately when the air is reduced in the afternoon.

ROSE CUTTINGS.

Where plants are required for indoor use they may now be produced in plenty by dibbling the cuttings in rather thickly into 5-inch pots and plunging in bottom-heat. The roots soon form and top growth is also quickly made. The cuttings should be about 6 inches in length from dormant wood from indoors. As soon as the cuttings are rooted the pots must be lifted out of the plunging material and the plants potted singly a few days afterwards, shading them until the young roots are getting well into the compost, when they may be gradually inured to less heat and moisture.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

NEW ORCHIDS.

CATLEYA SUZANNE HYE DE CROM.

THIS is rather a unique-looking Cattleya of hybrid origin. The good-sized flower is pure white, with the exception of the labellum, which is lightly marked in the throat with rich yellow. The petals and labellum are prettily crenated at the edges. Shown by Mr. Jules Hye De Crom, Ghent, Belgium. First-class certificate.

ODONTOGLOSSUM GLADYS.

This is a pretty addition to the Odonoglossums, and is the result of a cross between *O. cirrhosum* and *O. harrayanum*. It resembles the latter in colour, but the flowers are larger and more star-shaped. The sepals and petals are of equal size and even lanceolate shape, the edges being beautifully crenated and the apices acute. The cream ground colour is almost obscured by the numerous large brownish crimson blotches. The labellum is rather elongated, deep primrose yellow at the apex and heavily mottled with dull crimson at the base. The plant exhibited had one inflorescence composed of four fully-opened flowers. Shown by Messrs. Charlesworth and Co., Heaton, Bradford. Award of merit.

LELIO-CATLEYA ELINOR.

Here we have a perfectly self-coloured member of this bi-generic family, the medium-sized flowers being of a very rich golden yellow hue. The throat of the labellum is tinted lightly with orange, but this is not very noticeable. A very rich-looking specimen. Shown by Messrs. Charlesworth and Co., Heaton, Bradford. Award of merit.

CATLEYA ENID WESTONBIKT VARIETY.

This is an exceedingly large-flowered Cattleya, and the specimen exhibited was a very fine one indeed, an enormous inflorescence being composed of five fully-opened flowers. The sepals are lanceolate and the petals are almost ovate, the colour in each instance being bright lilac. The fimbriated and somewhat broad labellum is heavily streaked with rich carmine, with yellowish markings at the base. Shown by Major G. L. Holford, C.I.E., C.V.O., Westonbirt, Tetbury, Gloucestershire. Award of merit.

LELIO-CATLEYA LUXINOSA WESTONBIKT VARIETY.

Here we have a marked improvement on a very fine Orchid. This variety has larger and much richer-coloured flowers than the type. The large sepals and petals are of a deep orange, apricot and yellow hue, the petals having very deeply-crenated margins. The large labellum is very deep rich carmine, thus providing a very striking contrast to the colour of the sepals and petals. Shown by Major Holford, C.I.E., C.V.O. Award of merit.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Campanula Allioni from seed (E. J. L. E.).—We have found no special difficulty in raising plants of this from seeds when these were sown in thoroughly drained pots of soil composed of loam, leaf-soil and sharp sand, very thinly covered with fine earth of the same character and the pots covered with a sheet of glass and brown paper until the young plants appeared, when light and air were gradually given. From your letter, however, we consider that you have taken every care with your seeds, and that it is these which are at fault. It is possible that the original plants you raised were hybrids which gave and continue to give infertile seeds, a thing which sometimes happens with hybrids. From what you say about the appearance of your plants they are probably such. Although we fear they will never give you fertile seeds now, you might try the effect of brushing the flowers gently with a camel's-hair brush when the plants come into bloom so as to convey the pollen from one flower to another. We compliment you on your clear letter.

Sweet Peas for exhibition (X. Y. Z.).—The first essential to success in the cultivation of Sweet Peas for exhibition lies in the thorough preparation of the soil. It is necessary that you decide for yourself whether you will grow the plants in clumps or rows, equally gratifying results accruing from either system provided that all other conditions are favourable. In working the soil go to a depth of 2 feet or more, thoroughly digging the entire depth and working into the second spit a generous dressing of horse manure if the land is heavy, and of cow manure if it is light. In the surface soil, after the initial preparatory work is completed, prick a mixture of five parts of superphosphate of lime and three parts of sulphate of potash, at the rate of 2oz. to the square yard. This should be done immediately, so as to allow the ground to settle down before the seeds are sown at the end of the present month or during the first week of April. In sowing, set the seeds about 1½ inches down on a firm, level base; they should be placed about 3 inches asunder, and subsequently will need to be thinned gradually until the plants stand from 15 inches to 18 inches apart for flowering. The number of stems on each plant should be restricted to three, the superfluous ones being removed one or two at a time, so as not to give a shock to the plants. Before the seedlings are 3 inches in height, twiggy sticks rising 12 inches above the surface should be put to them, and just before they reach the tops of these the permanent stakes must be put into position. Do not water until it is absolutely necessary, and, when you do, give a thorough soaking, and follow a few hours later with weak liquid manure if you think that the plants want assistance, but never give this until they are in bud. If you want to exhibit a set of twelve you ought to grow eighteen varieties, and they might include Audrey Crier, Etta Dyke, Primrose Spencer, Lord Nelson, Sybil Eckford, Black Knight, Duke

of Westminster, Helen Lewis, Helen Pierce, King Edward VII., Queen Alexandra, George Gordon, Lady Grizel Hamilton, Jeannie Gordon, Phenomenal, Countess Spencer, George Herbert and Dorothy Eckford.

Six kinds of annuals for a show in August (F. R. R.).—The following are suitable: Sweet Peas, Asters, Stocks, Godetias, Salpiglossis and Calliopsis bicolor nana. All except the Sweet Peas and Godetias should be raised by sowing seeds in boxes at once. The Sweet Peas should be sown in deeply-dug ground early in April, and the Godetias at the end of that month.

Lawn mower for one man (M. A. P.).—A mower with blades 10 inches wide is the most suitable size for one man to use. Many gardeners have to push machines with 12-inch blades, but, unless the lawns are kept in first-class condition, this is very hard work, and nothing is gained by using such a machine. Ransome's, Green's and Shanks' machines are all excellent and thoroughly reliable, and you can with safety purchase either of these makes.

Incarvillea Delavayi (G. T. S.).—Plant the *Incarvillea* in a rather sheltered though sunny position in the open and in deep rich soil. The plant is quite hardy, and the crowns may be buried some 3 inches below the soil. It not infrequently happens that where the roots are much dried or belong to an importation that a long time elapses before growth appears. In an ordinary way the plant starts quite late into growth, so that there need not be any fear on that score.

Stopping Pentstemon cuttings (H. H.).—Unless the Pentstemon cuttings are weak and drawn there is no need to stop them, as, if planted out under favourable conditions, they will grow freely and branch out of their own accord. You do not state the condition they are now in, and whether they are still in their stove pots or otherwise. If they were originally put into stove pots and still remain therein, no time should be lost in potting them singly, for they should be planted out as soon as it is safe to do so.

Twelve kinds of herbaceous flowers for exhibition (F. R. R.).—We presume you mean kinds and not varieties. It is always advisable to carefully read the rules in the schedule and so make sure of facts. Here are twelve kinds which you should have no difficulty in obtaining by the date named: Gaillardias, Pyrethrums (double or single-flowered), Aster amellus, Phlox (herbaceous), Campanula pyramidalis, Coreopsis grandiflora, Helenium grandiflorum, Veronica spicata, Helianthus Hookeri, Delphiniums, Tritomas and Scabiosa caucasica.

Narcissus bulbs failing (J. H. W. S.).—Every root on the bulbs sent was quite rotten, and in most cases the bulbs also, which circumstance would point to some very unsuitable treatment. What that has been is, of course, impossible for us to definitely say, but we think they have been kept too wet. Again, if they are stood in a close room, these Narcissi are far more likely to go off than if they have a free circulation of air around them. There is no trace of disease or insects on the bulbs, except that they are absolutely rotten. Plenty of light is also very necessary to the development of Narcissi when they are grown indoors. We thank you for your kind remarks.

Herbaceous Phloxes (Nemo).—Only three of the varieties mentioned are known to us, and we could not say that you have these true to name. If they are, Jeanne d'Arc is white; John Lee, crimson; and Pantheon, soft rosy salmon. The colours of all the sorts named should have been obtainable from the person or firm who sold them to you. Whether Phloxes are good for exhibition depends not a little upon the cultivation meted out to them, but there are many finer white varieties than the first-named. A distinct set of Phloxes for the purpose indicated should include Flambeau, fiery red and orange; Sylphide, pure white; Pantheon, soft rosy salmon; Embasement, salmon scarlet, purple eye; Iris, mauve-violet; and Eugene Danzanvilliers, rosy lilac, white eye.

Carnations for exhibition in August (F. R. R.).—Mrs. Keen, scarlet flake; Master Fred, crimson bizarre; Princess Beatrice, pink and purple; and James Maguire, rose flake, are good varieties. If the plants be grown under glass in a cool structure and plenty of air admitted to them, the blooms will be clean and of first-class quality. The best soil is one composed of fibrous loam two parts, leaf-soil one part and well-rotted stable manure one part. A 5-inch potful of ground oyster-shells should be added to two bushels of soil. The same quantity, or a little more, of old mortar rubbish will do instead of the oyster-shells if you cannot procure the latter. When the pots are full of roots you may feed with artificials. Sulphate of ammonia, nitrate of potash and phosphate of potash are useful. A teaspoonful in one gallon of water is a strong enough dose.

Sweet Peas and Violets for market (M. B.).—In the case of Sweet Peas, you will find that the most profitable to grow for market are those with clear decided colours, the more washy tints being but little sought after. The following are good: Dorothy Eckford, white; John Ingman, rose and carmine; Countess Spencer, pink; Helen Lewis, orange; George Gordon, magenta; King Edward VII., crimson; Queen Alexandra, scarlet; Gladys Unwin, rose-pink and Miss Willmott, salmon pink. The dark coloured varieties, such as Navy Blue, Duke of Westminster and Black Michael, do not, except occasionally, sell well. The best Violets are: Admiral Avellan, La France, Luxonne and Princess of Wales, all single; and Comte Brazza, De Parme, Marie Louise, Mrs. J. J. Astor and Neapolitan, double. We are sorry that we do not know of any book dealing with these two subjects, but "Sweet

Violets," can be obtained from THE GARDEN office, and "Sweet Peas" from Messrs. Collingridge of Aldersgate Street, London.

TREES AND SHRUBS.

Elm tree suckers in a plot (*F. T. E.*).—We answer your questions *seriatim*. We think that many of the roots and suckers are those of the Elm that is cut down, and also from those near the corners of the plot parallel with A. The two at the other end of the plot and 20 feet away will also contribute their share. The roots of the Elm cut down are most likely alive. Undoubtedly the soil is impoverished by the roots and suckers, and as it is would be unsuitable for Roses. But if you dig a trench, say, 18 inches wide and 2 feet deep all round the plot and cut all the roots encountered, the plot can be made suitable for Roses. If possible such a trench should be left open. Of course, you must, besides digging this trench, remove all roots and suckers that are in the plot, else they will remain alive for a long time and give you a lot of trouble.

Pruning Gorse bushes (*E. M. L. B.*).—You may cut your Gorse bushes down at once or you may leave them until flowering is over. If you do the work at once you gain two extra months for growth and lose the flowers. Personally we advise sacrificing the bloom for one year, so that advantage can be taken of the longer growing season. While you are at it, cut the plants well down, as new growth will appear from near the ground as readily as from branches left 2 feet or 3 feet in length.

Climbers for a choice position (*L. J.*).—Of the plants you mention *Azara microphylla* is the most suitable subject for your wall; a still better plant, however, would be *Escallonia macrantha* or *Ceanothus thyrsiflorus*. It is more than likely that the plant you refer to as *Schizophragma hydrangeoides* is *Hydrangea petiolaris*. The former shrub is extremely rare, and the latter is often met with under the former name. It is a good wall plant and thrives in almost any aspect. *Aristolochia altissima* and *Decumaria barbara* will thrive in either a west, east or south aspect.

How to treat seedling Laburnums (*Mid-Norfolk*).—The seedling Laburnums you mention will not be of use for forcing for several years yet, and you will obtain better results by planting them out in the open ground for three or four years. Turn them out of the pots and shake all the soil away from the roots, then spread the latter out to their fullest extent and shorten very long ones. Leave the plants in the same position for eighteen months, then transplant them and shorten back the strongest roots. During summer, if very rank growth is made, shorten the branches a little; what you want to aim at is short sturdy growth producing strong buds. In about four years your plants ought to be in good condition for forcing. If by *Acacia* you mean the hardy False *Acacia* (*Robinia Pseud-acacia*), it is of no use for forcing. The Australian *Acacias* are, however, first-rate greenhouse plants. They succeed best by being well cut back after flowering.

Pruning of various flowering trees (*Rebecca*).—*Prunus Mume*, *P. Pissardi* and *Pyrus Malus floribunda*, when grown as small trees or bushes in the open ground, rarely require pruning, all that is necessary being to thin out a few inside branches when they appear to be getting too crowded. All naturally form shapely trees, which are always of better appearance if not cut back. When thinning is necessary, the branches may be removed as soon as the flowers have fallen. *Prunus triloba* may have the branches spurred back as soon as the flowers fade, the object in this instance being to get good strong young shoots which will flower from end to end. Trees cut back in this manner should be well fed, and, as the method of culture is a very exhaustive one, they require renewing earlier than trees that are grown naturally. The Siberian Crab (*Pyrus baccata*) may be treated as recommended for *P. floribunda*. It is not usual, neither is it necessary, to plant *Pyrus floribunda*, *Prunus Mume* or *P. Pissardi* against a wall. *P. triloba*, however, is a great success when grown in such a position; it is, though, perfectly hardy and forms a fine feature in the open.

THE GREENHOUSE.

Climbing plants for greenhouse (*Miss S. H. T.*).—It is impossible to recommend any climbing plants for the greenhouse which are not liable to become infested with mealy bug, for the simple reason that no such plants exist. As your *Tacsonias* were so badly attacked there is little doubt that the pests have taken possession of the house and are hidden in any available crevice. This being the case they will at once take possession of any new climber and spread rapidly. It is, therefore, evident that nothing

can be planted with any measure of success till the house has been thoroughly cleaned. How difficult this is can only be realised by those who have undertaken the work. All the woodwork should be scrubbed down with a strong lather of soft soap and water, working it well into every crevice. Then the walls should be whitewashed with hot lime and the structure repainted. Even with all this it is very possible that some of the pests will make an appearance when a new plant is put into position. It will, therefore, be necessary to keep a sharp look out and attack the enemy as soon as ever it puts in an appearance. The old adage of a stitch in time saves nine is well exemplified in the case of a greenhouse in which mealy bug has appeared, for if only half a dozen are allowed to remain undisturbed they quickly increase in a wholesale manner. Where an isolated bug or two are liable to occur a very good plan is to keep a bottle of methylated spirit with a small brush close at hand. A drop of the spirit will dissolve the woolly matter and kill the insect, as well as any eggs it may touch. *Passiflora Imperatrice Eugenie* or a *Tacsonia* are among the best of climbers.

Aspidistra flowering (*N. H.*).—The flowers of this plant are stiff, wax-like creations of a dirty chocolate and cream colour. They are produced close to the soil in the pot. They do the plant no appreciable harm and there is not any need to remove them, unless, which is very unlikely, the plant is in an unhealthy condition.

Growing Tulip *Lucretia* in pots (*Florist*).—We have never grown *Lucretia* in pots, but if you can manage other double Tulips, such as *Murillo*, successfully for market purposes and always fail with *Lucretia*, the fault is probably inherent in the variety, and we advise you to try another sort, say, *Premier Gladstone*. For example, *Rose Blanche* would be a perfect double white were it not for its weak stem. As to the stems of the Tulips getting soft and "knackling over," if this happens when they are cut, there is nothing better than splitting the ends of all the stems in the form of a cross for about three-quarters of an inch up them, and keeping the vases in a fairly warm temperature.

Stephanotis with seed-pods (*J. F. B., Ditchingham*).—It is not at all uncommon for the *Stephanotis* to bear a few seed-pods, but they are seldom allowed to develop, as they tend to weaken the plant, and if allowed to ripen and young plants are raised therefrom, they are, as a rule, very shy flowering compared with those obtained from cuttings. These strike root readily enough if put into a close propagating frame kept at a stove temperature. We therefore advise you to remove the seed-pod from your plant. It is not usual for the *Calla* to produce two fully-developed spathe on one stem. At the same time it is by no means rare, and in THE GARDEN for July 8, 1905, we published an illustration of the golden-flowered *Calla* (*Richardia*) *elliottiana* that had behaved in a similar manner.

Repotting tree Carnations and other plants (*Notice*).—You may now without delay repot the different subjects concerning which you enquire. In repotting, particularly in the case of the *Fuchsias* and *Geraniums*, take off as much of the soil as you can from the old ball of earth without disturbing the roots to any great extent. It is very necessary that the pots be quite clean, both inside and out, and they should never be used while wet. Effective drainage, too, is very necessary. It need not be excessive, say, one large crock or oyster shell over the hole in the bottom of the pot and a few smaller pieces above this. Suitable potting soil may be obtained from any local nurseryman, stating, when ordering, the purpose for which you require it. In potting take care that the soil is in a moderate state of moisture, as if too wet or too dry it is equally injurious. It must be worked down regularly all round the old ball and pressed firmly, but not excessively so.

Erecting a greenhouse (*Miss P.*).—For the purposes you name the greenhouse might well be of the "sunk" or "pit pattern," a 2-foot wide pathway excavation running through the centre, with brick or concrete side walls to keep up the soil bed. The level of the standing bed internally should be at least 6 inches above the outside surrounding level of ground, and with a 3-inch-deep bed of ashes and clinkers for standing plants upon, a good drainage would be secured and the plants kept free from worms. The outside walls of brick should not be less than 2 feet out of the ground, and upon this the wall plate should be set. We must leave it to your own knowledge of the facts as to whether water or much damp would ensue by adopting the above course, and if so the remedy is to start nearer the ground level. A sunk house is of necessity cheaper and requires no internal staging. The soil from the pathway excavation could be thrown on to the side beds to raise them. As you are connecting the new house up to an existing heating arrangement, your first thought should be that of levelling the ground to ascertain at what height the flow-pipe could be introduced to the new arrangement. A very slight rise from the old to the new will suffice, the turn of the level, for example, in every 9-foot run. For keeping out frost 2-inch pipes will be amply large.

Treatment of *Salvias* (*Mid-Norfolk*).—You will succeed far better with your scarlet *Salvias* if you take and root cuttings of young shoots now, and throw away your old plants. By commencing with young plants each year more vigour is obtained and better flowers are the result. As soon as the cuttings are rooted pot them off singly into rich loamy soil and grow them on in a light greenhouse until the end of June, pinching out the points several times to obtain a good stocky foundation. Then pot into 8-inch pots and place the plants out of doors in full sun. By pinching out the points of the shoots you can regulate the flowering season, but do not stop them after July.

Plants for an unheated greenhouse (*Cymro*).—Cucumbers would be even less likely to succeed in your unheated greenhouse than Tomatoes, so you may give up all idea of growing them successfully. During the summer months *Fuchsias*, tuberous-rooted *Begonias*, double-flowered Ivy-leaved *Pelargoniums* and similar subjects should grow and flower in a satisfactory manner therein, but they will in all probability be killed if left there during winter. In the case of such a small structure, with no provision for heating, we think you would derive the greatest amount of pleasure from growing a collection of the choicer kinds of hardy Ferns, which are extremely beautiful throughout the summer months, and in winter give but little trouble and no risk of their being injured by frost. A few of them, too, are evergreen, and therefore effective at all seasons. You could, of course, have hardy bulbs, such as *Daffodils*, *Tulips* and *Hyacinths*, during the spring months.

***Acacias* not flowering** (*L. E., Musselburgh*).—The *Acacia* (*Mimosa*) with Fern-like foliage is *Acacia dealbata* and that with needle-like leaves is *Acacia Riciana*. With regard to their non-flowering you are considerably handicapped by the fact that the only information you give is that they grow on the roof of a cool greenhouse. The first-named (*Acacia dealbata*) is naturally a fair-sized tree of 20 feet to 30 feet in height, or even more, and it is very probable that its non-flowering is due to a want of space for its development. The large flowering sprays of it that one meets with in the florists' shops are sent to this country from the Riviera, where this *Acacia* is a popular tree. If cramped and confined within the limits of a greenhouse its non-flowering is thus readily accounted for. The second species (*A. Riciana*), judging by the specimens sent, produces its buds freely enough, as one would naturally expect it to do, and their falling is undoubtedly the result of some check. Are the roots allowed to get too dry, or does the structure get too cold at times?

FRUIT GARDEN.

Pruning newly-planted Raspberry canes (*O. S. M.*).—You must cut down your Raspberry canes to within 4 inches or 6 inches of the soil at once. This, of course, will mean that you will not get any fruit this year, but you will secure strong young suckers for fruiting next season. If your soil is of a rather light and dry nature, we strongly advise you to mulch over the roots with well-decayed manure before very hot weather is experienced. This will keep the roots moist and help the plants a great deal.

Wire netting to protect fruit from birds (*R. C.*).—Wire netting, having a mesh from 1 inch to 1½ inches, suffices to keep out all birds, but 2-inch mesh will, as a rule, keep out blackbirds and thrushes. While it is these latter birds which prey so largely on bush fruit when ripe, it is the small birds, tits and finches, which prey so severely on the buds of the bushes in the winter and early spring; they do great damage also to Pear and Plum buds in cold weather. For that reason it is best to have the smaller mesh wire to protect your bushes, as if not now being injured in the winter by small birds, they may be so at any time later. We prefer to have bush fruit in a wired-in enclosure with wired door for admission, the sides being from 5 feet to 6 feet in height, and having round rods or bearers fixed across the enclosure from side to side, over which, during three months of the winter and for six weeks in the ripe fruit season, the whole can be covered with small mesh fish netting.

Melons in frames (*M. S. W.*).—You may rest assured that the seeds were not at fault. We scarcely understand whether you sowed the seeds in a box or placed them in small pots and the latter in a box. Small pots are much the best, as it is then a simple matter to transplant into the frames without breaking the roots. You do not say if the frame retained the bottom-heat. This is a strong point with frame culture, as, if the plants received a check, the fruits would cease to swell. With frame Melons grown only with manure as the heating agency, it is not well to sow the seed too early, as so much depends on the weather. We advise you to sow quite a month later in future, and by so doing secure a more rapid growth and get more sun-heat. With seed sown so early in the year it is necessary to keep a good relay of fresh manure round the frame to retain the warmth. It is not right to gather the fruits before they are ripe; if you do this the flavour is greatly impaired. You must also, when the fruits begin to colour, maintain drier conditions. It is an easy matter to ascertain when ready to cut, as the stalk cracks at the fruit, and you may then place on a warm, dry shelf to finish. As regards the splitting, your plants had too much moisture.



CARNATIONS:

ROSE PINK ENCHANTRESS,
ARISTOCRAT, and
WHITE PERFECTION.



THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

WATER PLANTS IN TUBS.

IT often happens that the owner of a small garden desires to cultivate a few at least of the many beautiful water-loving plants that are now on the market, and although his or her garden may not be suitable for the construction of a pond, much may be done by the judicious use of tubs, or even zinc buckets may be successfully employed for the smaller plants. The best tubs for the purpose are empty paraffin or colza oil casks sawn in two, each cask thus forming two good-sized tubs at a cost of 4s. 6d. or 5s. the two. These must be freed from oil, and this can readily be done by lighting some straw or paper in them and rolling them along a path or roadway for a few minutes, taking care, however, that the wood is not severely burned. This done, see that any bung-holes are stopped with hard and lasting wooden plugs and the tubs are then ready for use.

Undoubtedly the best system is to sink the tubs to within an inch or two of their rims in the soil, as a more natural effect is then usually gained. Sometimes, however, this system is not practicable and the tubs may then be stood on the surface. Where this is done a charming effect may be produced by building a small rockery around the tubs, forming plenty of good-sized pockets for the reception of trailing and other plants. Into the bottom of each tub place a 2-inch thick layer of gravel, then procure some very fibrous loam, pull it into pieces the size of hens' eggs, adding a little well-decayed yet flaky manure, half filling the tubs with the mixture. Fill up with water and in a few days the plants may be inserted, providing the period is May or early June. Practically all water-loving plants may be grown thus, and the following can be specially recommended: The Reedmace, Typha latifolia, Water Lilies of the Laydekeri and pygmaea sections, the Cape Pond Weed or Water Hawthorn, Aponogeton distachyon, and the pretty little Limnanthemum platatum.

If the soil is of a heavy or clayey nature a much better effect can be obtained by taking out the soil for a distance of 18 inches or so round each tub and to a similar depth, well puddling the bottom and sides with a 4-inch layer of stiff clay and then filling in with a good soil mixture that contains some peat. This soil can be kept wet with a little trouble, and in it may be grown various bog plants, such as Calthas, Arrowheads, Alismas, Bog-bean and the Water Forget-me-not, that do not like their roots entirely submerged.

THE ROSE ANALYSIS, 1900-1907.

BY the courteous permission of Mr. Mawley and the Editor of the *Journal of Horticulture* I am permitted to again place before your readers the accompanying analysis, which has already appeared in the columns of your contemporary:

"In order that the following table of Hybrid Perpetuals and Hybrid Teas, and also that of Teas and Noisettes, may be clearly understood, it may be advisable at the outset to once more explain the system upon which they have been compiled. For the last twenty-one years the name of every Rose in the first, second and third prize stands has been taken down at the leading Rose show of the season—that held annually in London in July by the National Rose Society. The results thus obtained have been tabulated, and the varieties arranged in the published tables according to the average number of times each Rose was staged at the last eight of those exhibitions. This applies to nearly two-thirds of the Roses which find places in those tables. For the sorts of more recent introduction the longest trustworthy averages are given instead, while the still newer kinds are given positions according to their records for the last exhibition alone."

The last exhibition, held on July 4, 1907, in the Royal Botanic Gardens, Regent's Park, was the largest in point of number of exhibition blooms exhibited that the society has yet held, and the inclement weather that preceded the show only prevented it from being at the same the finest, from the point of view of quality as well as quantity.

It is interesting to note that such an authority on all matters connected with the weather as Mr. Mawley is, is of opinion that long and severe frosts in the winter and keen frosts in the spring are not to be dreaded so much by the exhibiting rosarian as unseasonable weather in June, the exhibition flower requiring conditions that allow of a gradual and unretarded progress from the time that the bud is fairly well developed until the flower expands its petals.

Last season we had an excellent start, I mean the sunny autumn produced plenty of well-ripened wood, which passed well through the—on the whole—mild winter. I do not remember Roses pruning better than they did in March and April of last year, and writing on the prospect of the Rose season early in June, I thought I was justified in predicting a record year. The result only partly bore me out, wind, rain and cold played havoc with the early flowers, and it was a matter of surprise to see so many good flowers as were exhibited on July 4th. It is too early to say much of the prospects for 1908, and although we have had several severe frosts, not

much harm has been done; but I am afraid we shall have to prune much harder than was the case last year to get down to that absolutely sound wood that must be found to secure healthy growth.

The good Roses, therefore, of the year were not produced, as they usually are, from the first crop, and better quality flowers were more plentiful a week later. It will be gathered from the explanatory paragraphs above that Mr. Mawley's analysis does not touch on the quality of the individual flower, but only on its presence at the exhibition, and therefore it would be well to emphasise the importance of the second column, which sets out the average number of times shown spread over eight years, rather than column three, which gives the number of times shown at the 1907 show (in the winning boxes only), as we get the early season corrected by the later one, and a fair mean is arrived at.

H. E. MOLYNEUX.

(To be continued.)

HYBRID PERPETUALS AND HYBRID TEAS.

Table with columns: Position in Present Analysis, Average No. of Times Shown, Times Shown in 1907 in Proportion to the Average, Name, Date of Introduction, Raise's or Introducer's Name, Colour. Lists various rose varieties and their characteristics.

* New varieties, whose positions are dependent on their records for the 1907 show only.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

April 7.—Bournemouth Horticultural Society's Show; Brighton and Sussex Horticultural Society's Show; Cornwall Daffodil Society's Exhibition.

Metropolitan Public Gardens Association.—The many public gardens and open spaces that exist in the metropolis have rightly been called the lungs of London, yet it is doubtful whether the majority of those who use them and receive benefit thereby know to whom they are indebted for the laying out and upkeep of these gardens and spaces.

sum of £7,198 5s. towards the acquisition or the formation of thirty-four other open spaces. It is satisfactory to note that the list of subscribers to this most deserving association is steadily on the increase, and all who have an interest in the betterment of London should become subscribers. Besides gardens and open spaces, the association keeps a kindly eye on street trees, and has also a sub-committee for the promotion of window gardens in the poorer districts, an object that is worthy of the highest praise.

Essex County Technical Laboratories, Chelmsford.—The School of Horticulture, County Laboratories, Chelmsford, is just completing its year's work with an advanced four weeks' course, with the view to the students on April 8 taking the Royal Horticultural Society's examination. The County Dairy School has just completed a six weeks' course of instruction, thirteen students attending. An eight weeks' course commenced at the school on March 30, the students at the end sitting for the British Dairy Farmers' Association's diplomas and certificates for butter and cheese-making.

PRIZES FOR READERS. APRIL.

HOW TO MAKE A SMALL ROCK GARDEN—LIST OF SUITABLE PLANTS ALSO TO BE GIVEN.

- A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF-A-GUINEA
are offered for the best essays on the above subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Thursday, April 30. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Rose General Jacqueminot.—I observe that in his very interesting review of the Rev. J. H. Pemberton's valuable book on Roses Mr. H. E. Molyneux calls attention to the retention by the author of the accents in the word "Général," and remarks that they have been dropped by common consent for many years. If Mr. Molyneux will refer to page 7 of "The Official Catalogue of the National Rose Society" (a body with which he is associated, to its great advantage) he will see that Général Jacqueminot appears in full accent accoutrements. Mr. Pemberton's use of the third "e" is not so well supported.—WALTER P. WRIGHT.

The best fifteen hardy annuals. I read with pleasure the excellent essay on "The Best Fifteen Hardy Annuals for Summer Effect," published on page 121. In the list there

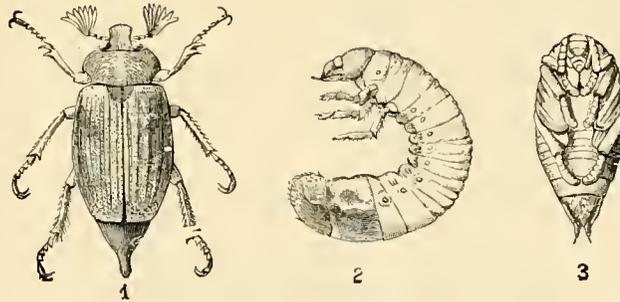
given by Mr. Morton I notice the absence of *Nigella*. The old Love-in-a-Mist is a pretty pale blue or white. The new variety Miss Jekyll is larger and the blue colour more decided; it is one of the prettiest and most graceful annuals in cultivation, hardly surpassed by any for cutting or garden effect. The graceful stems and curious seed-pods are still ornamental on last year's plants. The plant grows about 1 foot high, is easily accommodated in the matter of soil, but the seeds must be sown very thinly. I very much prefer it to *Centaurea Cyanus*, whose place in the list I should give it. To those who have not yet grown this lovely plant I commend the excellent coloured plate opposite page 8 of Vol. LXIX. of THE GARDEN and the illustration on page 125 of the present volume. No garden ought to be without "The delicate odour of *Mignonette*." I know of no other plant which adds so much fragrance to the garden air, and for its scent alone I would give it the place accorded by Mr. Morton to *Gypsophila elegans*. —H. P. BRIDGE, JUN.

Forced Daffodils.—Seeing the article in THE GARDEN for the 22nd ult. on "Forced Daffodils," I beg to add our experience, which may be useful to some of your readers. This year we gathered our first blooms on January 26, a full week later than usual, on account of the late arrival of the bulbs. Our flowers are always finer than outside ones, the white sorts being specially lovely, as they are so clean and free from stain and blemish, and none of the sorts come the least out of character. We obtain an early result by potting as soon as bulbs are procurable, usually the first week in September for the first batch, afterwards potting up at intervals of fourteen days till the middle or end of October, or even later if a late batch is desired for a long succession. The pots or boxes are put in a cold frame, carefully covered with mats and left till the bulbs are well rooted, then brought into a light, low greenhouse only slightly heated, i.e., 45° to 55° Fahr. Soil: Turfy loam, jadoo and ordinary garden soil. I am convinced that the least amount of bottom heat is fatal to Daffodils, and the cooler they are kept the better, giving plenty of tepid water when they are showing buds. The varieties we grow are: *Mme. Plomp*, *Emperor*, *Empress*, *Horsfieldii*, *Vesuvius*, *Cabeiras*, *Henry Irving*, *Ardh Righ*, *Van Zion*, *Sir Watkin*, *Gloria Mundi*, *Titan Beauty*, *Autocrat*, *William Goldring*, *Mme. de Graaff*, *Mrs Langtry*, *Cernuus*, *Albicans*, *Moschatus* of *Haworth*, *tortuosus*, *Queen Bess*, *Barrii* *Conspicuous*, *Nelsoni*, *minimus*, *Queen of Spain*, *Mary of Cambridge*, *Ariadne*, *Salmonetta* and *Lulworth*. I may say I have seventeen blooms from twelve bulbs of *Mme. de Graaff*. After flowering harden off and plant the bulbs out in the garden, where they flourish and multiply, and bloom the second if not the first year. —LILLIAN E. SAGE.

Anemone coronaria.—I am very anxious to hear the experience of others in growing the above. Some years ago they grew to perfection in my garden, and for about five years the flowers were enormous and the admiration of everyone who saw them. It did not matter how we treated them; we left some in the ground, lifted and dried others, and any particularly beautiful colour I could increase indefinitely by breaking up the root. They were invaluable as cut flowers in the spring, and the foliage also was so strong and long-stemmed and easy to arrange. The blooms were at least 4 inches across and sometimes more. Then one spring the young growths came up looking weak, brown and withered, and I thought they had been touched by frost and east wind and would recover; but they never did. I got fresh seed and tried over and over again, but never succeeded with them after they were planted out of the seed-boxes. Then I got some apparently

healthy roots from a firm who make a speciality of them. Very few came up; those which did had, as usual, the few burnt-looking leaves and no flowers. I have tried them all over the garden in parts in which they had not been grown before, and for the last few years I have reluctantly given up attempting to grow them. I shall be most grateful if anyone can tell me how to make them succeed again, as I have been given a lot of seed from specially fine ones. There is one curious fact. At the time when the *Anemones* would grow anywhere in the garden—more than ten years ago—a few were planted in a dry rockery bank. The flowers here were only about 2 inches across, but these continue to come up every year, though they have never been divided or moved, and they look healthy, but the flowers are small and they do not increase. The soil is exceedingly poor, and the stones are limestone. I put a little manure and soil round things unmethodically in early spring. The aspect is south-east. The borders where the others used to flourish are only a few yards away; yet, if what destroyed them was disease, it was not communicated to the plants on the rockery bank. —E. T. LLOYD EDWARDS, *Bryn Oerog, near Llangollen.*

Rose Gloire Lyonnaise.—Noticing a very vigorous young shoot springing from the base of a plant of this Rose, which is growing on a wall, a measurement was taken, with the result that the shoot was found to be 14 feet 6 inches in length. Is this an exceptional growth for this



THE COCKCHAFER AND ITS LARVA.

Rose to make in one season? I think this shows that *Gloire Lyonnaise* is suitable for growing as a pillar or climbing Rose. The wall on which our plant is trained is about 16 feet high, and some of the best flowers have been produced near the top. The plant received no special attention other than a thinning of the shoots, removing the old and exhausted wood and retaining the young, vigorous shoots. No manure water has been applied during the past summer, nor has any fertiliser been applied to the roots of the plant. Although this Rose was introduced by Gnillet in 1884, and is a general favourite in gardens, it is seldom seen treated as a climber, but experience teaches that it is peculiarly adapted for growing on high walls. —C. R.

foliage of our trees. It is by no means an easy insect to destroy, as when the cockchafer is feeding on the leaves of large trees they are very difficult to reach, but they may be shaken or beaten off into rick cloths or tarpaulins and killed before they have time to recover from the shock of their fall. Poultry and pigs will eat them with great relish.

The grubs are very tenacious of life, neither moisture nor drought seems to have any ill effect on them. They have been known to survive a fortnight's immersion in water with apparently no ill effects, and have endured a month's confinement in dry earth without injury. No insecticide has any effect on them when in the soil, unless Vaporite or bisulphide of carbon has. The best way of getting rid of them, if there be any reason for suspecting the presence of these grubs, is to turn up the soil and search for them. Fortunately rooks, seagulls, plovers and other insectivorous birds are very fond of them, and they are so large and conspicuous that they are easily seen when ground is being dug over or trenched. Night-jars kill large numbers of the cockchafer.

The grubs, as may be seen from the illustration, are about 2 inches in length, fat and much wrinkled, and are of a dirty white colour with darker heads and legs, the end of their bodies being somewhat swollen and of a bluish grey colour caused by their contents. They usually lie in a bent attitude, as shown in the illustration. They are often known by the names of white worms or Connaught worms. That they are capable of doing an enormous amount of mischief can easily be understood when it is known that they do not attain their full size until they are three years old. Then, in the autumn, they each form a rough kind of cell in the ground, about 2 feet from the surface, in which they become chrysalides. They remain in this condition until the following summer, when, in May or June, the cockchafer emerges from the soil, their transformations having taken about four years altogether. The favourite food of the cockchafer consists of the leaves of the Beech, Elm, Sycamore, Oak, Willow, Apple and Pear. The grubs chiefly favour the roots of *Rhododendrons*, *Azaleas*, *Asparagus*, *Strawberries*, grass and the roots of most trees. They may easily be mistaken for the grubs of the Rose chafer (*Cetonia aurata*), that beautiful shining metallic green beetle often found in the blossoms of *Roses* and *Strawberries*, and which is nearly related to the cockchafer, but among other slight differences the Rose chafer grub has a brown horny patch on either side of the first part of the body.

THE FELTED BEECH COCCUS.

(CRYPTOCOCCUS FAGI)

This insect, which is very injurious to Beech trees, is, unfortunately, much more common now than it was a few years ago. At one time it was a comparatively local insect, now it is to be found in most parts of England. Unfortunately, it has only lately been recognised as a dangerous pest to Beech trees, and at present the majority of owners of trees which are infested by this coccus seem quite ignorant of their real condition, and take no steps to destroy the pest. It is injurious to the trees in two ways, by drawing off their sap and by smothering the bark with a white felt-like substance, under the protection of which the insects live and breed. The presence of this insect, unlike that of many others, can be recognised at once by the white patches of the cotton-like exudations which proceed from their bodies, and when this insect has been allowed to remain unmolested for some time the stems of the trees look as if they had been whitewashed, and they no doubt are then rapidly becoming unhealthy and the pest will be

INSECT PESTS.

THE COMMON COCKCHAFER.

(MELOLONTHA VULGARIS.)

THE cockchafer or, as it is sometimes called, the May bug is one of our most familiar insects, and at the same time one of the most destructive, for the beetles feed on the foliage of various trees and their grubs on the roots of most plants; in fact, the grubs are much more injurious than the cockchafer. Fortunately this insect is not nearly so abundant in this country as on the Continent, where they sometimes entirely strip trees of their leaves, but they are seldom in such numbers as to seriously injure the

very much more difficult to exterminate than it would have been some months earlier.

The insects themselves are very small, and look like small oval eggs about one-sixteenth of an inch in length and of a yellowish or pinkish white colour, their limbs being somewhat rudimentary, as they do not move about much. Each is, however, provided with a long proboscis with which they are able to pierce the bark and to suck the sap of the tree. Being wingless they are no doubt carried from one tree to another by birds or the wind. The best way of destroying this pest is by laying sacks or canvas on the ground round the trunk of the tree so as to catch anything that may fall from it, then wet the affected parts with soap and water and scrape off as much as possible of the felt-like material, and afterwards scrub the tree with a stiff brush dipped in strong paraffin emulsion or in a new winter wash known as Voss No. 1. Either of these insecticides may also be syringed or sprayed on, but unless the felt matter is scraped off first it is very difficult to make the insecticide break it up so that the insects are reached. When applied with the brush it should be well worked into any irregularities there may be in the bark. This operation may have to be repeated, for it may be found that some of the eggs have not been killed and that white patches again make an appearance. In case suddenly denuding a tree of its unusual covering should be any detriment to it, it might be useful to fasten canvas over the parts or paint them with a mixture of clay and cow manure, which would gradually disappear under the influence of the weather.

The Felted Beech Coccus belongs to the same family (the Coccidæ) as the mealy bug and scale insects. Fortunately, it is only known to attack Beech trees; but as the Beech is one of our finest and handsomest forest trees, and also one of the most useful, it is most desirable that means should be taken to destroy this pest as soon as it is noticed. Every owner of a Beech tree should be on the watch for this pest.

G. S. SAUNDERS.

THE ROSE GARDEN.

THE PRESENT TREATMENT OF ROSES UNDER GLASS.

THE last few days of bright sunshine have been most welcome to the Roses grown under glass, and one may trace its influence in the more healthy colour of the foliage. Plants pruned early that are now showing bud should receive a sprinkling of some good fertiliser, and it should just be pointed into the surface soil with a label. A deep stirring of the surface is to be avoided because numerous little feeding roots lie just beneath and they must not be injured. Plants more advanced, with buds the size of marbles, will benefit now by an application once a week of liquid manure. That made from cow manure and soot is as serviceable and as safe as any. About a bushel of the former and a peck of the latter put into porous bags and dropped into a tank or cask holding about 40 gallons of water, will make an excellent stimulant, and may be given at about the rate of 1 gallon of the liquid to 10 gallons or 12 gallons of water. Later on, as it becomes necessary to fill up the cask, the liquid being weaker, may be given about half-and-half. A change of food is very beneficial, so that anyone having an opportunity of collecting sheep manure would find it serviceable to have another cask containing some of this excellent stimulant.

Roses planted out in borders under glass can be considerably helped by a mulching of fresh cow manure. The ammonia arising from the manure will feed the foliage, and the small feeding roots will soon come to the surface for the mulching. Where these natural manures are difficult to procure, waterings with guano water are to be commended. Good reliable guano, at the rate of 1oz. to 2oz. per gallon, is a first rate stimulant. Pot plants just starting into growth should receive a sprinkling of bone-meal, this

being just pointed into the soil. There is no doubt about the value of bone for Roses, and one may see how the roots welcome it by the way they fasten on to the small particles.

If mildew proves at all troublesome, a dusting of green sulphur applied with a fine dredger will keep it in check. This sulphur is much superior to all other forms. A syringing with a solution of Lifebuoy carbolic soap is also an excellent remedy, and it also tends to keep the green fly in abeyance. A half bar to 3 gallons of warm soft water is about the right proportion, and it should be syringed on before 9 a.m. on a fine morning. Green fly, as soon as they appear, should be checked. McDougall's Tobacco sheets are very efficacious and easy of manipulation. One sheet is sufficient for 1,000 cubic feet, so that they are very handy for the amateur.

Where necessary the plants should be tied out to sticks in order that every leaf may be exposed to the sunlight. Sometimes it is necessary to bend the shoots in different ways in order to obtain a well balanced plant, but the foliage will soon right itself if the work is done in good time.

Rambler Roses in pots are now showing their sprays, and they will need a sprinkling of some good artificial manure if this was not applied earlier. These Roses are very gross feeders and they require plenty of water, sometimes on bright days it being necessary to water three or four times owing to the somewhat small pots being full of roots.

Now is a good time to strike some cuttings under glass. The growths that have borne a blossom are just in the right condition for rooting. Make them with two joints and retain the top leaflets, and cut the shoot level near the bottom joint or eye. Dibble them round the side of 3-inch pots of sandy soil, and place in a frame where bottom heat can be given. A box placed on the hot water pipes, if in full light makes an excellent propagator, a pane of glass being laid on the top and removed and wiped over each morning. The pots should stand in an inch or two of sand or Coconut fibre, and the foliage of the cuttings be just sprinkled on fine mornings. A sheet of newspaper laid on the glass is necessary during bright sunshine. When roots are formed and are about half an inch in length the cuttings should be potted off into 3-inch pots and given a temperature of about 60° by day. By careful potting on and gradual hardening off the little plants may be planted out during the summer. If sudden cold draughts are permitted to reach these rooted cuttings, mildew is almost certain to appear, and prompt measures must be taken for exterminating it as advised above. Plenty of air without draughts is what is needed.

P.

POLYANTHUS NARCISSUS MONT CENIS.

SHOWN in the accompanying illustration, from a photograph taken by Messrs. Vandyk, is a very fair example of the so-called "sitting-room gardening" grown by the writer. These bulbs were planted about the middle of November, 1907, in boxes specially made, Coconut fibre taking the place of soil. They were standing out of doors all through the severe weather, and were at one time completely frozen over. Rain, snow, frost, cold winds, thick London fogs and very little sunshine have been their lot up till the beginning of March, 1908, when they were carefully lifted and transplanted into the wooden flower-stand shown in the photograph and brought into the drawing-room, the latter taking the place of the greenhouse. In less than a week the writer was rewarded with a grand show. No support of any kind was given to keep the flowers together. "His fact points to the excellence and fine quality of the bulbs.

J. A. E. DRURY-LOWE.



POLYANTHUS NARCISSUS MONT CENIS GROWN IN A SITTING-ROOM.

THE FLOWER GARDEN.

THE AFRICAN OR CAPE LILY.

(AGAPANTHUS UMBELLATUS.)

MOST valuable in the garden when grown in large pots or tubs, and arranged at intervals on broad walks or terraces in front of noble mansions, where its tall blue umbels, carried on lofty stems, have a very ornamental effect in the late summer, towering above the pendent, strap-shaped leafage, is this handsome South African plant, sometimes known as the Cape Lily. For conservatory decoration the Agapanthus is particularly useful, since, at the time of its blooming, there are not many blue flowers available for culture under glass. In the southern counties, however, it succeeds admirably if planted permanently in the open, and in the course of twenty years or so will form huge clumps 5 feet or more in diameter, which in the early autumn will bear dozens of splendid flower-heads. In this locality—South Devon, close to the mouth of the river Dart—it flourishes to perfection. It is sometimes stated that the Agapanthus requires abundant moisture during its period of growth, but this is evidently a misconception, as the plants growing at Kingswear are in very light and shaly soil, which becomes dust-dry in the summer, and they never receive a drop of water other than rain, yet they flower magnificently. They are entirely protected on the north and east, and are open to the south-west. They are never harmed by the severest winters that are experienced, beyond having 1 inch or 2 inches at the ends of the leaves browned in exceptionally hard frosts, but this rarely happens.

The most generally known form is the blue type, but there is another, deciduous white, sort which is evidently a distinct species, though it is not recognised by Nicholson, who only gives *A. umbellatus* and its variety *albus*, which is, naturally, also evergreen. This white variety I have lately obtained from Tregothnan. The deciduous white is quite distinct from *A. umbellatus*, its foliage being less than half the width of the leaves of that species. It flowers a trifle earlier than *A. umbellatus*, and its blossoms are rather more sparsely disposed in the umbel. In the autumn its leaves turn yellow and eventually die completely away, the new leaves starting from the crown in March.

In the accompanying illustration the deciduous white species and the blue *A. umbellatus*, evergreen, are both shown. The plant in the front with the, apparently, larger flower-heads is the white one; and that in the background, with the blossoms in many cases unexpanded, is the common blue-flowered plant. The subject in the immediate foreground is the white variety of *Commelina cœlestis*. It requires a very severe frost to kill the blue Agapanthus, for where 20° or more were registered every winter and the foliage was destroyed the plants never failed to make fresh growth in the spring.

South Devon.

S. W. FITZHERBERT.

WORK AMONG THE SWEET PEAS.

The middle of April and onwards is a good time for setting out those plants that have been raised in pots in the southern counties, but, perhaps, in the north of England and Scotland it may be as well to defer the work a week or two. Of course the plants will have been raised under perfectly cool and airy conditions, keeping the lights quite off the frames during every fine day. Whether the plants are to be put out in clumps or rows will, of course, rest with the cultivator, but whichever system is adopted it is wise to make a sort of basin 2 inches or 3 inches deep for the clumps, and a trench of a similar depth for the rows. Then scatter on the surface some approved artificial manure at the rate advised by the vendor, or a dressing of superphosphate, 6oz.

to each 3 feet run of the row may be given, turning the soil over and mixing it and the manure well together before planting.

There is not so much danger of overcrowding when plants are put out of pots as there is when seeds are sown in the open, but 6 inches is none too much space between each two plants. The basin or shallow trench will afford a slight protection from cold winds, and will facilitate watering and feeding when the plants are in flower. Small twiggy eticks must be put to the plants at once or else boisterous winds will do a great amount of harm.

Where seeds were sown in the open at the usual time, *i.e.*, the middle of March, the tender seedlings may soon be expected, and with their advent comes a certain amount of anxiety. Sparrows are exceedingly fond of them, and these pests must be baffled by means of wire guards, fish netting or strands of black cotton. The two last must be supported by sticks a few inches from the ground. Black cotton is the most

effective of all, and it is not much more trouble to fix than is the netting. Commence at one end of the row by tying an end to a corner stick, then hold the reel in the palm of the hand so that the cotton plays out between the fingers, keeping it taut and giving it two twists around each stick as they are reached. It will, of course, be necessary to go backwards and forwards over the same ground several times to get a sufficient number of strands over the row, but no ties need be made until the row is completed or the cotton on the reel is exhausted.

Slugs, too, have a liking for the seedlings, but these can be effectively checked by using Kilogrub. This is scattered down each side of the row, not on the seedlings, and just scratched in with a hand fork, trowel, or even a pointed stick. If wireworm is suspected, dig in Kilogrub 6 inches deep along each side of the row or round the clump, taking care not to disturb the young plants. Where the seed is not yet sown, this substance may be dug into the soil before sowing, wireworms, leather jackets, eelworms and other ground pests quickly succumbing to its deadly fumes. It is also wise to incorporate this substance before setting out pot plants, *i.e.*, where ground pests are present.

Last year germination was very irregular, many seeds remaining in the soil quite hard and sound after some of the plants were up. The writer searched for these seeds, and, when they were discovered, each had a slight notch filed or cut into its hard outer covering, after which they were returned to the soil, with the result that



THE AFRICAN LILY (AGAPANTHUS UMBELLATUS), BLUE AND WHITE FORMS, IN MR. FITZHERBERT'S GARDEN.

germination was soon effected. Owing to the wet and sunless weather experienced last summer home-grown seeds are not likely to give much trouble in this respect this season, but some of the American-grown seeds may behave in a similar manner.

As the seedlings are growing much good will be done by stirring the soil between them twice a week with a stout pointed stick, this allowing air to freely enter and permeate the soil and at the same time destroying young weeds that are sure to appear. Thinning must be attended to early, leaving the plants 3 inches apart at first, and when they get 3 inches high pull out every other one so that they finally stand 6 inches apart. For exhibition purposes twice this distance is none too much. As soon as tendrils appear twiggy sticks 12 inches or 15 inches high must be afforded the plants, leaving the main sticks until the plants have nearly reached the tops of the smaller ones. This may seem double labour, but it is quite justified by results. If the tall sticks are placed in position at the outset the plants frequently become attenuated and weak, but by using the smaller sticks first a sturdy, healthy foundation is secured. The future treatment of the plants will be dealt with when the time for staking arrives. H.

HARDENING OFF BEDDING PLANTS.

At this season of the year the hardening off of bedding plants constitutes one of the most

important operations in the flower garden, and with all the frames and glass houses full the amateur is often at a loss to know how to carry out the work. Providing a wall or fence facing south or west is available, the frames may soon be emptied of many of their contents, thus making room for other plants that are less hardy. In the case of a wall or a close boarded fence, all that will be necessary is to fix up some stout stakes, leaning one end on the wall and allowing the other to rest on the border several feet away from the wall or fence, the stakes, of course, standing in a sloping direction. Along the tops of the stakes and on the wall or fence nail securely one edge of a mat or other protective material, and at the bottom edge a roller may be fixed. During the daytime the mats can be rolled up and fixed by strings to the wall, thus

EARLY-FLOWERING HARDY PRIMULAS.

THERE is no flower which brings deeper pleasure to the true gardener than the little "Bird's een" of the Craven Highlands. *Primula farinosa* is widely distributed, being found in mountain marshes in temperate regions, including our Yorkshire fells. It bears delicate lilac blossoms on stems of varying height, but usually about 9 inches or 12 inches. Individually the flowers are small and produced in crowded heads, supported by slender stems which sway in the lightest breeze. The popular name of "Bird's een" is attributed to the conspicuous marking which surrounds the centre of the corolla tube, giving the effect of an eye. Plants of this *Primula* can always be procured at reasonable

during summer. It flowers in April and May, being probably the earliest-flowering hardy species. The colour is a pure, intense bright pink, with a small golden eye. The plant is a native of the Himalayas, and occurs right up to the snow-line. It is a deciduous species and soon makes large masses, throwing up sheaves of blossom from established clumps. The flowers are borne on stems 9 inches to 12 inches in height or more, and always appear before the leaves.

Walmgate Gardens, Louth. THOMAS SMITH.

LILY OF THE VALLEY (FORTIN'S VARIETY).

ALTHOUGH autumn is, perhaps, the best time for making fresh plantations of Lily of the Valley, circumstances often render it necessary to defer the operation until spring. To those making plantations I would strongly recommend the above variety. It has the same sweet scent as the old variety, while the individual flowers and the trusses are both much larger than those of the older forms. The foliage is correspondingly large and, as may be supposed, it is quite as vigorous. C. C.

[A coloured plate has been given of it in THE GARDEN.—ED.]

THE HARDY PRIMROSES IN POTS.

ONE of the most charming ways of growing the hardy Primroses is in pots, and two beautiful kinds for the purpose, from photographs taken in the alpine house in the Royal Gardens, Kew, are *Primula frondosa* and *P. pedemontana*. The former is, although it is illustrated as growing in a pot, quite hardy in this country, growing well in a half-shady place when planted in moist sandy peat and loam. It is a true perennial and may be increased readily by dividing the crowns as soon as the plant has done flowering. It is one of the most useful early-flowering Primulas for growing in pans for the alpine house and one of the easiest to grow. And what is an "alpine house" some may ask? It is a little house, unheated, except in severe frosts and damp weather, where the early flowers of the year may be enjoyed under glass. It is a sort of unheated greenhouse, and should be more evident in our gardens. One may enjoy spring flowers in comfort when outside, perhaps, cold winds are blowing and snow falling. *P. pedemontana* is a native of the Alps in Piedmont, its bright crimson flowers appearing in April.

HOW TO GROW THE HARDY PRIMULAS IN POTS.

Several of the Primulas are especially adapted for this purpose, notably, *P. marginata*, which is very free-flowering and lasts in perfection for some time. Even when not in flower the singular beauty of the margined leaves make this plant very attractive. When grown in pans Primulas should be potted in rich porous soil, thoroughly well drained, as stagnant moisture of any kind is fatal to them. They require plenty of water in the growing season, and when possible rain water should be used. The best time for repotting is just after they have finished flowering, so that they will have time to make good growth as early as possible in the year. A frame with a northern aspect is most suitable in which to grow Primulas, and the pans should be plunged to the rim in ashes. The lights should be left off all through the summer months, but should be used to keep off excessive rain in autumn and winter. Plenty of air should always be admitted during the winter. Primulas are readily raised by means of seed, which should be sown as soon as ripe. The seedlings should be potted off as soon as they are large enough to handle and should be grown on in a shady frame. Some are very slow growing and require careful watching in order that they are not smothered by such things as Liverwort and other weeds. If the facts given above are too meagre we shall be very pleased to answer any questions on growing these beautiful flowers in pots.



THE PIEDMONT PRIMROSE (*PRIMULA PEDEMONTANA*).

affording the plants stood on the border an abundance of sunshine and fresh air. The mats will, of course, be let down at night.

Where the fence is an open one, snug temporary quarters can be provided for many bedding subjects by nailing or tying thick mats along the face of the fence, thus preventing north or easterly winds from reaching the plants. In each case mats must, of course, be provided at each end of the border to prevent cold winds blowing on to the plants from either end, and in many instances it will be wise to allow these end mats to remain down during the daytime as well as at night, especially when cold winds prevail. Of course, it must be distinctly understood that half-hardy plants must not be stood direct out of warm houses or frames into these temporary shelters; such a course would be disastrous. It is plants that have been submitted to cold frame treatment for a fortnight or so that may be thus stood out, and, where such a course has been adopted, these temporary shelters will provide sufficient protection from the second week in April until bedding-out time for such plants as Asters, Stocks, Zinnias, Verbenas, Pelargoniums, Lobelias and, indeed, almost any of the subjects that are used for summer bedding. A 2-inch thick layer of ashes should be placed on the border before standing the plants thereon, else worms will prove troublesome. Gradual hardening off is the key to beds full of sturdy flowering plants during the summer months,

rates, but it is readily raised from seed, and the seedlings flower in the second year. The plant is deciduous, the leaves dying down in autumn, leaving scarcely any trace of its presence during winter. It is only upon careful examination of the position that the plump buds are revealed which indicate the rich harvest to follow. It succeeds in cool, well-drained positions on the rock garden, associating admirably with *Ramondias* and dwarf Ferns.

P. nivalis is another exquisite gem for amateurs. The plant is really the creation of the gardener, or rather the name is, for the plant itself belongs to the *viscosa* section, and is placed as a variety of *P. pubescens* by the Kew authorities. At any rate, *P. nivalis* is a most charming albino. I have seen it the admiration and envy of gardeners years ago, where it flourished in a cottage garden in a mining district, thereby proving that expert culture is uncalled for. It flowers with prodigal freedom in spring, and the large snowy trusses are borne on 3-inch to 6-inch stems. With age the plants assume a sprawling character, and when this occurs they must be broken to pieces and replanted, crowns with a piece of old stem attached rooting easily. It will succeed in good loam freely mixed with stone chippings, and is not averse to a sunny position, provided always that the roots be cool.

P. rosea is the jewel of the Bog Primulas. Growing freely in rich, moist soil, it luxuriates in positions where the roots are actually in water

THE KITCHEN GARDEN.

ASPARAGUS FOR AMATEURS.

(Continued from page 114.)

THIS last note on the above is doubtless the most important to the amateur, as many who are unable to protect or force in any way can grow good crops in the open. Even here the amateur does not always get the best results, and I have endeavoured to avoid all costly details and make the cultural work as simple as possible. I must also refer to failures, and advise, as far as possible, the remedy. Only recently I saw some beds sown with Radishes and Lettuces, and although the injury would not be noticeable at the time, such a system is detrimental to the plant. To grow Asparagus well the surface of the beds should be kept free of all growths, weeds and otherwise, from the start. On page 70 I referred to the formation of the beds, soil and sowing or planting, and advised the latter. Any time from the end of March and through April is a good time for planting if the growths are not far advanced.

It is well to plant quickly, as exposure will do much mischief. If seed is sown, do not sow thickly all along the row, but at intervals of 6 inches apart, dropping a few seeds at each place. These later on are easily thinned. I advise the Giant French or the Early Giant Argenteuil for sowing; the latter is a great favourite in the Paris market, and is largely forced and imported into this country. There is also a very fine variety of recent introduction called Palmetto that is well worth attention. The variety which is best known in this country is Connoyer's Colossal.

OPEN GROUND CULTURE.

At the early stages of growth the amateur must not cut the plants too hard, and cutting, which usually begins early in April, must cease at midsummer, as the plant must have time to form new crown growths for the next season. Another point that often arises is whether all the growths that appear should be cut or the thin weakly ones left. I prefer to cut all, as the small spray can be used for soups or other purposes, and during the growing season it is then an easy matter to feed. In this country we often get late spring frosts, and the early growths are much influenced in consequence, and to help the growth or ward off severe cold it is a good plan to cover the surface of the beds with dry short litter at nights, this being placed in the alleys early in the day. By the end of May the cutting must not be so severe, the small spray being left and also a few larger growths if the shoots are at all weak.

Feeding and Manuring.—Asparagus is often fed at the wrong season. I think it is almost useless to place, as is often done, large masses of rank manure on the surface of the beds in the early autumn months, as with a heavy wet soil the manure frequently rots the crowns. I am aware it is a difficult matter to feed with liquid manure from July to October, but if food can be given in a liquid state at that season it is of far greater value than later in the year. There is, however, no difficulty in giving a quick-acting fertiliser in the shape of nitrates or guano, and if this is given in showery weather or well washed in, it is of great value. For many years I had a light soil resting on gravel to deal with, and we required large quantities of Asparagus early in July. We gave the beds a mulch of well-decayed manure, and often, say, some three or four times during the season, a top-dressing of a good fertiliser, well watering it in. Such aids as fish manure, Peruvian guano and other quick-acting fertilisers are of great value, as these are easily applied and the plant soon takes hold of the foods, with the result that it assists in building up a strong crown growth for

future requirements. Of course, new beds. I mean beds just coming into bearing, will not for a time require large quantities of food; but here some of the aids noted above, if the growths are good, will be valuable. We often overlook the value of water for this plant; if it can be liberally given when in active growth, the labour is well repaid. Liquid manure is one of the best foods we have whenever it can be obtained; failing this, give the other foods advised above. I do not contend that Asparagus beds should not be given food in the autumn when top growth ceases, as so much depends upon the soil. Very light dressing is beneficial, as it is washed down to the roots by the winter rains and by the early spring is incorporated with the soil; but I do not advise the heavy solid manure in quantities often given.

Soot is a most valuable winter food if mixed with slaked lime and rich soil in equal proportions, as this clears the land of pests, which are often harboured by other manures. It may be given at any time, say from October to April. Salt is often given at the wrong season, and does more harm than good. The plant, though a native of our shores, is greatly benefited by salt dressings, but these should be given in spring or during active growth. Lime as advised is most helpful on heavy land, and may be used freely at the season named, but salt should be omitted when lime and soot are given as a surface dressing. For many years, with difficult land to deal with, we found night soil a splendid fertiliser; it was laid up for some months and liberal quantities of

THE FRUIT GARDEN.

THE TREATMENT OF YOUNG VINES.

ALTHOUGH the work of planting Vines is an important matter, future success will greatly depend upon their treatment during the first season. Young Vines recently planted will be commencing to grow, and this is a critical period for them. Do not cut them back or they will bleed and die. Select a strong "break" near the eaves of the house to form the leading shoot and rub out all above it, but preserve all the shoots below the leader. Allow the leader to grow without stopping, but the side shoots should be stopped at the eighth leaf. It will be found necessary to place some sticks in the border to which the shoots growing beneath the wires can be secured. By encouraging the growth of auxiliary shoots the stem of the Vine is strengthened. An abundance of healthy foliage well exposed to the light induces a free root action, and the result is a strong, healthy Vine. As the season advances admit, during fine weather, plenty of air. All bunches of fruit must be removed as soon as seen. During warm weather syringe the Vines and close the house about 4.30 p. m.; this will ensure the necessary damp atmosphere during the night.

Some varieties, such as Muscat of Alexandria and Lady Downe's Seedling, require a slight



PRIMULA FRONDOSA IN A PAN AT KEW, IN FLOWER NOW.

lime used when in bulk, and with it wood ashes or burnt garden refuse and any spent soil added. It was a valuable food, either for new beds or as a surface dressing. Another point that should not be overlooked, especially in light soils, is to have a good depth of surface soil to blanch the growth. It also prevents the beds drying in the summer months. Many good growers at that season, just as the growth begins, give a good mulch of rich soil or manure and do not feed again unless with liquid manure or fertilisers. I have gone into detail over food supplies, but if these are given as advised and at the season named, they are not at all costly, as many of the substances named above are at hand and are readily applied.

G. WYTHES.

shade during the bright summer months, otherwise their foliage is frequently scorched, even when an abundance of air is admitted. A suitable shade may be procured by placing a piece of fish netting over the roof of the vinery. Do not allow the roots to become dry. When all the leaves have fallen cut back the side shoots close to the stem. The main rod, if strong and well ripened, may be left some 6 feet or 8 feet in length, but if it is weak cut it back to a good plump bud. When the pruning is completed tie down the rods in a horizontal position and allow them to remain until the spring. If mealy bug has been noticed during the growing season, steps must be taken for its eradication.

Munden Gardens, Watford.

C. RUSE.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

WINDOW PLANTS.—My window-boxes are now making a brave show. Crocuses are over, but Daffodils and Hyacinths are looking well in windows with a warm aspect. Small shrubs are making windows in cooler aspects look very interesting, and window-boxes planted with Wallflowers are distinctly promising. As soon as the bulbs have finished flowering I propose to plant some of the window-boxes with Tufted Pansies (Violas). These plants are seldom used for this purpose, but they make a beautiful display for several months. Window plants indoors should be repotted without delay; many plants will need this attention. Well-known foliage plants, such as the Aspidistras, Aralias, Dracaenas, Palms and Indiarubber Plants do not want repotting annually. When the plants are growing satisfactorily I repot them about once in three years, varying this rule only occasionally.

Roses—A few days ago I pruned my Hybrid Perpetual Roses; this was done rather later than usual owing to the cold weather in the latter half of March. Just now I am pruning my Hybrid Tea-scented Roses, as I invariably find they succeed very well when taken in hand at this time. The Tea-scented Roses I prefer to complete the pruning of before the middle of April, as they are somewhat tender, and I would rather defer this important work till well on in the month in consequence. For exhibition purposes and in all cases where large blooms of good form are wanted, I find it a good plan to cut back rather hard. For ordinary garden decoration and where blooms are wanted in abundance, it is better to prune the plants moderately. I never prune the Teas and Noisettes so severely as I do the more vigorous-growing Roses. Always use a sharp knife, and prune close to, and in the same direction as, the bud.

Hardy Fruit.—There are indications that my Morello Cherries will soon be in blossom. I have frequently noted a tendency for the trees against walls and fences to become infested with black fly. When this pest is in evidence I prepare a solution of soft soap and water, dissolving 2oz. of the former in a gallon of the latter, and after frequently stirring the insecticide apply it to the flowers before they open by the aid of a syringe. This invariably rids the plants of the pest. Should one application be not sufficient, a second will doubtless effect the remedy. Take means to protect the blossom from injury by birds by netting them forthwith. Fish-netting,

which is now sold very cheaply, may, if doubled, be used as a slight and sufficient protection against late frosts. This material should be hung over Peach, Cherry, Apricot, and Nectarine trees. The netting should be secure, so that it does not blow against the trees.

The Vegetable Garden.—Potato planting should be continued, giving attention to the first batch of the main-crop varieties. At this period I make a sowing of main-crop Carrots, selecting quarters where the ground is open and friable and where manure has not been recently applied. Lettuce and Cabbage plants that have wintered in the seed-beds should be planted out forthwith; with the approach of more genial weather they make rapid progress. For succession a sowing of Lettuce seed should be made in a warm border at once. Brussels Sprouts, autumn Cabbage, Kale, Broccoli and Savoys should be sown at this period. Sow the seeds 1 inch deep in drills 6 inches asunder, and, most important of all, sow thinly. My first Celery seedlings are now being transplanted. I have selected a sheltered quarter in a warm aspect, and have made up a bed of good soil. The seedlings are transplanted about 4 inches apart.

The Greenhouse.—The Japanese Azaleas (*A. mollis*) and the beautiful Ghent Azaleas will soon be making the greenhouse and conservatory gay, and, together with the floriferous Indian Azaleas (*A. indicum*), will reward one for their careful nurturing of months past. I am taking the precaution of erecting a light shading of tiffany to run on brass rings, stretched on wires running across the glass house, to shade the plants from bright sunshine, otherwise their display will be brought to a premature conclusion. As the Azaleas go out of flower I propose to repot the more rooting plants.

Hardy Flower Garden.—For blooming in the middle of July next and later I am now sowing outdoors some of the newer Sweet Peas. The ground has been deeply dug and a trench taken out similar to that required for Celery, and this filled in to within 6 inches of the surface with well-rotted manure. The latter has been trodden in and the soil returned to the surface. This has been levelled previous to the planting. By the aid of a dibber holes have been made 2 inches deep and 3 inches apart in two rows throughout the length of the quarter allocated to them. One seed is dropped into each hole and the soil raked over as a finish. After labelling, two rows of black cotton are strained over the rows, and this I am convinced from past experience will prevent any harm coming to either seeds or seedlings from birds. When the seedlings are 4 inches high the plants will be thinned out to 6 inches apart. By these means good results are almost sure to follow.—D. B. C.

METHODS OF INCREASING THE HERBACEOUS PHLOXES.

THERE are few plants that add more to the attractiveness of our gardens in the late summer and early autumn than the beautiful herbaceous Phloxes. They are divided up into two groups, one section being known as the summer-flowering and the other the late or autumn-flowering. The summer-flowering sorts are obtained from *Phlox suffruticosa* and the late varieties belong to the *decussata* section. In the present instance we propose to confine our remarks exclusively to the latter section, as this is undoubtedly the more popular of the two. Phloxes are increased in several ways. They are easily raised from seeds,



2.—REPRESENTATIVE PIECES OF DIVIDED PLANT.

although this is a method seldom practised. More often the old plants are lifted and divided, or sucker-like shoots are propagated in the spring or cuttings are inserted in late spring or early summer, and the issue in such instances is highly satisfactory.

Lifting and Dividing Old Plants.—During late March and April the old plants should be bristling with numerous shoots of recent development. This is the time to lift and divide them. They take most kindly to division, many of the older plants breaking up into quite a large number of useful little pieces. Old plants that have been left in one position for some years do not divide so easily as do those that are two years or three years old at the most. The older the plant is the harder and more unsatisfactory is it in the centre. In such cases it is better to break off the outer pieces, leaving the hard unsatisfactory pieces alone. Fig. 1 represents an old plant just lifted. It will be noticed that this is a fine large clump, capable of being broken up into several pieces of fairly large proportions, or a number of smaller ones for the same purpose. Fig. 2 gives a very good indication of the size of the pieces into which to divide the old plants. It will be observed that each piece has several shoots on it, thus ensuring the development of a useful clump before the summer is over. The divided portions should be planted in the specially prepared flowering quarters, first breaking up the surface with a fork to make the soil friable; it is so much easier to deal with the plants then. Plant the pieces 18 inches to 2 feet apart; we prefer the latter distance. Better effects are obtained in the flowering period when the plants are grouped in colonies. Half-a-dozen, more or less, pieces in each group will suffice, and they should be planted firmly. In some gardens it is more convenient to plant the Phloxes in rows in special quarters. Where this is so give each plant 2 feet of space in the rows and about 2½ feet or rather more space between the rows, then they will do well. Fig. 3 is a good representation of the smaller divided pieces. We have a preference for material of this kind, because by its use it is a comparatively easy matter to grow stately spikes of blossoms of vigorous growth and high quality flowers in consequence. These same pieces if planted 18 inches apart and the planting carried out carefully will give a splendid account of themselves before the flowering is over.

Raising Phloxes from Cuttings.—Very few persons are aware of the fact that Phloxes may be raised from cuttings quite successfully and with ease. Plants resulting from cuttings inserted during March, April and even May make handsome exhibition spikes of blossom. This is a method seldom practised by southern growers, yet by its recognition it is possible to make a large number of plants from one old stool. The cuttings should be from 3 inches to 4 inches in



1.—AN OLD PLANT OF PHLOX MRS. JENKINS LIFTED FOR DIVISION.

length, and to make them ready for insertion they should be cut through just below a joint; the latter is denoted by the junction of a leaf-stalk with the stem of the cutting. Fig. 4 serves to illustrate what a cutting should look like when ready for propagation. The cuttings may be propagated in 5-inch or other pots, using soil comprising loam and leaf-mould in equal parts and plenty of coarse silver sand, all well mixed and sifted through a sieve with a half-inch mesh. Fig. 5 shows several cuttings inserted in a 5-inch pot. The pots may be placed in a cool greenhouse or cold frame until rooted, subsequent to which period they must be carefully hardened off and planted in their flowering quarters when nicely rooted and well established. Fine cuttings, rooted in a pot as above described, may be transferred as whole to the flowering quarters, giving fully 2 feet space (we prefer more) between each clump of plants. Grand plants may be created in this way.

Raising Phloxes from Seed. - Seed sown at the present time should produce excellent results. Procure the seed from a firm of good repute and sow in light soil in shallow boxes or pans. Cover the seeds lightly and make the soil moist by holding it in a vessel of water, keeping the surface soil above the water level. In gentle heat the seeds will germinate satisfactorily. When the seedlings can be handled prick them off individually, using shallow boxes and light soil. Subsequently harden off and plant outdoors in late May. This is a very fascinating occupation, as it is possible something really good and new may be brought into existence.

HOW TO GROW GOOD BEETROOTS.

By a good Beetroot large size is not meant, but rather a shapely, firm, medium-sized root of good colour. The best soil for this crop is a rather light but well worked one, two spits deep being none too much to loosen the soil. On no account must manure be incorporated, as this tends to coarseness and forking in the roots, features that the merest novice will realise are most undesirable. If a site that was manured well and cropped with some other vegetable last season can be selected, this will suit splendidly, and, providing it is not very stony, good shaped roots may confidently be expected. The best time of all for sowing the seeds is the end of April or early in May; some cultivators sow earlier, but there is a risk of the seedlings being damaged by frosts, and in a hot season early sown plants have a tendency to run to seed.

The surface of the bed should be trodden moderately firm and then raked over, removing stones, sticks or any other rubbish that may be present. Then draw out broad-bottomed drills



4.—CUTTINGS READY FOR INSERTION.

1½ inches deep and 1 foot apart, and sow the seeds thinly therein, covering them with soil and making the surface of the bed level and tidy by slightly raking it. A mistake that many amateurs make is to sow the seeds too deeply; it should be remembered that the so-called seeds are really dried fruits, containing, perhaps, two or



3.—SUCKERS WITH ROOTS.

three seeds, which are in reality small, hence 1½ inches is quite deep enough to sow them.

When the seedlings appear thin them early so that they stand 9 inches apart, and if the variety is a dark-leaved one remove the greenest leaved seedlings. Birds are very fond of the tiny plants, and during dry weather often do much damage by eating them, hence steps must be taken to prevent attacks by these pests, the most effective being to place old fish netting or strands of black cotton over the beds, attaching these to short sticks a few inches from the surface. Work during the summer will consist of hoeing frequently between the rows, this fulfilling the two-fold purpose of keeping down weeds and preventing moisture escaping from the soil.

As soon as frost is experienced the plants must be carefully lifted, the leaves twisted off, and the roots stored for the winter in clean ashes, soil or sand. Care must, of course, be taken not to bruise or injure the roots in any way, else the colour when the Beets are cooked will be pale. The long-rooted varieties are usually cultivated for the main crop where a good deep, rather light soil is available; for early crops and for shallow or heavy soils, the Turnip-rooted sorts are best. In lifting and preparing Beetroots for exhibition during the summer, select those of even size and good shape, and carefully sponge away all the soil without injuring the skin. Any very fine roots that are present may be removed without any harm accruing, but judgment must be used in this operation. Good varieties are—Long-rooted: Dell's Crimson and Sutton's Blood Red; Turnip-rooted: Sutton's Globe and Egyptian Turnip-rooted.

HANGING BASKETS FOR THE GREENHOUSE.

A GREENHOUSE without a few hanging baskets filled with plants always presents a somewhat bare and unfurnished appearance, no matter how well the stages are filled, and as the present is an excellent time for transferring many plants from pots to baskets some hints as to the way to proceed may be of use to the novice. The first thing to consider is the baskets, and these are preferably made with stout galvanised wire or Teakwood. They should be provided with three rigid wires, 1 foot or more in length and terminating in a stout hook at the top for hanging up the basket. Chains are frequently employed instead of the rigid wires advised, but these are a nuisance when it is desired to take down or hang up a heavy basket, as a little practice will quickly prove. The baskets may be of almost any shape desired, but for general purposes the simpler the design the better. Wire baskets are generally made bowl-shaped and wooden ones square. Small boxes with virgin cork nailed on the front and some holes bored in the bottom for drainage make excellent receptacles for hanging on walls, these, of course, being drained and filled with soil the same as pots.

Having decided on our baskets, we must now proceed to line them. Moss is frequently employed for this purpose, but, as it forms an excellent refuge for slugs and other pests, its use

is not advised. Good fibrous peat is decidedly better, and should be used where it can be obtained. Cut it into slices 1 inch thick with a sharp knife or an old saw, and place these slices evenly round the sides of the basket so that the soil placed inside will not get washed out. Where peat is not available, good fibrous turves make an excellent substitute, these being used when the grass is just dead or in a partially decayed state. The general soil must next be considered, and, although a few special plants may need a particular mixture, the ordinary run of greenhouse subjects will thrive in the following: Very fibrous loam two parts, peat or flaky leaf-soil one part, well-decayed flaky manure half a part, and sand half a part. Pull the loam and peat to pieces with the hands, leaving many pieces as large as hens' eggs and making none smaller than Walnuts. If some small pieces of charcoal can be incorporated so much the better, and the whole must be thoroughly mixed before using.

We now proceed to fill the basket with the plant or plants to be used. Generally speaking, one kind of plant to a basket is preferable, mixed baskets seldom presenting a pleasing appearance. If it is desired to clothe the sides of the basket as well as the top, small plants may have their roots pushed through the wires or wood at the sides, but this is not needed with creeping or naturally pendent plants; it is also a nuisance when one wishes to turn the plant out of the basket. However, this is a point that must be decided by individual taste. Having selected our plant for the basket, it must be turned out of



5.—CUTTINGS INSERTED AROUND THE EDGE OF A 5-INCH POT.

its pot, all drainage and sour soil removed from the base and top of the ball of soil and roots, and some of the side roots gently loosened with a pointed stick. This done place it in the centre of the basket if one plant only is to be used, taking care that the top of the ball is at least 1 inch below the top of the basket. Then work the soil well round it with the fingers, making the whole moderately firm as the work proceeds.

During hot weather an abundance of water will be needed, and at least twice a week the baskets should be taken down and thoroughly soaked in a tub of water to which a little Clay's or other approved fertiliser has been added. The work of filling the baskets, especially where a pendulous plant is being used, will be greatly facilitated if the basket is hung up at a convenient height; for smaller and more erect plants stand the wire baskets in a large pot or pan and the flat-bottomed wooden ones on the bench. The following plants, besides many others, are suitable for baskets in a cool greenhouse: Fuchsias (almost any), Oxalis floribunda, Asparagus Sprengeri, Begonia glaucophylla, Achimenes, Tradescantia zebrina, Campanula isophylla, Ivy-leaved Geraniums (these go well with Fuchsias), Glory Pea (Climanthus Damperi), Nephrolepis cordifolia pectinata, Davallia Maresii, Maidenhair Ferns—such as Adiantum cuneatum, A. capillus-veneris and A. gracillimum—and the Golden Polypody (Polypodium aureum).

THE TOWN GARDEN.

HARDY ANNUALS.—There are no flowers grown in British gardens that come in for as much unjustifiable abuse as those that are included in the comprehensive category of "Hardy Annuals." The seeds are sown somewhat thicker than Mustard and Cress, anything from four to a dozen seedlings are thinned out and then, because the plants do not branch out and flower profusely, the grower writes them down as absolutely useless. There was never a greater mistake made. The beauties of Clarkias, Godetias, Coreopsis and others are not seen by those who do their gardening, if such it may by courtesy be called, in that manner, but if the seeds are sown thinly and the superfluous plants removed early so as to allow an abundance of space, hardy annuals will be found especially beautiful and pleasing in the garden.

HOW TO SOW THE SEEDS.—It is permissible to sow either in lines or clumps, and personally I much prefer the latter system, although in long, narrow beds delightful effects may be created by line sowing. For clumps the easiest way is to take an 8-inch pot, invert it, grasp it firmly and press the rim into the ground; then give the wrist a half turn, bring it back to the normal position again and lift. If this is done when the soil is in a pleasant state for moisture the operation will leave a ring with a drill of any depth that the cultivator desires—for large seeds like Nasturtiums it may be 1½ inches deep, while for small seeds like Godetias, Clarkias and others it may be about a quarter of an inch. In these circles the seeds should be set very thinly, and as soon as the seedlings show through the surface thinning must commence, and it should be carried out so efficiently that the plants of practically all stand 5 inches or 6 inches apart, and for many kinds this will not be sufficient. If desired, tallies recording the name and date of sowing can be put in the middle, or sticks may be used to indicate occupied ground, and the latter is the system I prefer, as I do not think that numbers of labels add to the attractiveness of a garden. However, this is purely a matter of taste.

SOIL PREPARATION.—This is a matter of importance if the finest results are to be achieved. Deep digging is the first thing, and there must be the incorporation of manure according to the state of fertility. All the annuals appreciate a good soil, but to make it excessively rich is an error, as it will lead to such gross and luxuriant growth that flowers will be conspicuous merely by their absence. When the digging has been completed the surface should be made moderately smooth, and the base of the drills must always be firm and level. It is immaterial whether the soil is enriched with natural or concentrated fertilisers, providing the former is perfectly sweet.

TIME OF SOWING.—Herein the cultivator of hardy annuals has plenty of latitude, for he can commence at once, and if he so desire can make successive sowings onwards to the end of May. As a general rule it may be said that the most suitable time is from the second week of April to the end of the month. This is another case in which it is imperative that each grower must exercise his own judgment, and to arrive at a decision he will have to take into consideration the nature of the soil and the weather.

A SELECTION OF ANNUALS.—Some excellent kinds include *Bartonia aurea*, which is rather straggling in habit and must be allowed 12 inches from plant to plant; *Candytufts*, *Clarkias*, *Godetias*, *Mignonette*, *Larkspurs*, *Comflowers*, *Convulvulus*, *Nasturtiums*, *Linum grandiflorum*, *Nemophila*, *Saponarias*, *Silenes*, *Poppiea*, *Eschscholtzias* and *Virginian Stocks*. It will be observed that Sweet Peas are not embodied in this selection; this must not be taken as a sign of unworthiness, but that they are of too much importance for inclusion in a list and are always treated of on their own merits in special articles. H. J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

CROTONS that were ringed a time back will now be ready to come away from the parent plant. Have some good potting material at hand, so that when severed the plant is at once put into a very small pot; it will then scarcely feel the shift.

Winter-flowering Carnations.—These will now be ready for placing in 3-inch or 4½-inch pots. Give them good loam, sand, leaf-soil, a small quantity of spent Mushroom manure, and a little artificial as recommended by the vendors. Drain the pots thoroughly and make the soil firm. Place the plants in a position near the glass where they will not get drawn. Border Carnations of the newer types should be potted into the flowering pots and placed on a cool ash bottom. These make a beautiful show after the principal batch of Malmaisons are over.

Amaryllises that have flowered should be grown on in a warm house or pit, syringing the foliage twice daily till thoroughly developed, when they may be allowed cooler treatment. Prick out seedlings raised this spring into small pots or pans and keep them somewhat close.

HARDY FRUIT GARDEN.

Trees in this department are very backward, owing to prolonged frost during March. Keep the protecting material over tender trees for some time yet, and draw the blinds down every night so as not to be caught unawares, as the frost often comes on in the morning, though it may not appear frosty at night. Keep a sharp look-out for aphids on the Peach trees, and syringe with extract of quassia or XL All as soon as the flowers are over, choosing a fine morning for the operation, as the foliage will then get dry before nightfall.

KITCHEN GARDEN.

Sowing seeds will demand a great deal of time now. All arrears of main-crop sowing should be made up as quickly as possible, and the main sowing of Carrots should now be made. Carter's Improved Horn, Carter's Golden Ball, Nantes and Long Surrey are excellent varieties.

Potatoes.—More should now be planted, choosing good, reliable cookers. Make another sowing of early Beet, Turnips and Celery for main and late crops. Finish planting Seakale sets, and give not less than 18 inches by 2 feet 6 inches between the rows. Give abundance of air to all early crops growing in frames, and gradually harden off all young plants that have been forwarded by such means.

FLOWER GARDEN.

Plant out new subjects in vacant places and in spots which have been well prepared. Manure sites that are intended for Dahlias. Plant out Pansies and Violas where they are intended to flower. Uncover plants that have been protected, such as Gerberas, Dracaenas, Fatsias and Fremontias, and give a little top-dressing. Prune Roses of the more tender varieties, and fork over the beds or borders. Shift Bamboos and Arundinarias, choosing, if possible, dull days for the operation, and quickly convey them from place to place. Encourage growth on Belladonna Lilies; the stronger these can be grown the better will be the flowers. A little artificial manure helps them, as does a top-dressing of spent Mushroom bed manure.

ALPINE GARDEN.

Sow seeds and prick out those already sown. Make good all vacant spaces from the reserve nursery. Keep every plant neatly labelled, as

it is most interesting to employers to be able to walk around and see the names of the plants.

CONSERVATORY.

This should be kept very bright and gay now. Tie climbers loosely, and when an opportunity occurs thoroughly clean every portion. Keep all dead and decaying flowers picked off, and take away all plants when they are over, as one bad plant in a collection will spoil the whole effect.

FRUIT HOUSES.

Continue to pay such attention as recommended in the last calendar. Sow more Melons for succession. Strawberries ripe and ripening should be removed to cool houses.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

SALVIAS.—There are but few plants which brighten up the conservatory or greenhouse during the autumn and onward to Christmas better than these, and if fine specimens are required by the autumn, no time should be lost in getting in the cuttings. The first thing is to get good strong cuttings. Sometimes the old plants, from which the first cuttings must be taken, are not in the best condition, but the cuttings grow away very quickly and the tops may be taken again. *Salvias* may be grown in any ordinary soil, but they succeed best in good loam, with manure added. During the summer they should be grown in a pit, giving plenty of air, or the lights may be taken off altogether in favourable weather. *S. splendens grandiflora* is certainly the finest scarlet variety grown.

FRUIT UNDER GLASS.

Peaches and Nectarines.—Early Peaches that have finished stoning may have the temperature raised several degrees without any further fear of fruit dropping. If the final thinning has not yet taken place no time should be lost in doing it, as this final swelling requires all the resources of the tree. Syringe freely and deal promptly with any insect pests that may appear. Keep the borders well watered and give weak manure water at each watering. In later houses a little time should be spent daily in disbudding, thinning the fruit, &c. In this way the work comes lighter than if done all at once, and it is far better for the trees that disbudding should be done a little at a time.

HARDY FRUITS.

Strawberry Planting.—Autumn planting is undoubtedly the most satisfactory way of making a Strawberry plantation, providing good plants that will fruit the first year can be obtained, but this is not always the case, especially on light soils and bad seasons for getting runners. In this case I much prefer to have the runners planted thickly in the autumn, making the final planting in the spring, the present being a good time for the work. This allows time for the soil to become well settled after being trenched. A fine day should be chosen for treading and raking down the plot, so that it may be ready for planting when the weather appears to have set in mild, and if planting just precedes a nice rain this will settle the soil well round the roots and give the plants a good start. Be careful not to bury the crowns when planting and to make the soil firm about the roots.

KITCHEN GARDEN.

Seakale Planting.—In the more favoured districts, where a supply of forced Seakale is expected early in November, a limited batch of early made, strong cuttings may now be planted, choosing a sunny border. Planting for the production of the main forcing batches will be best done about the middle or end of the month.

The roots are then more likely to escape injury from frosts, which often catches extra early plantings.

Main Crop Celery.—I am no advocate for sowing the principal crop of Celery in heat. Nothing beats a frame in a warm sheltered position. About the middle of the month is a good time for sowing. Let the seed bed consist of a light loamy leaf-soil passed through a coarse sieve. Firm it well, sow thinly, and well water with a fine rosed pot. Keep the lights shut down till germination occurs, and cover with mats at night. When growth commences air should be increased until the lights are entirely removed.

FLOWER GARDEN.

Everlasting Pea.—All the varieties of Everlasting Peas are useful, but the pure white variety is especially so for supplying cut flowers during the hottest summer months. These may be readily increased at this time of the year by taking off the young growths as soon as they have pushed about 6 inches through the soil. Take a sharp knife and run down so as to sever them about 2 inches or 3 inches below the ground level; insert these cuttings round the edges of pots or pans and treat like any other soft wooded cuttings at this time of the year. A very large percentage of them will soon root, and may be potted off singly and hardened off preparatory to planting out.

Dog's-tooth Violets in Grass.—One great advantage in planting these in grass is that they present us with their flowers unscathed by the splashing of heavy rains. The Dog's-tooth Violets are delightful at the present time in leaf and blossom. On a sunny day the effect is unique. We cannot get such fine effects by growing the Dog's-tooth Violets in beds and borders. The usual practice is to drill these little bulbs into lines for edgings; but every garden that has grass about it, which it is not necessary to mow till summer, should certainly have a large colony of Dog's-tooth Violets.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

THE EDITOR'S TABLE.

A SEEDLING VIOLET FROM DEVON.

Mr. J. Heath of Kingskerswell, Devon, sends flowers of a seedling Violet, with others of the variety *Souv. de J. Josse* for comparison. The flowers of both are the same colour, but those of the seedling have much firmer petals, which are also waved, thus giving the flowers a very attractive appearance. He writes as follows: "I am sending for your table a small bunch of a seedling Violet that I have raised, and with it, by way of comparison, a few blooms of *Souv. de J. Josse*. The latter is the finest of its colour on the market at present, but, unfortunately, it has the thin pointed petal after the manner of California. The seedling has more substance altogether, and in waviness of petal somewhat resembles a good Spencer Sweet Pea. Although I have raised many thousands of seedlings in my time, this is the only one I am retaining as being distinct enough to keep. Cross-fertilisation with Violets is practically impossible, which accounts for so very few new varieties; but by following the lines by which I obtained this seedling, I hope in the spring of 1909 to send you something worth seeing."

AN UNUSUAL CYCLAMEN FLOWER.

Mr. Edward Wormald, 15, Berkeley Square, W., sends us a rather unusual form of fasciation in the Cyclamen. The flower sent was quite normal, but about half an inch below it a rather small yet perfect leaf was produced, this leaf having about half an inch of stem so that it was on a level with the flower. Undoubtedly the petiole of the leaf and the flower-stem had grown

together and thus formed one, branching occurring near the apex, thus proving the close affinity between flowers and leaves.

A REMARKABLE DAFFODIL.

Mr. H. Harland, gardener to the Rev. G. Rogerson, Milton House, Newton Abbot, sends us a very remarkable example of *Narcissus Empress*, four good-sized flowers being produced on one stem. It is, of course, an example of fasciation or the growing together of two or more stems. The stem in question was very much flattened and deeply ridged, but the fusion was perfect. Three of the flowers were quite normal, but one, the largest, had seven perianth segments and also a malformed segment situated on the outside of the trumpet, a short distance from the base and growing in the same direction as the trumpet. Fasciated examples with two flowers are fairly common among the trumpet Daffodils, but we have not previously seen four on a stem.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Violet leaves diseased (T. H. D.).

The state of the leaves is certainly not due to red spider, but corresponds with the fungus named *Aecidium violæ*. Comte de Brazza is a weak-growing variety, and this, coupled with bad ventilation, is probably the cause of the disease. It is almost hopeless to try and effect a cure, the best course being to root up the plants and burn them, taking care to thoroughly clean out the frames and scrub them well before using them for Violets again. If you do not care to adopt such drastic measures, try the following: Cut off all the affected leaves and burn them, and then thoroughly spray the plants and surrounding soil with a solution of sulphide of potassium, 1oz. to three gallons of water. Afford free ventilation at all times when the weather is open.

Raising *Linnea borealis* from seeds (L. B. W.).

The charming little *Linnea borealis* is rather difficult to raise from seeds, which are often unripe when saved. They should be sown in a pot or pan, well drained in the usual way with broken crocks for about a fourth of its depth, with some turfy loam above, the remainder being filled up to within 1 inch of the top with fine soil composed of loam, with about a third of peat or leaf-soil and a good proportion of sharp silver sand. Press this carefully down, but do not make too solid, and sow the seeds, pressing them gently into the soil with a flat piece of wood, but not covering them when doing so. Just cover them over with some fine soil of the same kind, and water carefully so as not to dislodge the seeds. Cover the pot with a sheet of glass, and over this put a piece of brown paper. Should the soil become dry before germination the seeds will probably be useless, and the best way to water is to dip the pot to the rim in water, allowing this just to rise through

the surface and replacing the glass and brown paper. When the seeds germinate give air and light gradually, always, however, keeping the seedlings in partial shade. Prick out into similar soil about 1 inch apart before planting out. The *Linnea* is a shade lover, and grows freely in woods. A soil of peat or leaf-mould, loam and sand in about equal proportions will grow it satisfactorily if the plants are shaded from sun. We grow it behind a hedge, which shades it from the south, west and south-west, and where it only receives the minimum of sun in the early morning. A few stones are placed about the plants, and these conserve the moisture. It is rather difficult to establish, but when once established does well. It should have plenty of water in dry seasons.

Crocuses diseased (H. C. C.).—The Crocuses are affected by *Botrytis parasitica* (Cavaca). We add Cavaca's verbatim report: "The disease attacks primarily the shoot growing from the corm, and the leaves are destroyed in portions." In the Crocuses under notice the corms were all quite healthy, only the shoots had suffered. In damp atmosphere an epiphytic mycelium appears, which forms small, velvety, whitish sclerotia. These sclerotia were also present in the Crocuses. The sclerotia when ripe become hardened and black. The diseased portions of the plant rapidly decay and, of course, fall to the ground, and the soil thus becomes infested and the disease is propagated by means of conidia. You must carefully watch the plants this year, and cut off and burn all diseased parts. This will most likely prevent the spread of the disease to the corms. Should the disease appear next year, it would be better to dig up the corms, select those which are quite healthy, and transplant them in a special bed in the nursery, not in the garden. It is most likely that a good many will then recover.

Raising Asters, Stocks, &c., without a glass house (Stirling).—You may raise seedlings of *Schizanthus*, Asters and Stocks quite easily without the aid of a propagator of the kind you mention in your letter. If we understand you correctly, you may sow the seeds in pots, pans or boxes and stand these in your cold frame, where they will germinate quite satisfactorily. As a matter of fact, these seeds may be sown outdoors where they are to grow in April, but rather later in the month so far North as your garden is situated. The seeds would germinate even in a room with a northern aspect, but the process would be distinctly slow. We prefer the window in a southern aspect, however, to the other position, but do not begin too early. The only advantage that raising these plants in heat is, that you can ensure an earlier display by these means. We do not advocate the purchase of the propagator you mention.

Peony damaged when renovating border (Stirling).—We should not move the two pieces into which your Peony got broken unless you very much wish to remove them to some other quarters. The Peony may be planted at any time between September and April, but the latter date is somewhat late for the planting to be performed. As a rule the plants seldom flower the first year after planting, appearing to suffer by the removal. The second and third year, however, they may be relied upon to do well. These remarks apply especially to plants with undamaged roots. It is very difficult for us to advise you with regard to your broken plant without seeing it first, and this, of course, is out of the question. As you have already planted the broken pieces, we should not again interfere with them, unless it is your intention to find new quarters next autumn; in that case we should be disposed to lift and replant at once rather than wait until then.

Summer bedding (E. J. W.).—As you appear to desire a display as late as possible, we think you have erred in too great a variety of early or mid-summer subjects generally, and we note that you have omitted entirely the most valuable family of Asters, also *Celosias*, garden Marigolds, Verbenas and Mignonette. These are of much service for late flowering, and you might with advantage make a freer use of *Zinnias*, which are invaluable for late work. The *Nemesia* group would appear better in the forefront of the Argemone, an arrangement that would remove it from *Erysimum*. The *Celosias* and Marigolds should be freely used, and Mignonette would be valuable always. The beds on the grass, if these are to be cleared in early June, would do well for late-raised *Zinnias* or Asters, *Celosias*, Verbenas, &c. It is quite possible that some of the *Godetias* would give you a far greater return at flowering time than Argemone, which, compared to many other things, is unduly tall. If you have a reserve plot of ground, your better plan will be to make successional sowings of the seeds, while such later-flowering things as *Celosia*, Snapdragon and Aster will be better raised in the ordinary way

and transplanted. We thank you for your remarks as to the helpfulness of THE GARDEN.

Information about Violets (A. R. W.).—The two varieties named by you are among the finest of the family Mrs. Arthur being probably the finest double yet introduced. In the singles Kaiser Wilhelm is a great advance upon the older sorts. Taken together, we think they cannot be beaten.

Annuals (E. T. L. E.).—It is not at all an easy thing to define what is an annual from a certain point of view, because so many so-called annuals but need the protection of a frame or glass house, or a little warmth, to render them perfectly perennial. The fact, however, that you can root cuttings of certain plants which are regarded as annuals, and by these means make of them a plant of perennial character, does not quite fit the situation, and a large number could be cited of which this much is quite true. The terms "annual," "biennial," or "half-hardy annual" are rather terms of convenience and usage, and are only approximately correct. At the same time, the true annual is that which springs from seed, and dies root and branch the same year after flowering. What may be done by special means is quite another matter. In the true annual the root and branch system perishes as a result of maturity after perfecting seeds to perpetuate its kind. The Virginian Stock is one of these. On the other hand, certain annuals may be made biennial by sowing the seed at too late a period for flowering. A self-sown annual will grow, flower and perish the same year, but the so-called "annual," which for three years grew and flowered, has no real claim thereon.

Plants for border (Britannia).—If your desire is for the plants to bloom, as you say, in "late summer and autumn," we fear the Delphiniums and Aquilegias will not be quite suitable, and, so far as the Campanula is concerned, this will depend upon the species you have in mind. In such a case, too, seeing that you apparently wish for long, massed lines of things, the idea of planting varieties of one colour would not be good, and a much more decided display could be obtained by planting those subjects that flower together. For example, such plants as *Helianthus multiflorus* major, yellow, for the back; *Kalmia* (Tritoma) *Uvaria*, scarlet, next; *Phlox* Mrs. E. H. Jenkins, pure white, next; and *Aster Amellus*, mauve, or *Rudbeckia Newmannii* for front. These would all bloom together. If, however, you require a display at an earlier date, you could plant other things in conjunction with the above-named. Perhaps you will let us know as to this, and we can then definitely advise you. We think the Clematis alone will be best on the trellis, and by planting such as Jackmani, J. alba, Lord Wolseley, mauve-blue; Henryi, white; Miss Bateman, white; Lady Lonsborough, pale mauve; *Viticeella rubra*; and Ellen Moser, white, barred with red, you will have a good set. We thank you for kindly mentioning THE GARDEN.

THE GREENHOUSE.

Treatment of Arum Lilies (A. J.). Both the Arum Lilies (*Richardia*) concerning which you enquire behave quite differently from the common Arum Lily (*Richardia aethiopica*). This forms an elongated root-stock and retains its foliage throughout the winter, whereas the underground portion of the two named by you is a kind of flattened tuber, which passes the winter in a state of absolute rest. During this period they should be kept dry, and early in the year, when they commence to start into growth, they must be repotted. By this you will see that you have given yours the correct treatment, and a temperature of 50° by night, rising to 60° or even 70° by daytime, will not be too hot, at least for *R. Pentlandii*, which, being a native of the northern portion of the Transvaal, requires more heat than *R. albo maculata* (not immaculata), which comes from the southern part of Natal. When once growth recommences the foliage is rapidly pushed up and, if the plants intend to bloom, the flower-stem also. As the pots get full of roots a little liquid manure occasionally will be beneficial. After the flowers are over the plant makes its growth for another year, when it must be treated the same as during the growing period. By the end of the summer the leaves will turn yellow and ultimately die down when the soil should be kept dry till the new year is a month or two old.

Arum leaves brown at the edges (Gertrude). This is a very common trouble with Arums, which has at one time or other aroused a good deal of controversy. Several theories as to its cause have been put forward, but the generally accepted idea is that it is produced by a too liberal use of stimulants and by too close and moisture-laden an atmosphere. This theory is borne out by the fact that plants subjected to a hardy mode of treatment and a free circulation of air are seldom attacked in this way. These are the points to bear in mind in combating this evil. As the Arum is quite hardy in the favoured parts of this country, one can perfectly understand that it resents too close an atmosphere. At the same time, we beg to point

out that our efforts to oblige are, in many cases, greatly handicapped by the absence of any information as to the conditions under which the plants are grown.

Cyclamen buds going off (A. W., Surrey).—No objection can be taken to the cultural details given by you, and the leaves and flowers that you sent show that the plants are in a flourishing state. The cause of the buds going off is, doubtless, too close an atmosphere, for, though the temperature given by you is quite correct, a free circulation of air is necessary. If stood rather closely together the buds are liable to damp, for which reason some cultivators elevate the plants on inverted pots. The leaves sent show that the plants have had a liberal amount of liquid manure, and highly-fed one are always more liable to damp than those which have been less liberally treated.

FRUIT GARDEN.

Fig tree casting its first crop (R. T. S.).—To enable you to secure a good first crop on your Fig tree it is essential that you give the tree a period of complete rest in a cool atmosphere for at least three months before starting it into growth. Unless you can do this, we can see no prospect of your ever securing a satisfactory first crop; and from what you say of the position in which the tree is planted and the condition under which it is grown, it seems to us impossible for you to give the tree this needful rest. Therefore we think that the best thing for you to do will be to dismiss the idea of a first crop, and to do your best by stopping the young shoots at the sixth leaf, by preventing the overcrowding of foliage, and by feeding with manure water to secure an extra heavy second crop. If it is important that you should have an early crop of Figs, why not grow a few trees in pots, introducing them into heat in November from a cold shelter? You would then obtain ripe fruit early in April. The variety St. John is the best for this purpose.

Peach tree buds dropping (R. K., Paerlowsk, near St. Petersburg).—Our correspondent writes: "I am quite desolate about the exceedingly strong buds dropping off *Violette Hative* and *Dymond* Peach trees, and I am very anxious to learn its cause and how to prevent it. Beyond the two varieties in the same house are *Crimson Galande* and *Humboldt Nectarines*. They also drop buds, as, I think, all Peaches do more or less, every year, and one does not care about this as long as there are enough buds left for a full crop. I have observed it for several years on these two varieties, happening as well on the strong growth as on the weak. When the buds are cut through then one sees that they are black in the centre. Are these two kinds especially subject to bud dropping? I must add that the trees are about ten years old, a picture of health and are never neglected. They are forced very slowly and the shoots were not overcrowded last year. I think I dare say that they never suffered from dryness at the roots; plenty of lime in the soil. They are planted in a raised border, as all Peach trees are with us. Have good soil and drainage. Last year they bore a full crop of first-class fruit. This year they cannot bear a good crop, because too many buds have dropped." We are anxious to be of service to our Russian correspondent, and thank him for the plain and clear way in which he has placed the case of Peach bud dropping before us. The ample provision he has made for the successful growth of his trees and the precautions he seems to have taken against failure makes it difficult to suggest the cause or to propose a means of preventing such failures in the future. The question is an old and perplexing one. We scarcely remember the time when it did not cause serious anxiety and loss to many gardeners in this country. For this reason we draw special attention to the subject by publishing our correspondent's letter at length in the hope that some of our readers, who are experts in fruit culture, may be able to throw some new light on the subject. The buds sent with the letter are so discoloured and withered that they do not help us in any way to elucidate the matter. We may say that we have not found the variety mentioned especially liable to this weakness. Our greatest trouble in this country in this respect has been with the early American varieties, and this only refers to their culture under glass. When grown out of doors they do not drop their buds. We refer more especially to the varieties *Alexandra* and *Waterloo*. Of late years this has been overcome, even in these varieties, to a great extent by not applying any fire-heat at all until after the fruit has stoned, when it is quite safe to apply fire-heat to expedite forcing. It is much colder in Russia in spring than it is with us, and we suggest that the extra heat required to sustain the heat in your case has had something to do with the trouble. Try what covering up with protecting materials at night will do next spring, and use as little fire-heat as possible. *Peregrine Peach* was sent out in 1904 (Rivers), and those who have grown it speak of it in the very highest terms. It is something like *Crimson Galande* as far as growth and cropping qualities are concerned, but it is much better in flower and is larger and handsomer. Both *Nectarines* are grand. There is nothing to choose between them, but

Early Rivers is a fortnight earlier grown under the same conditions. If the leading Vine shoot is strong, do not stop it until it reaches within 2 feet of the top of the house. If, on the other hand, it is weak, stop it when it has made a growth of 4 feet; this will strengthen the shoot for fruit bearing next year. The laterals of these shoots may be stopped in the first instance at the third leaf, and the subsequent laterals, which will grow from the first laterals, at the second leaf, and so on from succeeding ones until the end of the growing season.

ROSE GARDEN.

Roses and mildew (A. D. Z.).—The Rose you name, *Reine Marie Henriette*, is notoriously addicted to mildew, even when planted in the best of positions, namely, in the open garden upon an arch, but when planted against a wall the consequent liability to drought at the root is a sure incentive to trouble from this fungus. We advise that all soft wood be removed at once and burnt, as this probably contains more mildew spores than the old wood, then give the plant a good syringing (preferably with a fine-spray syringe, such as the "Abol") of a solution of Lifebuoy carbolic soap. A half bar to three gallons of soft water is an effectual solution. Keep the plants syringed at intervals and well in advance of any appearance of the fungus, then we think you will not be troubled so much as last season. This solution is quite harmless to young growths. Climbing Roses against walls should be well watered twice a week in a dry season, and even in such a season as last it sometimes happens that the plants against some walls are very dry at the roots.

Using green bones for Roses (Woodpecker). We do not think you would gain much by buying green bones and breaking them up for your Roses, especially as you have not got a machine for doing the work. Bones are so very slow in dissolving that it would be a long time before the plants derived any benefit from them. If you had a machine that would grind them up into fine meal it would be worth your time to purchase them at the rate you name, but we do not advise you to buy them for use in the manner you suggest.

KITCHEN GARDEN.

Manure for kitchen garden (A. G. G.).—By what you say we have little doubt that your garden needs a good application of lime. Soil that has been well worked and heavily manured for forty years will certainly be very rich in humus or organic remains, and we advise you to apply lime at the rate of 8oz. to the square yard. This dressing should be given when the ground is vacant, securing fresh lime and placing it in heaps until it is slaked, then spreading it evenly over the surface and digging it in.

Securing a supply of vegetables (E. H.).—In reply to your question as to a good handbook, we think you would find the "Book of Vegetables," by G. Wythes (Lane, Vigo Street, W., 2s. 9d.), of great help during the coming season. We are glad to advise on the points you mention. Of Peas we gather that you wish a supply as long as possible and not too many at one time. If you have a fair depth of good loamy soil in the favoured district you reside in, you should have a good succession of Peas from May to October. We have recently in THE GARDEN given copious notes on early, mid-season and late Peas, so will not repeat varieties. The lists given are most reliable, and contain the cream of the Peas in cultivation. For an earliest supply you would sow on a warm sheltered border early in February; again, three or four weeks later, these also on a somewhat sheltered border; after that we would advise sowing every three weeks on an open quarter till the end of July. Of Beans, we presume you mean Dwarf French. If Broad Beans are meant, these should be sown in February, March, April and May for a succession and they like a heavy soil. The Dwarf French Beans may be sown from April till August, every four weeks in good land well enriched with manure, sowing an early variety in April and May; later sorts such as *Veitch's Progress* or *Canadian Wonder*, for later supplies. Of course, the Runner Beans will give a longer supply; these you would sow early in May and a month or six weeks later. As regards quantity to sow, here again so much depends upon the requirements of the house at a certain date, and for eight persons, if you sow a couple of rows thinly, say, half a pint of seed, this should suffice. As regards Peas, you would require double that quantity at each sowing or even more for the earlier sowings. For Spinach we would advise sowing in February and monthly till September, but sow as thickly as possible. A quart of seed should give you enough for the year. The August sowing must be larger, as this is for the winter supply.

THE GARDEN

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APRIL 11, 1908.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock St et, Covent Garden, W.C.

OUR COMING FLOWER SHOW.

AS it is most probable that many of the intending exhibitors or competitors at our coming flower show may be new to such exhibiting, it may be well to point out a few things that may be interesting and useful. Taking the classes as published, Roses claim first notice. These may be shown in ordinary boxes filled with water-tubes, or in boxes filled with green moss, into which are set small bottles or vases, each one to hold one flower in water; or boxes may be dispensed with, and small, neat vases, each one holding one flower, stood in proper order and in limited space on the show tables. In such cases the stems should not be too long, so that the flowers stand erect, thus showing their good points. Not to utensils or boxes, but to flowers, are prizes given; still, it is well to stage flowers as neatly as possible in all cases.

Bunches of garden flowers need not be tied, but should be just a comfortable handful in each case and be neatly arranged in each bunch. These should be set up singly in vases of from 6 inches in front to 9 inches in height at the back, and not be crowded. Sweet Peas should be loosely placed in the vases, not bunched or compressed. About eighteen to twenty spikes of bloom in each vase, neatly or lightly arranged, will be most favoured. Of course, fine form and fresh colouring will tell materially. Bunches of garden annuals should be set up as advised for other garden flowers, although annuals may be included with garden flowers. Perennial or biennial flowers cannot be included with annuals. Those, however, may comprise both hardy and tender kinds. Carnations should be shown in vases and have fairly long stems, so that the flowers stand well above the vase, and not be crowded.

In exhibiting fruits from bushes, these are best staged on neat plates that have been dressed with Vine or other large, soft leaves. A fair quantity of each fruit—say, a pint for instance—would represent a dish. Quality of fruit, especially size, colour and freshness, would have more weight than quantity.

Vegetables should be thoroughly cleaned and neatly trimmed of all superfluous leaves

before staging. Collections look best when arranged on a carpet of fresh green Parsley. Failing that, have a groundwork of clean white paper, setting up the taller or larger kinds of vegetables at the back, and keeping the smaller things, such as Tomatoes, Peas, Beans or Potatoes, for the front. All single dishes should be shown on plates, which will be specially provided.

All these things, including flowers, fruits and vegetables, must be placed by the exhibitor, if present, in the proper position for each class, according to its number as shown on the tables. If all exhibitors will look for those numbers and place their exhibits properly, also see that their entry cards are carefully and correctly placed on each exhibit, they will render the work of the managers and judges very simple. With regard to ladies' special classes, although they may compete as amateurs, if such, or in any open classes also, in arranging table decorations, baskets or bouquets, effort should be made as far as possible in having the flowers in water or otherwise spraying them occasionally to keep them fresh. Last but not least, the greatest care must be taken to cut out, preserve and, finally, in due course send in with the entries all the coupons. Those who cannot bring their exhibits will be at no disadvantage with those who can; they will be carefully staged by competent men.

"A GRATEFUL READER" writes: "As one who has in more recent years enjoyed reading THE GARDEN from week to week, and having gained considerable information by these means, I am delighted with the prospect in view of competing with other readers in friendly rivalry in the different classes so generously provided for us. I am conscious of my own shortcomings and want of practical knowledge of some of the subjects for which there is to be a competition, but am hopeful that, having the knowledge of what is to take place so well ahead, and by reference to the columns of THE GARDEN each week, as well as to my earlier copies, I may do justice to your paper and to myself. Permit me if you will please to make a suggestion. Why do not you print the schedule of prizes on a separate sheet and publish this with each successive weekly issue? Were you to do this, I and other readers would be pleased to pass this on to some of our enthusiastic amateur gardening friends, and by these means bring this excellent idea, of a show open exclusively to readers of THE GARDEN, before others who would be interested." [We intend to have a separate sheet.—Ed.]

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

April 11.—Seascale and Lake District Horticultural Society's Spring Show.

April 14.—Royal Horticultural Society. Exhibition of flowers, plants, &c. Special Daffodil prizes, 1 p.m. to 6 p.m. Lecture at 3 p.m. by Mr. E. A. Bowles, on "Hardy Cacti and other Succulents." Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

April 15.—Royal Caledonian Horticultural Society's Spring Show.

Journal of the Royal Horticultural Society.—Part I. of Vol. XXXIII. of this journal is now in our hands, and, as usual, its contents are most varied, interesting and useful. The Rev. Professor G. Henslow, M.A., V.M.H., deals with "The True Darwinism" and "Phyllotaxis, or the Arrangement of Leaves," and Mr. H. Morgan Veitch contributes an interesting article on the "Amateur and Horticultural Law." Other useful and interesting articles are "The Relation of Meteorology to Horticulture," by R. H. Curtis; "Arches, Pillars and Pergolas," by W. P. Wright; "Japanese Dwarf Trees," by A. Maumérne; "Mistletoe," by W. Smyth; "Gesneraceae," by Colonel R. H. Beddome, F.L.S.; and "A Bundle of Herbs," by Miss H. C. Philbrick. The reports of the trials of perennial Asters, Cannas, Dahlias, Tulips, Melons, Strawberries, French Beans, Kales, spring-sown Onions, Potatoes and outdoor Tomatoes held at Wisley, and the reports on manures, appliances, &c., are also most useful. We should like to see these parts of the Journal bound into more lasting covers than the paper ones at present used. The contents are certainly worth it, and the books would then become most valuable for reference. The price to non-Fellows is 7s. 6d.

Beans, Peas and Potatoes in 1907.—The returns of produce of crops in Great Britain for 1907, published by the Board of Agriculture and Fisheries, price 4d., provide most interesting reading. Beans were a good crop generally, the yield for Great Britain being 34.5 bushels per acre, or 5 bushels over the average. In England the crop was 34.5 bushels, Wales 28.7 and Scotland 36.4 bushels per acre, these results being 5.2, 2.8 and 2.2 bushels respectively above the mean of the previous ten years. The yield per acre of Peas, though not so high as in 1906, was 2.3 bushels in excess of the average. It is interesting to note that the culture of Peas is almost wholly confined to England, the acreage in Wales and Scotland representing less than 1 per cent. of the total for Great Britain. In England the best results were secured in the Eastern, North-Eastern and South-Eastern Counties. The Potato crop was a very poor one. The yield for Great Britain was 5.4 tons per acre, nearly two-thirds of a ton less than in 1906 and one-third of a ton less than the average. England had the best results compared with the average, the deficiency being only a quarter of a ton; but in Wales the crop was 1 ton per acre below the average, and in Scotland half a ton. The shorter crop, combined with a smaller acreage, reduced the total yield by 450,000 tons as compared with 1906. In England the Eastern, North-Eastern and East Midland groups of counties gave an over-average yield; but in every county, with the exception of Worcester, in the West Midland, South-Western, Northern and North-Western groups the yield was below the mean. The principal over-average yields were obtained in Cambridgeshire, Essex, Middlesex and Buckinghamshire. Westmorland, Wiltshire, Cumberland, Devonshire, Derbyshire, Lancashire, the North Riding and Hertfordshire gave the poorest returns. Fife had a decline of three-quarters of a ton an acre, but Perth had a third of a ton over the average.

The Midland Daffodil Society.—The dates originally arranged for the annual exhibition in connexion with the above society—April 23 and 24—are now confirmed, and the exhibition will be held in the Edgbaston Botanic Gardens. The committee anticipate a most interesting display of seedlings from the foremost raisers in the country, so that the exhibition will be one of unusual interest. A handsome silver challenge bowl, as a memorial to the late Rev. S. E. Bourne, as well as ten other silver bowls and vases, is being offered, so that exhibitors have plenty to attract them. Mr. Herbert Smith, the hon. secretary, will be pleased to furnish full particulars: his address is Tenby Street, Birmingham.

Swanley Horticultural College. This college exists chiefly for the purpose of training young women in the various branches of horticulture and allied subjects, and it is pleasing to note that steady progress is being well maintained. The annual report for 1907 is of a favourable character. The chief feature of the year was the establishment of the course in natural history, which has for its object the training of third-year students who have passed the ordinary gardening course and wish to increase their knowledge of natural history subjects in order to qualify as teachers of gardening and Nature study. The silver salver, which is held for the year by the student gaining the highest aggregate number of marks in the midsummer examinations, was gained by Miss Margaret Legg. The syllabus of work is a most interesting one and is well illustrated. Full particulars of the various courses may be obtained by writing to the Principal.

Horticultural Instruction in Essex.—The Essex County Council was one of the first to include horticulture among the subjects suitable for secondary education, and it is gratifying to find that the work is still proceeding on well-defined and comprehensive lines. The report and handbook of the education committee contains some interesting information regarding the teaching of horticulture in the county. Mr. C. Wakely, the staff instructor, draws attention to the practical results of the early work constantly being met with, many former students now holding good positions in the country. During the year three demonstrations were given to gardeners and amateurs in the county gardens at Chelmsford, a teachers' holiday course was held during the third and fourth weeks in August, many school gardens were laid out and those already established were visited, two gardeners' associations visited the county gardens and lectures were given at no less than thirty-six centres in the county, so that residents have had ample opportunities of securing knowledge on this subject.

PRIZES FOR READERS. APRIL.

HOW TO MAKE A SMALL ROCK GARDEN—LIST OF SUITABLE PLANTS ALSO TO BE GIVEN.

A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF-A-GUINEA
are offered for the best essays on the above subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Thursday, April 30. Both amateur and

professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

"The Garden" Flower Show.—There is a special reason for rejoicing over the coming flower show for readers of THE GARDEN, that is, assuming it be held in the Horticultural Hall or some other similar central building, and it is that for once a real competitive miscellaneous flower show will be held in the heart of London. This is a class of show plentiful all over the kingdom outside of London, and always constitutes the most popular forms of flower shows, because, not only inclusive of almost everything found in gardens at the time of year in which the show is held, but has the charm or excitement of being competitive, and that enhances interest so much to visitors. Grand as are the Temple and Holland Park shows of the Royal Horticultural Society, there is no competitive element in them, hence there is nothing which specially arouses the interest of visitors. How different at great provincial shows, where the greatest anxiety is manifested to find the leading exhibits in the respective classes. I venture to hope that, seeing how plentiful are trade or honorary exhibits at the usual shows, none other than those competing will be included in the exhibition.—D.

Late Peas.—I was very much surprised to find no mention of Gladstone in the list of varieties recommended for late supplies by Mr. G. Wythes in his article on page 128. It is one of the very best late Peas on the market, and is seldom attacked by mildew. Added to this good point we have medium-sized well-filled pods and a flavour that is not surpassed by any other standard variety. A list of late varieties is certainly not complete without it.—PISUM.

Sweet Pea nomenclature.—"D.'s" protest under the above heading in a recent number of THE GARDEN has come none too soon. I have often wondered why raisers of novelties should follow one another like a flock of sheep, by giving new Sweet Peas, with very few exceptions, personal names; but to prove that all raisers of Sweet Peas are not possessed of such poor imaginative power as "D." thinks, and are capable of striking out a line for themselves, I give a list of a small collection of novelties which I sent to the Shrewsbury show last year: Mother o' Pearl, Opal, Pearl, Amethyst, Ruby, Moonstone, Coral, Scotch Pearl, Jarjoon, Topaz, Seashell, Cowrie, Red Admiral, Romani Rani, Sycira Lee and Helen Grosvenor. Exception may be taken to the last two names on the ground of their being personal, though Sycira Lee is really a dromesky nav (Gypsy road-name), and the last name on the list was chosen because the flower is, in the opinion of several experts who have seen the plants growing, a great improvement on Helen Lewis, and came from the same cross as that which produced Romani Rani (Gypsy lady) and Sycira Lee.—HUGH ALDERSEY, Aldersey Hall.

Mistakes made in sowing seeds. The caution of your correspondent "Avon," page 141, not to pat down the surface of the soil after sowing the seed, might be applied to seed sown in pots or pans as well as in the open ground, to which he refers. It is a common practice to use comparatively fine soil in seed-

sowing and pat it down firm and level before scattering the seed on it, then, after covering with some more fine soil, the surface is patted down quite smooth and solid. As the seed germinates the smooth surface on which it lies is not at all adapted for the insertion of the tiny rootlets, and the soil above, even though it may not be too deep, is pressed into one unbroken surface, through which the young and succulent plants have much difficulty in making their way, and many perish in the attempt.—H. P.

Introduction of the pink Malmaison.—With reference to the paragraph in a recent issue as to the introduction into England of the pink Malmaison this must have been some years at least before 1872, as there was in 1869 in the greenhouse of my father's house a very large plant of this Carnation. The stem was as thick as my thumb, and it grew on a wire trellis to a height of about 4 feet and about the same width, carrying a splendid crop of very large flowers for many months. I have never since seen such a fine plant, and it must have been several years old in 1869.—J., *County Kerry*.

Destroying wasps.—In a recent number of THE GARDEN I noticed an article on wasps and a cure for their sting. Do other readers know of the use of garden mould for the latter purpose? I have found it infallible, rapid and it is certainly cheap. If you moisten a little mould, put it on the wound, and tie a handkerchief over it, all pain will have ceased in from twenty to thirty minutes. One summer I was stung three times at short intervals, once on the arm (wasp up my sleeve), once in the neck (wasp down back of collar) and the third time at a garden party on the lip (biting a cake with a wasp on it). In each case the cure was perfect. By "garden mould" I mean common garden earth.—Colonel R. DE VILLAVILL.

Irises in flower at Godalming. There are in flower here to-day (March 23) two plants of the somewhat uncommon *Iris fosteriana*, a Juno Iris remarkable for its colouring. The falls are of a rich shade of yellow, while the drooping standards are of a deep purple, the two colours forming a strange contrast. Another Juno Iris, a recent importation from Central Asia, is flowering here for the first time. In form and growth it resembles a small *I. rosenbachiana*, but the colouring is quite distinct, the prevailing tone being a pale primrose. A ridge of a deeper yellow runs down the falls, flanked at first by four, and lower down by six, lines of a brownish purple, which spread into a patch of this colour on the blade of the falls. Perhaps the most striking of all the early Junos is a hybrid of *sindjarensis* × *persica*. This plant has produced four large flowers of a wonderful combination of turquoise and purplish blue, set off by a bright orange ridge on the blade of the fall. It was raised by Mr. C. G. van Tubergen of Haarlem, and deserves to be more generally known.—W. RICKATSON DYKES, *Charterhouse, Godalming*.

Saxifraga longifolia.—It is not absolutely correct to say (see page 142) that this plant "never produces offsets"; but it is true in the main, and particularly so if the remark be directed to the narrowest-leaved varieties so frequently regarded as typical of the great Pyrenean Rockfoil. The more linear-leaved forms rarely, if ever, produce an offset; but the broader-leaved forms, in which the rosettes are of a more blunt character, do sometimes reproduce their kind in this way. In the wild state, however, the species varies considerably as the obvious outcome of seeding for generations. At the present time I have one or two offsets of a distinct form of *S. longifolia*, and these, growing alongside some seedlings of a good form of the type, are making far better progress than the latter. When the rosettes flower there is not much trouble to get seeds, and, as pointed out by Mr. Smith, the seedlings, if well cared for, soon make fine plants.—E. H. JENKINS.

NEW PLANTS.

CYPRIPEDIUM BERKLEYANUM.

This plant is the result of a cross between *C. Boxalli* and *C. bellatulum*. Two flowers were borne on a rather short erect stem, the latter being covered with fine hairs. The dorsal sepal is of medium size, curved forward, the white ground being densely spotted with dull crimson dots except at the edges, which are white. The petals and labellum are of a dull magenta crimson. The leaves are broad and slightly mottled with dark green on a light green ground colour. Shown by Mr. J. Forster Alcock, Northchurch. Award of merit.

PHAIUS CLIVE.

This is a very handsome member of this comparatively little-known family. The plant exhibited had one very erect stout-stemmed raceme composed of ten fully-opened flowers and fine buds. The sepals and petals are ovate lanceolate in shape, the colour being a mixture of deep lilac, cream and gold. The labellum is the most conspicuous part, this being large, well opened and of a deep brownish crimson at the base, the top portion being a mixture of white, cream and purple. A yellow and orange bar runs down the centre, thus giving the flower a most striking appearance. Shown by Norman C. Cookson, Esq., Oakwood, Wylam (gardener, Mr. H. J. Chapman). First-class certificate.

ODONTOGLOSSUM CRISPUM SEEDLING.

This very unique seedling of a well-known Orchid was raised by Messrs. W. Bull and Sons, King's Road, Chelsea, and was exhibited by them. As a result of crossing two plants of *O. crispum* this is most interesting on account of the colour. The plant was a very small one and only had one flower, the seed from which it was raised not being sown until March, 1905. The white ground of the flower is very heavily marked with large brownish crimson blotches, with traces of purple surrounding them, the labellum having a bright yellow blotch on the centre.

CATLEYA SCHRODERÆ QUEEN ALEXANDRA.

This is a lovely variety and will prove a valuable addition to this already large family. The large flowers are of a beautiful pale lilac hue except the large labellum, which has a bright purple ring about halfway down, this being followed by a broad band of rich golden yellow in the throat. Shown by Messrs. Sander and Son, St. Albans. Award of merit.

CATLEYA SUZANNE HYE DE CROM, JUNGFRAU VARIETY.

A very fine variety indeed of a new Orchid. The flowers are larger than those of the type and of a uniform pure white with the exception of rich yellow in the throat of the beautifully fringed labellum. Shown by M. Jules Hye de Crom, Ghent. First-class certificate.

CYPRIPEDIUM HELEN II. WESTONBIRT VARIETY.

Here we have a very beautiful variety of the Lady's Slipper Orchid. The dorsal sepal is large, the yellow ground colour being fairly thickly sprinkled with good-sized dull crimson blotches, except at the edge, which is white. The petals are dull brownish purple, with small dull crimson dots placed rather thickly thereon. The pouch or lip is of medium size, stands well forward and is of a pale brownish hue. Shown by Major Holford, C.V.O., C.I.E. First-class certificate.

BRASSO-CATLEYA SCHRODERÆ DIGBYANA SUPERBA.

This is one of the heavily-fringed forms of this bi-generic family. The sepals are lanceolate, recurved and pure white. The petals, too, are of the purest white, but much broader than the sepals. The labellum, which is very heavily fimbriated, is large, well opened and pure white, except for a rich deep yellow marking in the

throat. Shown by Messrs. Charlesworth and Co., Heaton, Bradford. First-class certificate.

RHODODENDRON PURITY.

This is probably one of the most shapely-flowered varieties of the hybrid set so frequently referred to as Himalayan. The flowers are large, very pure white, campanulately inclined, and produced with a good deal of freedom on quite dwarf and fairly compact-growing plants. Exhibited by Mr. Charles Turner, Slough. Award of merit.

IRIS SIND-PERS AMETHYST.

A very beautiful and showy Hybrid Iris, having *I. sindjarensis* and *I. persica purpurea* as its parents, the new comer partaking very largely of the species first named. The chief colour tone is violet-blue, deepest in the centre of the flower, while the blade of the fall is whitened with the exception of the margin, which is deep blue. Raised and exhibited by M. C. G. Tubergen, Haarlem, Holland. Award of merit.

All the above were exhibited at the Royal Horticultural Society's meeting on the 31st ult.

THE ALPINE HOUSE AT KEW.

DURING the spring months there is not a more interesting spot in the whole of the famous gardens at Kew than the little alpine house that is situated at the northern end of the herbaceous ground, a position that is overlooked by the majority of visitors. Within this little house are flowered the choicest of the alpine or rock plants that are grown at Kew, the idea being to simply provide a protection from boisterous winds and heavy rains, perfectly cool treatment and an abundance of fresh air being demanded by these plants.

Perhaps the most interesting specimens now flowering in this house are some fine plants of *Heloniopsis japonica*, a new and rare hardy plant from Japan. The rose-purple flowers are borne in rather dense globular clusters on stout erect stems about 6 inches long. Each flower measures about three quarters of an inch in diameter, the perianth segments being narrow and lance-shaped and placed in the form of a star. Added to these we have long stamens regularly arranged, with a long pistil surmounting the whole, thus giving the flowers and the inflorescence the appearance of miniature *Nerines*. The leaves are lanceolate, about 4 inches long, and are produced in very dense clusters.

Shortia uniflora will be better known, and here it is doing well, the dainty pale pink frilled flowers being held well above the handsomely-tinted foliage. The variety *grandiflora* has rather larger flowers of a deep shell pink colour and very beautiful foliage, but the flower-stems are too short for it to be of much service. The old *Primula marginata*, with its handsome pale lilac flowers and serrated leaves, appeared quite at home, the flowers in the different plants showing considerable variation in shape.

Tulips naturally find a place here, and we specially noticed some grand specimens of the handsome *Tulipa kaufmanniana*, eight bulbs being grown in a 7-inch pan. This varies somewhat in colour, some of the outer segments having the characteristic rosy red marking down the outside and others being quite a uniform deep cream colour. The general colour of the flowers is deep cream, with a deep yellow zone in the centre, and when they are fully open one can realise what a gem this plant is. A variety named *aura* that we saw in the open border is even more handsome, the colour being rich yellow with a deeper yellow zone in the centre, and the red markings on the outsides of the outer segments. A few red spots are also placed inside the petals, just above the deep yellow zone. *Tulipa pulchella* is a dainty little species from Cilicia, and is worthy of a place in the best Tulip

collections. The flowers are rather small and flimsy, the colour being deep bright rose-pink, with slaty blue blotches forming a zone at the base inside the cup. The erect foliage is rather narrow and grooved. *Tulipa prestans* is a branching species, *i.e.*, several flowers are produced on one stem. These are most gorgeous creations, the colour being a vivid orange scarlet. A curious feature about this Tulip is that the broad leaves are thickly covered with fine minute hairs on their inner surfaces.

Among the Saxifrages none is more imposing than the handsome *S. Grisebachii*, a native of Macedonia and a member of the encrusted section. The leaves form neat rosettes, and from the centre of each spring a unique and handsome inflorescence. The small rosy red flowers form a rather dense tuft at the top of an erect stem. This stem, too, is of a reddish colour, and situated upon it in a regular manner are good-sized leaves of a uniform reddish colour except at the tips, which are deep green, thus adding to the charms of this beautiful Rockfoil. The plants at Kew are growing in pans between pieces of sandstone and look quite at home. *Saxifraga apiculata* Alberti is a fine variety of this well-known species, the flowers being much larger and brighter in colour than those of the type. *S. Scardica*, a native of Macedonia, was producing its good-sized pure white flowers in profusion, the dense tufts of foliage providing a pleasing foil of green. Some small plants of *S. Boydii* were also flowering well.

A BEAUTIFUL HEATH.

(*ERICA CARNEA*.)

It is to be regretted that the hardy Heath (Ericas) are so little seen in our gardens, flourishing as they do in any ordinary sweet soil, for the

THE ROSE GARDEN.

VARIETY WANTED IN FORCING ROSES.

At the Chicago Florists' Club in December last the subject was discussed relative to the need of greater variety in our forcing Roses. Perhaps this matter affects our American neighbours more than it does us, seeing that they depend so largely for the enjoyment of the Rose from specimens grown under glass. But the thought must have occurred to all who handle large quantities of forced Roses that there is room for a greater variety. It seems almost absurd to suggest it when we remember our multifarious collection, which has attained to almost a prodigious size. But so few have the desired qualities of a forcing Rose, which is, briefly, self colour, full and deep flowers, perfect shape, brilliance and clearness of colour, long stems, erect growing, good lasting properties, sturdy growth and fragrance. This latter quality I must admit is almost ignored by the florist.

We could do with a real good white. I know some will say at once that we have Frau Karl Druschki. Of course we have, and a good Rose it is; but it does not come up to my ideal of a white forcing Rose. We want a snowy white Catherine Mermet, with all its sublime shape, finish and fulness. The greenish whiteness of The Bride is against the advance of this Rose. Kaiserin Augusta Victoria also has a yellowish tinge, so also has White Maman Cochet, and a weak stem also. L'Innocence is not at all bad, but its petals are terribly impatient of damp.

Have we a good red? I say no; not the ideal red. Liberty and Richmond are good, and until

no. Perle des Jardins and Mme. Hoste are extensively cultivated under glass; but they are not the ideal yellow, although it is doubtful whether we shall ever improve on them. In Lena we have a glorious colour, but a very thin flower. Harry Kirk may possibly prove a good thing, so also may Mme. Paul Varin Bernier, although this latter is rather undersized. I imagine Mrs. Aaron Ward will be a gain to this section, and perhaps the Lyon Rose will be an acquisition to the salmon yellows. I rather fancy the best improvements we are likely to obtain in the yellows and orange shades will come either through the Hybrid Teas or that advancing group *Rosa pernettiana*.

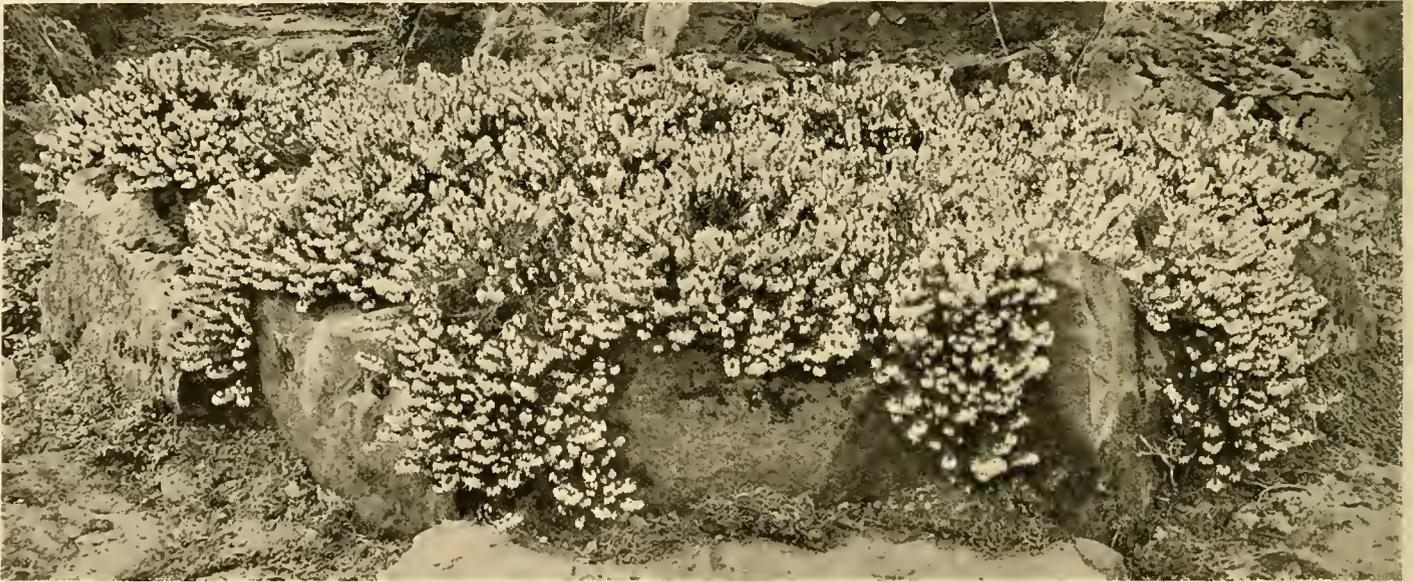
Shall we ever improve upon Bridesmaid for a pink? It seems to me very doubtful. Great things are expected of Mrs. Jardine, an Irish Rose that has found its way first to the United States; but it will have to be a good Rose to surpass Bridesmaid. As a salmon pink Mme. Abel Chatenay will probably never be beaten for late spring flowering; but I am told the new Joseph Lowe is a very prolific bloomer in winter, and it has a great resemblance to Mme. A. Chatenay, although a sport from Mrs. W. J. Grant. P.

THE ROSE ANALYSIS.

(Continued from page 162.)

MR. MAWLEY'S comments on this table are as follows:

"It is interesting to try and gauge from time to time by these tables the advances that the Rose is making in one direction or another. In other words, the trend of public opinion, at all events from an exhibitor's point of view. For instance, taking the table of Hybrid Perpetuals and Hybrid Teas, one cannot but notice from year to year the unchecked advance of the Hybrid



THE WINTER HEATH (*ERICA CARNEA*) IN MESSRS. BAKERS' WOLVERHAMPTON NURSERIES.

general idea that they must be planted in peaty soil is quite erroneous. One of the prettiest is *E. carnea* (the Winter Heath), and the accompanying photograph shows a lovely patch of it growing on the rockery at Messrs. Baker's nurseries at Codsall, Wolverhampton. Its beautiful rose-pink flowers are most acceptable and pleasing to the eye, as it comes into bloom while all other early spring flowers are still practically dormant. It first commences to show a little colour during the dull days of January, and by the end of February and throughout March it is a perfect blaze of colour. The variety *E. carnea alba* is also well worth growing. G. W. K.

we get something better they will be largely grown; but already there are murmurings against Richmond, owing to a weakness or flaw in its flower-stalk, which hinders it lasting any length of time when cut. Is the new Rhea Reid likely to replace either of these? It comes from the raiser of Richmond, and he says its blooms are as large as American Beauty (from which it is a seedling crossed with a seedling Hybrid Tea), as double as Bridesmaid, as sweet as La France, as red as Richmond in winter, and resists mildew. Should all this prove true, then Rhea Reid is the red forcing Rose we are looking for. Have we a good yellow? Again I must say

Tea, together with the gradual decline of the Hybrid Perpetual. This year there are no fewer than thirty-two Hybrid Teas on the list, last year there were twenty-six and five years ago only fourteen. And yet at present we cannot afford to dispense with the Hybrid Perpetuals altogether, or our gardens would lose much of their beauty. On the side of the Hybrid Tea we have a daily increasing army of large continuous flowering and mostly pink Roses with, as a rule, little fragrance. On the other side we see a diminishing array of so-called Perpetuals which flower bravely enough during the summer, but only moderately during the rest of the season. They are somewhat

smaller in size, and generally some shade of crimson in colour, and in many cases have a most delicious perfume. Our hybridists having so successfully obtained increased size and freedom of flowering in the Hybrid Teas are, no doubt, now turning their attention to the further improvements most needed in that section, namely, more crimsons and some good yellows of lasting colour, like *Maréchal Niel*, and, above all things, greater perfume.

"At the last exhibition few varieties were exceptionally well represented, in fact, only Captain Hayward and Gladys Harkness have never before, and Mrs. W. J. Grant and Marquise Litta have only once before, been as frequently staged. Whereas K. A. Victoria, Her Majesty, H. Vernet, Ulster, M. Baumann, C. Lefebvre, Fisher Holmes, Tom Wood, Earl of Dufferin, Victor Hugo, Beauty of Waltham, Xavier Olibo, Duke of Teck and Louis Van Houtte, all but one, be it noticed, Hybrid Perpetuals, have never before been as sparingly exhibited.

"Turning now to the newer Roses, by which is here meant those varieties on the list which are five or fewer years old. Of those sent out in 1902 Alice Lindsell, No. 13 (creamy white with pink centre), and Florence Pemberton, at No. 16 (creamy white, shaded pink), virtually retain their former positions, while Aimée Cochet, No. 67 (flesh pink), which did not appear in the last analysis, secures a place at the bottom of the present one. Of the two 1903 varieties, both of which are new to the analysis, Gustave Grünerwald (carmine pink) on its first appearance takes up a very creditable position at No. 30, while Mrs. T. Roosevelt (light pink) will be found at No. 50. I have not grown Mrs. T. Roosevelt, but can strongly recommend Gustave Grünerwald for general garden cultivation on account of its distinct shade of pink and its good and dainty habit of growth. To 1904 we are indebted for three fine acquisitions, both for exhibition and garden purposes, viz., Dean Hole, Hugh Dickson and Lady Ashtown. Little need be said of Dean Hole (pale carmine, shaded salmon) considering that, although only three years old, it has already risen to the third place on the table, and is a far better garden Rose than either of the varieties which occupy the leading places above it. Hugh Dickson (bright crimson) may be said to have leapt into favour, having at one bound risen from No. 61 to No. 8. Lady Ashtown (deep pink), one of the best all-round Roses of recent introduction, has risen from No. 20 to No. 15. Mrs. David McKee (creamy yellow), on the other hand, has since last year fallen from No. 45 to No. 50. Dr. J. Campbell Hall, No. 63 (coral rose), has also lost a few places, but is, nevertheless, a very pretty garden Rose. We now come to five varieties which were sent out in 1905. J. B. Clark (crimson, shaded plum), the sensational flower of the National Rose Society's exhibition in 1905, has risen from No. 32 to No. 21. Countess of Derby (flesh peach), which is new to the table, takes up a position at No. 42. The deep-petalled Betty (coppery rose, shaded yellow), also new to the list, will be found at No. 56. Richmond (bright crimson), likewise new to the analysis, secures a place at No. 63. The remaining variety, C. J. Grahame, No. 63 (bright crimson), has not improved on its previous position of last year. The only Rose distributed in 1906 which was shown a sufficient number of times at the last exhibition to obtain a place in the table is William Shean (pink), which secures a place at No. 56.

Greatly to the honour of our British raisers be it said that as many as twelve of the above sixteen new Roses were raised in the north of Ireland, and ten of them by a single firm. As regards the other four Roses, we are indebted for two of them to America, for one of them to France, and for the remaining variety to Germany. Of the sixteen Roses all but one are Hybrid Teas, while nine, or more than half, are some shade of pink." E. H. MOLYNEUX.

THE ROCK GARDEN.

SAXIFRAGA BOYDII ALBA.

NEXT to the true major forms of *Saxifraga burseriana* the above-named plant is certainly, when well grown, the finest of the early white-flowered *Saxifragas*. How well this plant may be grown and flowered, and how pronounced its fine encrusted character is when seen under the best treatment, were abundantly



BOYD'S WHITE-FLOWERED ROCKFOIL (*SAXIFRAGA BOYDII ALBA*). (About two-thirds natural size.)

demonstrated by the splendid examples seen at the Royal Horticultural Hall recently when Mr. E. A. Hambro of Hayes Park, Kent, exhibited the plant so finely. The plant in question was the best we have ever seen, and was simply covered with its handsome opaque pure white blossoms, and the effect of these latter above the spreading leaf-tuft was very fine. We regard this plant as a hybrid between *S. coriophylla* and *S. burseriana*, and it is not, as might reasonably be assumed from its name, merely a white-flowered form of the well-known, if rare, *S. boydii*. Grown in very sandy loam with crushed sandstone, and pieces of the same interspersed with the soil, the plant was perfectly happy, and reflected the highest credit on the intelligent care and cultivation bestowed upon it by Mr. Grandfield, the gardener. The illustration depicts but a portion of what we believe to be the finest example of its kind seen at any London exhibition, a large pan of 8 inches across being studded with the purest of white blossoms an inch or so removed from the grey leaf-tuft. E. JENKINS.

ERINUS ALPINUS ON A WALL.

THE lovely little *Erinus alpinus* is nowhere so beautiful as on a wall, and a long stretch almost covered with its purplish flowers is charming in the extreme, whether the wall be an old red sandstone one, one of whin or limestone or old discoloured bricks. Even when out of flower the green cushions formed by the leaves are great ornaments to a garden or other wall. I know of one long stretch of wall some 12 feet or 14 feet high, screening from the sea breezes an old Scottish garden, and on the outside of this, fully exposed to the sea winds, and with the spray borne by the wind being carried against it occasionally, this little *Erinus* flourishes, and there must be thousands of plants in this wall.

The *Erinus* should be established from seeds sown in the crevices with a mere modicum of soil over them. If the wall is kept fairly moist for a time they will soon germinate, and the most crucial stage will be over. An old wall with crumbling mortar offers the best medium for the *Erinus*, and in a few years the vacant crevices will be filled with young self-sown plants. On a wall either *E. alpinus* or *E. hirsutus* is better than the white variety of *alpinus*, which is not so effective, although very beautiful also. There are many gardens in wet districts where the *Erinus* will not thrive on the level, but dies out

in winter, and there the system of wall cultivation will prove a boon. S. ARNOTT.

COLOURED PLATE.

PLATE 1845.

ROSE HUGO ROLLER.

THE Rose of which we give a coloured plate cannot fail to become a general favourite, for in the exquisite combination of colour we have a blending that is almost unique, even in the very extensive collection of Roses now in cultivation. In the garden it is one of the first to catch the eye, and the brighter the sun the more vivid is the crimson tint brought out. It would seem to be a real hybrid between a Tea Rose and a Hybrid Tea, as the erect stems give evidence of the Hybrid Tea character, while in refinement of bloom and in delicacy of colouring the Tea Rose predominates. The blooms, which are produced sometimes in small clusters and sometimes singly, are borne erect, a quality that will commend it to all who appreciate this excellent trait in a Rose. Exhibitors will find this variety a useful addition to the most select box of Teas, for the blooms will come quite a good size with the aid of free disbudding, both of the buds and side shoots, and, although the crimson colour is intense, it will be more helpful to a box of Teas than the self-coloured crimsons, which many think tend to mar the more delicate-coloured Teas which always predominate.

Hugo Roller received an unanimous award of merit when exhibited before the Royal Horticultural Society last summer. It was raised by Messrs. William Paul and Son, Waltham Cross, to whom we are indebted for the blooms from which our coloured plate was prepared.

THE FLOWER GARDEN.

RAISING HEPATICAS FROM SEED.

HEPATICAS, the varieties of Anemone Hepatica or Hepatica triloba, the old name of the plant, are such beautiful spring flowers that an extended appreciation of their worth is devoutly to be desired. In order that this may be realised, it is highly necessary that only such varieties as are most easily cultivated should be encouraged, as there are but few who can succeed with some of the weaker and more delicate sorts, beautiful though these are. Thus the double blue Hepatica, which is such a charming flower, is successful in only a few gardens, and the double white, enfeebled possibly by over-propagation, bids fair to rival it in delicacy under common conditions in the garden. It is, therefore, most desirable that the raising of Hepaticas from seeds should be encouraged, so that free-growing, vigorous varieties may be secured; while by this means there is every probability that seedlings will appear

been collected they may remain on the paper, well spread out, for some days until they are apparently hard on the exterior, when they should be sown without further delay, so as to secure seedlings the following spring.

Although sowing may be done in the open ground in small drills and covered with about a quarter of an inch of fine soil, there is considerable loss in doing this, as the seedlings will be liable to injury from the changes of weather, and many may be thus destroyed when in a miniature stage. It is much safer to sow the seeds in boxes or pans, and much care is necessary to prevent the soil from becoming dry on the surface and to keep the seeds in a uniform condition of moisture. The soil ought to be of a sandy character, with some leaf-soil and sand added to good loam. It must not be too light and open, however, or the little roots of the seedlings will be liable to dry up, especially if the method recommended in the following paragraph is not followed. This is simple, and consists in sowing the seeds round and just beneath the edges of pieces of slate pressed slightly into the soil. I have raised many Hepaticas in this

the seeds are fresh, but if kept until the spring after ripening they will be longer germinating. Although some trouble and patience are required, the results are excellent and well reward one for the trouble taken.

THE WOOD CRANE'S-BILL.

(GERANIUM SYLVATICUM.)

WE hear but little at the present time of the value of the Wood Crane's-bill (*Geranium sylvaticum*) and its varieties as border or wild garden flowers, although many plants of lesser worth than these are sought after and prized. Like others of the extensive genus to which it belongs, this Crane's-bill is one which has not only much true beauty, but is also a plant which is so accommodating in its ways that it may be cultivated in places where few other flowers would grow. It is a rare native of woods and thickets in the north of Great Britain, as well as of various parts of Europe, Siberia and West Asia, so that its natural preference for shelter from sun points it out as a valuable plant for growing under trees and in shade, although it can be successfully cultivated in full sunshine. It comes into bloom in June and lasts for a considerable time in beauty, frequently continuing through both June and July, and forming a handsome plant some 2 feet or a little more in height, having erect stems and leaves with from five to seven lobes, each lobe deeply toothed.

While the colour of the typical form of *Geranium sylvaticum* is purple or blue, it is rather variable, and this tendency has given rise to some beautiful and welcome varieties, of which that shown in the illustration, *G. sylvaticum album*, is one of the most desirable. In this variety the pure white flowers are produced as freely as those of the purple or blue varieties, and the appearance of a good plant in the border, the wild garden, or the large rock garden is acceptable to all in its season. A very pretty rose-coloured variety, *G. s. roseum*, is also in cultivation, and one of the most pleasing of all is one of a silvery blue. The cultivation of the Wood Crane's-bill is simple in the extreme, as, although preferring a free and rather open soil, it will grow in any ranging from a poor and sandy one to a stiff loam approaching to clay. It is readily increased by division in spring or immediately after flowering, and plants of the type can be raised from seeds sown either when ripe, or in spring in little drills in the open, or in pots or boxes under glass. Seeds germinate readily, and, if the young plants are given proper treatment in the way of timely pricking out, they will bloom the year after.

Sunnymead, Dumfries.

S. ARNOTT.



THE WHITE-FLOWERED WOOD CRANE'S-BILL (*GERANIUM SYLVATICUM ALBUM*).

which will yield blooms of different shades of colour from the parent plants. The process is a little tedious, but the results will amply compensate for the time and trouble necessitated.

The raising of Hepaticas from seeds has long been practised, but, as a rule, only upon a very limited scale, partly owing, no doubt, to the fact that seeds of these lovely flowers are seldom, if ever, offered by the seedsman. It is thus necessary to save seeds from one's own plants, and in this case it is desirable to have a small collection of the different colours in one's own garden, so as to endeavour to cross-fertilise the plants, although this is not absolutely necessary, as there is some variation in a natural way. This cross-fertilisation may be effected with a small camel-hair pencil, transferring the pollen from one flower to another. When the seeds begin to ripen, which is when they will part readily from the stalk, the plants must be gone over daily, removing the seeds which can be detached without pulling them off, and placing these on a piece of paper in a dry, but not too warm, room until the whole are collected. If the plants are not visited daily at this time, many of the seeds will fall to the ground and be lost. When all have

way, and have first pressed the pieces of slate slightly down into the soil, so as to leave a mark. Round the edges of this, and about a quarter to an eighth of an inch from the margin, the seeds were sown very thinly and just covered with fine earth, the pieces of slate being then pressed down upon them rather firmly. The seedlings will appear the spring after sowing, as a rule, but some will not germinate until the following year. It is as well to allow them to remain in the boxes for a year after they appear, standing them outside in a shady position during summer and until late autumn, when they must be again put into a cold frame or a cold greenhouse, giving them a little top-dressing at the same time. The following March they can be planted out about 6 inches apart if in a place where they are to bloom, but about 3 inches apart if they are afterwards to be removed again. They will require little after-care, except an occasional top-dressing to keep the crowns about the level of the soil.

From seeds of a varied collection many charmingly-coloured seedlings will result, including various shades of blue, rose, pink, red and purple. Seedlings will bloom at intervals, but the general time is the third and fourth year after sowing if

MANY years ago Verbenas were grown largely for bedding and pots, and well-filled beds of the old Purple King, Lord Raglan, Lady Cowley, &c. were much admired. These varieties were raised chiefly from cuttings of young tender tips about 2 inches in length inserted in 6-inch pots or pans and filled with a sandy compost and placed in frames kept very close, such as that of an old Cucumber frame, and in this way, along with many other useful plants to be grown for bedding, were rooted quickly in spring in heat from the tips of the autumn cuttings; but many of these old varieties seem to have gone out of cultivation and the stock raised nowadays is more from seed. We have excellent varieties as to colour, &c., which are kept separate, and if sown in February or March and forwarded in a slight warmth make capital plants for putting out at the end of May. Given a good soil these seedlings grow strongly and probably resist mildew better than some raised from cuttings. Be that as it may, the plants make a very useful show during the summer months, and from a few packets of seed of different suitable colours a good batch of plants may be raised without much trouble.

H. MARKHAM.

WATER AND BOG GARDENS.

APART from the interest and pleasure derived from the cultivation of moisture-loving plants, there is a distinct charm associated with these subjects when carefully employed in the embellishment of a water garden; nor is this all, for without water in some form or other it is impossible to do adequate justice to the many beautiful forms of plant life which by nature are aquatics. To name but one group we have the Water Lilies old and new. The formation of ponds is a simple enough matter, and with a little management they can be introduced into small gardens. There is, of course, the question of space, which frequently hampers operations at the beginning, and probably some slight misapprehension regarding the initial cost; yet if one considers the relative freedom wherewith these plants flourish under the conditions indicated and the modicum of labour and material required for their future

Sagittaria japonica plena; 6, *Lobelia Queen Victoria*, *Aster Hon. E. Gibbs* and *Primula sikki-mensis*; 7, *Astilbe chinensis*; 8, *Solidago nemoralis*, *Phlox Coquelicot* and *Caltha palustris plena*; S 9, *Pontederia cordata*; 10, *Rodgersia pinnata* or *podophylla*: 1a, *Primula rosea*; 3a, *Primula Sieboldi* (*cortusoides*); S X, *Hottonia palustris*; (S) Y, *Aponogeton distachyon*; S Z, *Herpestis reflexa*. All the plants named must be planted above water level, except those marked "S," which are aquatics. *Nymphaeas* for eight positions, marked by small dots: *Atropurpurea*, deep wine-coloured flowers; *clisiana*, red to crimson; *gladstoniana*, cream white; *Laydeckeri lilacina*, rose lilac; *L. rosea*, light to deep rose; *odorata*

THE KITCHEN GARDEN.

PEA GRADUS GROWN UNDER GLASS.

RECENTLY I saw some very fine plants of the above Pea grown in boxes and pots, and they were remarkable for their sturdy growth and fine leafage. *Gradus* may be termed a dwarf marrowfat of the early type, and it is even earlier than some of the green round early Peas, which are often of inferior flavour. It was sent out some years ago by Messrs. Laxton of Bedford, and each year it has proved of great service on account of its earliness. It is a 3-feet high variety, and even when grown in pots or boxes it does not exceed that height. Last season I saw a large quantity of this variety sown in frames for late supplies, and

well-being, it becomes obvious that all subsequent outlay is reduced to the lowest possible limit.

It need scarcely be remarked that where the conditions favour natural treatment such should invariably be followed, as not only is it pleasing in itself, but it accords with Nature's method of informal grouping, while it also admits of greater variety being employed, even where the ground treated is of moderate dimensions. Where the position does not lend itself to such treatment, no other style of water garden can excel the formal tank. In shape this should be fairly rectangular, this being the easiest and cheapest to construct.

The salient features of the sketch may be briefly summarised as follows: 1. The outline of tank and bottom are uniform in construction, being made of cement concrete. 2. All projected parts are 6 inches below water level, and may either be constructed of concrete or brickwork built in cement; these are beds formed to retain the soil, the means for supplying water being shown in section. 3. Grass or stone pavement covers concealing the outside margin of the tank. 4. The bottom is concave, giving at least 3 feet of water in the centre. The four prominent circles indicate the positions of the four colour forms of *Nymphaea Marliacea*—*alba*, *carnea*, *rosea* and *chromatella*.

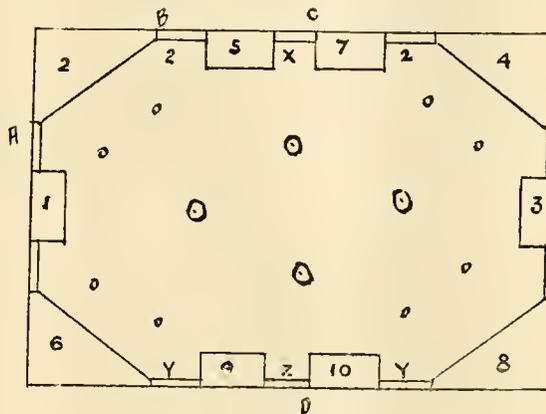
I offer below suggestions for suitable plants for the various beds, employing those which are distinct in leaf or refined in flower, and which furnish a succession of delightful interest during summer and autumn. 1, *Iris Kämpferi*, duplex white; 2, *Ligularia macrophylla*; 3, *Iris gigantea*; 4, *Senecio Wilsoni*; S 5,

exquisita, soft rose, deeper centre; o. *sulphurea grandiflora*, sulphur yellow.

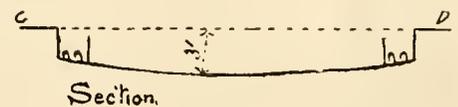
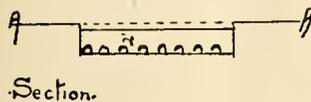
There is such a wealth of moisture-loving plants that I have made this selection with diffidence. When one remembers the White Willow Herb, the great Water Buttercup, the Globe Flowers and Swamp Lilies, to mention but a few of the subjects which revel in swampy ground and in no way inferior to those favoured, one is inevitably forced to make a choice even where none are indifferent, and nearly all are worthy of admiration. After all a very great deal depends upon individual taste, but, as mentioned above, the material to select from is so extensive that there is no difficulty in obtaining what one most desires.

THOMAS SMITH.

Walmsgate Gardens, Louth, Lincs.



PLAN OF A WATER GARDEN (SCALE 16 FEET TO 1 INCH).



grown thus it gave a splendid crop. It was quite free from mildew, and the pods set freely and filled well, there being no gaps. It has other claims on those who like a late supply, as when sown last July it gave splendid dishes in October, and the crop was equal to a July one.

EARLY CAULIFLOWERS UNDER CLOCHES.

WHEN visiting *Gunnersbury House Gardens* a week or two ago I was much interested in the vegetable department, and specially noted a splendid lot of early Cauliflowers. The plants were remarkable for their size and fine leafage, considering the season, and will give very early heads, being all grown under cloches, or bell-glasses as they are known in this country. It is somewhat uncommon to see such a good array of these glasses in this country, but it shows at a glance what splendid assistance they are. Mr. Hudson informed me that they are by no means costly

and they are so much lighter than our hand-glasses; at the same time they are not only useful for the purpose named but for so many others. Some are used for early Lettuces, and for this they are excellent, as several plants can be grown under one cloche. These retain the sun-heat so well that the growth is most rapid. It is scarcely necessary to add that on the Continent the cloche is very common, and at this season of the year immense numbers are used for early vegetables. I am sure the amateur would find them of great value to raise early plants and protect others, and also for rooting cuttings of shrubs and other hardy plants.

G. W.



A SMALL WATER AND ROCK GARDEN.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

HARDY FLOWER GARDEN.—I am planting Pansies and Violas just now. The ground has been well dug and heavily manured, and the surface soil is also friable and in capital working order owing to a forking over of the quarters a few days ago. For ordinary garden embellishment I allow a space of from 6 inches to 9 inches between the plants, giving the greater space to the stronger-growing varieties. Although late, the planting of perennials may be done still. For a sunless border many of my friends are often in doubt as to what to plant. I find that Lilies of the Valley, Solomon's Seal, the Japanese Wind-flower (*Anemone japonica*), Foxgloves, Primroses and Polyanthuses, *Solidago canadensis*, London Pride and the Periwinkle, besides many kindred subjects, do well in this position. Old plants of the early-flowering outdoor Chrysanthemums may be lifted and divided at this time; each year I make a division of the plants in early April with considerable success. Seeds of the Sunflower may be sown where they are to flower. When the seedlings are through the soil protect from slugs.

Cold Frame.—This valuable adjunct of the garden is becoming more in demand each day as the spring advances. For hardening off the more tender subjects raised in heat, either from seeds or cuttings, the cold frame is indispensable. I use it for boxes, pans and pots containing seedling Snapdragons, *Mimulus*, *Lobelia* and numerous other things raised in heat, where, by gradually inuring them to hardier conditions, the young plants become fitted to be transferred in a week or two to their flowering quarters outdoors. It is absolute folly to take plants from the greenhouse and plant them outdoors; they must be hardened off preparatory to planting them in the beds and borders. Still continue to cover the frame-lights at night, as late frosts are sure to visit us when we least expect them.

Roses.—All kinds of Roses may be pruned now. I pruned my Hybrid Perpetual Roses at the end of March, the Hybrid Teas during the first week of April and now I am finishing the pruning by dealing with the Tea-scented Roses. I hope to complete this work before the 20th inst. Roses in pots are doing well in the greenhouse; the buds are opening kindly and are free from



1.—OLD PLANT OF IVY-LEAVED GERANIUM.

green fly. Weak doses of liquid manure I find help the buds at this time very considerably. Standard Roses planted last autumn and during the present early spring have each been staked; this is a matter that must not be delayed if it has not already received attention. Briars that I intend to bud later on are now receiving attention. I rub out all except about three of the most promising eyes at a point nearest to the height I wish the future head to be.

The Vegetable Garden.—Mushroom beds for summer supplies may be made up now outdoors. The material for this purpose should be used in sufficient quantity to ensure a steady warmth till the spawn has thoroughly penetrated through the whole heap. These outside beds should be covered with tarpaulins or anything of a similar nature, or straw-thatched hurdles. Either of these protective agencies will throw off heavy rains, which is an important factor in successful culture. I am still making new beds of herbs, both by cuttings and by seeds. Main-crop Potatoes should be planted without delay; it is a good plan to get the planting done before the warm weather comes along. Early Peas I am now earthing up, at the same time inserting stieks for their support. Main-crop Peas I am sowing at the present time, as they will be wanted to succeed earlier sorts in July next. Spinach may be sown between other subjects as a catch crop just now.

The Greenhouse.—Pelargoniums of the show, fancy and regal types are coming into flower already, promising to make a bright display in the near future. These plants should not be coddled, but should receive abundant ventilation, otherwise they will speedily be infested with green fly. The Zonal and Ivy-leaved types are also doing well, some of the more forward plants already developing stout and sturdy flower-spikes. Keep the plants rather dry at the roots, and when water is given, follow the same with a weak application of manure water. Auriculas coming into flower should be placed in a cold

greenhouse and shaded from the sun. A greenhouse with an east or northern aspect appears to suit them very well.

Trees and Shrubs.—I am busy planting trees and shrubs that have been unavoidably delayed. It is not too late, if care be observed in the planting, to do this thoroughly. The Ivy is a much-neglected subject in many gardens, and it is difficult to account for this seeming want of interest. I am still planting a few of the better and more interesting sorts. Evergreen shrubs that have made free growth may now be pruned. In this connexion we include the Laurels, Aucubas and kindred subjects. The growths must not be cut back with the shears, but individual shoots trimmed back with the pruning knife. D. B. C.

IVY-LEAVED PELARGONIUMS AND THEIR PROPAGATION.

THESE plants are more popularly known as Ivy-leaved Geraniums, and as such we will refer to them in these notes. Old plants, of course, vary in their character, so much so in fact that it is almost impossible to illustrate what may be described as a typical plant. It is largely a question of age.

Cutting Back Old Plants.—The plant in Fig. 1 represents one that was struck last year and that is now making two or three vigorous growths, which for many purposes would soon become somewhat tall and spare in their character. With a specimen of this kind it is possible to achieve much. A beginner would possibly



3.—ONE OF THE GROWTHS SUITABLE FOR MAKING INTO A CUTTING.

hesitate to cut back the plant at all, fearing to irretrievably damage the prospect of the ensuing season's display. Old plants of the Ivy-leaved Geraniums should not be cut back so hard as is the case with the Zonal Geraniums, which were dealt with some few weeks back. The plants now under notice are longer jointed than the Zonal types, and the joints are altogether different in their character, as a comparison will reveal. These are reasons, apart from other considerations, why the plants are not cut back so hard. Fig. 2 illustrates how the cutting back should be done. It will be observed that the growths have been removed at a point in the stem about three-quarters of an inch above a joint; when these ends heal up they will be so shrivelled that no unsightly appendix will be noticeable. Growth will soon evolve in the axils of the leaves immediately below the place where the cuts were made, and a bushy plant guaranteed as a consequence.

Detached Growths and what to do with them.—Shoots of varied character are acquired when the old plants are cut back, and these should be used



2.—THE SAME PLANT CUT BACK: NOTE HOW THE CUTTING BACK HAS BEEN DONE.

for the purpose of perpetuating the different varieties. The growth, as represented in Fig. 3, is quite typical of the majority of those that are detached from the old plant. As a matter of fact, this is one of the growths resulting from the cutting back of the plant in Fig. 1. It is an ideal shoot and should make a very excellent cutting. To make this growth into a cutting it will be necessary to remove the lower leaf, cutting this off close to the stem of the cutting and removing all the bracts at the same time. To complete the making of the cutting, the stem should be cut through immediately below the joint where the leaf-stalk adheres to the stem of the cutting. Some growers would perhaps prefer to make the cutting rather shorter, by removing

a temperature of about 55°, and in these conditions they will root very speedily. Pot up singly into small pots as soon as rooted.

Reliable Varieties.—Ryecroft Surprise, salmon pink; Souvenir de Charles Turner, deep rose-pink; Corden's Glory, scarlet; Ryecroft Scarlet, bright scarlet; Galilee, soft pink; Phrosa, bluish lavender; Miss Clara Walker, salmon cerise; H. Cannell, rosy scarlet; Leopard, lilac-pink, blotched crimson; Mrs. Banks, white; Mme. Crousse, silvery pink; and Hon. Mrs. Boyle, rosy pink.

POLYANTHUSES AND PRIMROSES AS POT PLANTS.

THE man with the unheated greenhouse is frequently at his wits' end to find suitable subjects to place therein, quite ignorant of the fact that many beautiful yet commonplace subjects are quite suitable for the purpose. One class of plants eminently adapted for such work consists of the choice Polyanthuses and Primroses, and where plants of these are growing in the open they may be lifted and potted at once with the greatest success, providing reasonable care is observed in the operation. Select some of the healthiest looking plants that possess plenty of flower-buds and tread the soil firmly around them. Then creak some good-sized pots and proceed to lift the plants, cutting right round each one several inches away from the centre of the plant with a good sharp spade. Lift with as much soil and roots adhering as possible and transfer the plant promptly to the pot, pressing the soil moderately firmly around the ball of roots. If the natural soil is of an open or light nature this will answer admirably for the pots, but where it is heavy and sticky an ordinary potting mixture, in which loam predominates, must be used. After potting give the plants a watering in and place them in a cold frame, if possible for a week or ten days, keeping the lights nearly closed so that the plants become established in their new quarters. After this they may be transferred to the greenhouse to open their flowers, and a brilliant display will be the result. Where a cold frame is not available they may be placed direct into the greenhouse, standing them in a shaded position and ventilating carefully for a few days.

AURICULAS AND POLYANTHUSES.

THE amateur beginner in gardening finds the possession of a small greenhouse or frame very often a sort of white elephant, because he imagines only tender plants can be grown in such places during the winter months, and he has no heating apparatus to enable that to be done. Yet without heat in a house or frame how many charming plants may be grown such as will withstand frost and come through the winter unharmed. Foremost among these hardy plants come Auriculas and Polyanthuses, plants that will even do well through the winter outdoors; but if in a house or frame in pots, are then so much better protected, and will flower as a rule fully a month earlier in the spring. The beginner, when reading of Auriculas, is apt to think reference is made only to the fine and rather dear show varieties, whether of the old florists' section or the still more beautiful alpinics. Any of these a real amateur cultivator may grow under glass, once he has mastered their cultivation, with great success. But the beginner should be content to start with the cheap border varieties, such as can be purchased now from florists in pots at from 2s. 6d. to 3s. per dozen, getting them at once shifted from 3½-inch pots into 5-inch pots, using for compost turfy loam two-thirds, the other third consisting of old hot-bed manure, leaf-soil and sharp white sand, the whole being well mixed. In repotting remove the drainage and one-third of the soil from the roots of each plant, then repot, doing so firmly and keeping the stems well buried. New roots

will later form from close beneath the leaves. At some future potting a year later the portions of root-stems below the younger roots should be cut away, or otherwise they may harmfully decay. The plants need no heat, and will not care for exposure to strong sunshine. Being alpine plants, shade and coolness suit them best.

After flowering is over, should none be required to produce seed, the flower-stems should be pinched or twisted off just beneath the flower-truss, then allowed to die away. Unless some one variety or more seems exceptionally good, it is best to save no seed, or rather not to wait for flowering, but get a packet of good alpine border Auricula seed at once, sowing it in a shallow pan on good fine sandy soil, just pressing it in, well damping it and covering with glass, then shading with paper, as the germination will be better in darkness than in light. Plenty of patience is needed with Auricula seed, as it grows irregularly. Still, the paper shading must be removed when some plants appear. All the same, keep the pan all the summer in a shady, cool place. By August many of the seedlings will be fit to prick off into other pans or into shallow boxes thinly, and be large enough to pot up singly in November. It is thus possible through seed-sowing to create a stock of scores, or even hundreds, where the simple trouble described is taken.

If Auricula plants become infested with aphid, wash the leaves with a tiny brush and a decoction of tobacco and quassia chips. Polyanthus plants even now showing bloom may be purchased from barrows or florists even more cheaply than Auriculas, and simply need similar treatment in potting, the plants being kept in full light and air so that bloom does not become drawn or colourless. All these can be planted out into the open ground on a shady border as soon as flowering is over. If desired and plants do well, they may be lifted into fresh pots in November. A packet of seed of a fine strain should be obtained at once and sown as advised for Auricula seed, also it should be similarly treated; but as the seedlings will grow much faster, these had best be dibbled out into the open ground 6 inches apart for the summer and kept well watered; then so many as desired may



4.—CUTTING ON THE LEFT PREPARED FOR INSERTION; ON THE RIGHT A ROOTED CUTTING READY FOR POTTING UP.

the two lower leaves and cutting through the stem immediately below the second leaf; this is quite a matter of opinion and is of little moment.

Cuttings and Rooted Cuttings.—For the guidance of the inexperienced, Fig. 4 is given to illustrate a cutting prepared for insertion, and also to show a cutting rooted and ready for being potted up. This cutting has been made from the smallest of the three growths represented on the plant in Fig. 1.

Potting Up Rooted Cuttings.—Rooted cuttings, as represented in Fig. 4, should be potted up when they are fairly well rooted. It is better to do the potting up before the roots get matted together, as they will when a number of cuttings are inserted in one pot. Fig. 5 represents the same plant as shown in Fig. 4 potted up and established with great possibilities before it. Pots 3 inches in diameter, of deep build, should be used for the first repotting, and the compost should be made up of the following ingredients: Four parts good fibrous loam, one part leaf-mould and one part well-rotted manure, the whole of these soils being passed through a sieve with a half-inch mesh. Add sufficient coarse silver sand or clean road-grit to make the compost porous, giving the heap a good mixing before using. Pot firmly, taking care to creak the pots properly so that good drainage may be provided.

How to Root the Cuttings.—The rooting of the cuttings is a comparatively simple matter, provided proper conditions are observed. The soil for propagation purposes should consist of four parts loam, one part leaf-mould and one part coarse silver sand or river sand, all passed through a half-inch mesh sieve and well mixed. For autumn propagation we prefer inserting a number of cuttings around the edge of 5-inch pots, but for spring and early summer work insert cuttings individually in 2-inch pots. Embed the cuttings about 2 inches deep, pressing the soil firmly at the base of each one, otherwise they will be likely to fail. One watering in should suffice for a long time. Place the cuttings in a warm corner of the greenhouse, maintaining



5.—ROOTED CUTTING POTTED UP INTO A 3-INCH POT.

be lifted into 6-inch pots in November, and thus help to fill the greenhouse or frame. D.

A CATCH CROP OF RADISHES.

BEGINNERS in gardening are not infrequently hampered by lack of space in which to grow the various crops of salads and other small things. Where such is the case a nice batch of Radishes may be obtained as follows: In the centre of the space between each two rows of late Potatoes draw a 1 inch deep flat-bottomed drill and sow therein seeds of a quick-growing Radish, such as French Breakfast. The Radishes resulting from this sowing will be ready for use before the Potatoes are high enough to do them any harm, and the latter will not suffer in the least.

THE TOWN GARDEN.

BEDDING PLANTS IN FRAMES.—At the present time there are, doubtless, many thousands of bedding plants in frames that are destined to brighten the summer flower garden, and if the grower is to get the full value of them later on it is essential that they shall have regular attention. It is necessary that they have all the air that is possible, while light is equally beneficial. In towns the cultivator suffers seriously from the poorness of the light, but he commonly makes matters worse by neglect on his own part. If he would keep the glass in his frames, and in his houses too, for that matter, scrupulously clean, the plants would thrive far more satisfactorily, and, as a consequence, bloom much more profusely in due course. Watering will demand the grower's attention, and in this respect care must be exercised not to be too generous in the supplies, or just about as much harm as good will result. Further, all dead and decaying leaves ought to be removed as soon as they are seen, as any trouble of this sort on one plant will soon spread to others that are growing in the same structure. Flowers should be pinched out as soon as they are seen. If it is possible to plant out the yellow *Calceolarias* before the end of the month, it will be found that they will grow better and the irritating summer losses will be fewer in numbers.

CATS IN GARDENS.—One is always hearing walls at the damage done by cats in town gardens, and questions are constantly being asked as to how these active and determined felines can be circumvented. Speaking from my own experience I can say that I have not had half-a-dozen cats in my garden during the past thirteen years, and I have kept them out by the aid of wire netting. In the period named above I have had two sets, and it was in the interval between taking down the old and putting up the new that the few cats that have honoured my garden by their presence paid their visits. The netting is 3 feet wide and of 2-inch mesh, and it is carried its full height above the fence on supports 2½ feet high; it will thus be seen that above the wire there is a full 9 inches of swaying netting, and it is precisely that part which the cats do not appreciate. Although the supports are flimsy a venturesome animal will occasionally travel up them, but when that additional storey is reached and it commences to swing it at once decides that the soil in my neighbours' gardens is just as good as that in mine and it descends. Far be it from me to swear to the elegance of the arrangement, for there is nothing of that sort about it, but for its efficacy I can safely vouch. The secret of success lies in bad workmanship, for the wire is so slack that except at the posts no cat will tackle it. One of my friends who knew of my good fortune decided that he would enclose his garden, but he wanted the wire to look nice. With this end in view, he procured 1-inch mesh, 2½ feet high and had a support to the top of every 3 feet (I should have mentioned that my supports are 7 feet asunder), and from these he stretched the netting as tightly as he could. When the work was completed it looked neat and smart, but as for keeping out the cats—well, it was useless, for they tested it carefully, found it firm, told their friends, and those who wanted to see the garden simply walked over the wire in the most convenient spot.

CLIPPING IVY.—Notwithstanding the sombre appearance of some Ivy, it is one of the best wall and fence plants that can be grown in towns, and my collection of about twenty varieties, all small-leaved, from Cheals, is a pleasure to me and my visitors. I mention the plant now as the time is opportune for the annual trimming. If this work is done much earlier there is an interval of bareness, but done now new growths are soon produced and the attractiveness of the garden is scarcely marred. H. J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

KITCHEN GARDEN.

CUCUMBERS AND MELONS.—Top-dress Cucumbers that are fruiting, using a little often. A box of soil should be put into the house at night, and by the morning it will be warm, and the work may then be done. Keep the plants well syringed twice daily, and stop at every joint next the fruit, allowing only one fruit to develop at a joint. Sow for succession Carter's Model and Sutton's Peerless, two good varieties for table and exhibition use. Sow more Melons for succession and frame work. A variety called Carter's Frame is an admirable one for cool frame treatment. Hero of Lockinge is also a fine variety for growing in frames after the bedding plants have been cleared out.

Tomatoes.—Pot singly now varieties for outside culture. Carter's Outdoor and Sunrise are both excellent for the purpose. Grow in a warm house or frame for a week or two, after which they should be placed in cool frames. They will then make strong sturdy plants for putting out into their summer quarters. It is very often the cause of failure that plants in too weak a condition are planted outside; they take a long time to recover, and when they do half the summer is gone.

FRUIT HOUSES.

Grapes that are swelling rapidly should be given plenty of liquid manure, also an occasional dressing of Le Fruitier or guano, which should be well watered in. Keep the laterals pinched. This operation should be done frequently, so that the Vines do not miss the flow of sap. Shut the house up early in the afternoon, damping down every crevice thoroughly. Succession houses should be brought along slowly or according to requirements. Where there is plenty of space between the wires and the glass the shoots ought not to be pulled down to the wire too quickly or they may snap and cause a gap. Keep the roots in a fairly moist position, especially near the pipes, or red spider may gain a footing and be difficult to dislodge.

Peach Houses.—Where fruits are reaching the stoning period the temperature may be slightly lowered for a week or two. Keep the growths regularly tied; cut away any that is not required when the stoning period is over. Give the trees a thorough watering with farmyard manure into which some soot has been mixed; this will keep the foliage nice and green and healthy.

PLANTS UNDER GLASS.

Himalayan and other Rhododendrons coming into flower should be kept in a cool, dry and airy house; at the same time the paths and stages must be damped down daily and twice on bright days. Top-dress and tie in growths of *Lapagerias*; these plants require cool treatment to be a success.

Bouvardias that were recently started will now supply cuttings which may be put in at once to increase the stock. Old or large plants may be shaken out and repotted.

Fuchsias must go into the flowering pots and keep the points pinched till they are required for flowering. Pot early-struck cuttings on as may be necessary. Shift on small plants of *Grevillias*, *Cordylines*, *Bambusa gracilis*, *B. fulcata*, *Boronias*, &c. Keep up the supply of forced shrubs and bulbs for the conservatory and mansion and for the supply of cut flowers.

LAWNS AND FLOWER GARDEN.

Keep the lawns in trim condition by rolling and sweeping, the grass verges neatly cut, and

the gravel paths neat and free from weeds. Stake any plants that need it. Continue to plant out alpine plants from the reserve and sow seeds. Keep the various portions free from objectionable weeds.

Hardy Ferns should have a top-dressing, or if the soil is very poor and worn out replace it with new. Evergreen and deciduous Ferns in the rock garden are always nice, and an endeavour should be made to keep them in good condition. The Parsley Fern (*Allosorus crispus*) is always refreshing and the Holly Fern (*Polystichum setosum*) is a fine one for the window. Ferns delight in a nice fresh open and sweet mixture, and a good collection is always interesting. W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)

Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

POTTING ORCHIDS.—A great many Orchids require repotting just now, and when potting them it is necessary to get away entirely from the method followed in treating ordinary greenhouse plants. The reason is that in the majority of instances the compost is more in the nature of a mechanical support than a manurial one, although Orchids doubtless derive some little sustenance from various materials used; but this is principally in the way of moisture, and could this element be continuously provided, there is no doubt that many of our best-known species would thrive for an indefinite time on bare blocks of wood, provided also that the roots had good hold.

Herbaceous Calceolarias.—A glance at healthy *Calceolarias* in any stage of growth is sufficient to convince one that they are gross feeders. Let this but be fully recognised and acted upon by affording abundance of stimulants, keeping the plants clean and free from aphides and thrips, with plenty of air and light on all sides.

KITCHEN GARDEN.

Sowing Vegetable Seeds.—Why sow seeds early when the plants are not needed to plant out till June or July? In some gardens the quarters are not available till the early crops, such as Spring Cabbage, Potatoes and Peas, are cleared. Many sow early in March on a sloping border at always the same spot, or as nearly as possible. What is the result? In some seasons there is a fair supply of vegetables, often a scarcity, and in others a total failure. I am aware some will say it is an easy matter to transplant them or prick out, but how few persons can do this with the commoner vegetables, such as the Brassicas. My advice is sow thinly and make three sowings instead of one, if there be the least doubt that the crop cannot be planted when the plants are ready.

FRUIT UNDER GLASS.

Melons.—In the earliest house the plants are swelling their fruits and require supports. Remove all surplus fruits and all flowers, also superfluous growths, stopping and tying as necessary. Afford efficient supplies of water, giving liquid manure as necessary for the maintenance of free growth. Genial atmospheric moisture must be maintained by damping early in the morning and afternoon and syringing the plants lightly about 3 p.m. on bright afternoons. Later plants showing fruit blossoms should, unless abundant and the plants vigorous, have the first flowers removed. Secure a somewhat higher temperature and drier atmosphere during the setting, only affording as much moisture as will prevent flagging. Stop the shoots at one joint beyond the fruit, but employ the knife as little as possible during the setting period.

HARDY FRUIT.

Strawberries.—Where old plantations have not yet been looked over this ought to be done at

once, removing all decayed leaves and weeds. The soil round the plants should be made firm and any slugs found harbouring beneath the foliage destroyed. When this is done give a dusting of soot or lime among the plants. The ground between the rows may be hoed to free it from any weeds that may be making their appearance.

FLOWER GARDEN.

Hardy Cyripediums.—Where it is intended to grow them in the open ground—and in no other place do they flourish so well and continue healthy so long—a suitable position for them is one sheltered from the north and east winds, with a little shade overhead. The soil should be taken out about 18 inches deep, or if the soil be light and well drained, 12 inches deep will be sufficient. In the case of clayey soils a few inches of rough crocks or clinkers will be necessary to form a drainage, and then fill in the hole with roughly chopped peat and half-decayed leaf-soil in about equal parts, with the addition of some rough charcoal nuts and sphagnum moss. In this mixture the plants invariably do well, provided a sufficient supply of moisture is forthcoming in the growing season.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

DAFFODILS FROM MR. PETER BARR.

Mr. Peter Barr, V.M.H., whom we are pleased to know is living among the Daffodils in Scotland, sends us, as he so kindly did last year, several interesting Daffodils in flower. In the collection were the following, accompanied by Mr. Barr's notes dated March 25. They are as follows: "I send you a few Daffodils at present in flower, some of them just open, others in flower some time ago. *Narcissus Corbularia* from Ovar Marshes, Portugal. Of this section it is the first to flower. During winter sportsmen from punts shoot snipe over where this form grows. In the centre of the marshes is an island covered with conifers. On this island the flowers of *Corbularia* are extremely small, the soil being pure dry sand; in the marshes the plants have large flowers, nearly double the size of the specimens sent, the leaves long and twisting, and like the figure in Sweet's "British Flower Garden," Vol. VII., t. 164. Haworth calls it *serotina*, Salisbury's name is *turgida*, said to flower in May, and abundant at Tarbes in the French Pyrenees. I have searched this locality and consulted botanists, but there is no such plant. *C. citrinum* does grow there. To my mind, Haworth, Salisbury and Herbert, I feel sure, were mistaken. In no single instance did I find a yellow and sulphur Daffodil growing in the same sort of soil. I take it that Mr. Bourne, in his book on Daffodils, took it for granted that this Ovar plant was *C. conspicua*. At the present time *C. conspicua* is unknown as a wild plant, and can only be had true from bulbs grown in Guernsey, and from which island the trade have been supplied for a long series of years. The best bulbs are those raised from seed. *C. conspicua* might be found about Tangiers. When there I did not chance to see any *Corbularias*, but Mr.

and Mrs. Brookes (both dead) assured me a Hoop-Petticoat *Narcissus* did grow about Tangiers, and promised to get me bulbs, but did not keep their promise. I am now trying another source. Now that many people spend the winter there, some one or other may read this paragraph. I shall be indebted if they will send me a few bulbs. To prevent further trouble over this plant I propose to name it Ovar Hoop-Petticoat, unless one of your readers will give it a botanical name. I am writing to Mr. J. G. Baker and suggesting that he will give it a name. Ajax Mrs. Buchanan, raised by Baron de Soutellinho, out some weeks and terribly battered with north-west winds. A. Queen of Portugal, hybrid between Oporto yellow and triandrus albus. It is smaller, flowered earlier than Queen of Spain and is paler in colour. A. cyclamineus, A. minimus, A. pallidus *præcox*. Hybrid between Ajax and cyclamineus, Mrs. Alfred Tait. *Moschatus*, true."

RHODODENDRONS AND SAXIFRAGAS FROM HOWTH.

Mr. R. Farrer sends a collection of interesting spring flowers from Howth. He writes as follows: "I enclose a few flowers for your table. *Rhododendron ciliatum*, which is perfectly hardy here, is, as usual, smothered with flowers. The only special treatment it asks for is to have the seed vessels nipped off soon after flowering. *Daphne blagayana* requires no particular care except to be top-dressed with large stones from time to time. I also enclose a small scrap of *Erica cononodes*, with its brightly-coloured buds, and some *Saxifraga* flowers, including two spikes of *S. Grisebachii*, which seems to have made itself at home; a spike of *Faldonside*, certainly an improvement on *Boydii*; and two flower-heads of *S. sancta*, the most effective of all at this time. Its golden yellow entitles it to pre-eminence."

THE TELEMV SWEET PEAS.

Mr. Adcock, The Gardens, Litcham Park, Petersfield, Hants, kindly sends flowers of this interesting strain of Sweet Peas, which are similar in colour and quite as sweetly scented as those which we associate with summer days. Our correspondent writes: "I am sending you a few Sweet Peas—Telemv strain—which I am growing here. They are very good, I think, in colour, and when better known will, I am sure, be largely grown. The colours are very distinct, namely rose and cream, red bicolor, violet, red and white stripes, lavender and lilac, purple and maroon, pale primrose, blue and red. The seed was sown on September 15. I am also flowering some in pots, but have cut some of these down to about 4 inches from the rim. I intend to plant them out early in April, and hope to have them in flower in May. My advice for this part of England is to sow about the middle of October to flower early in May."

A CURIOUS CŒLOGYNE.

Mr. C. Burtenshaw of St. Helens House Gardens, Norwich, sends an unusual flowering portion of the well-known Orchid *Cœlogyne cristata*. Two rather small well-formed inflorescences were produced from one pseudo-bulb. His letter reads as follows: "I am sending you a piece of *Cœlogyne cristata* for your table; you will see it has two flower-spikes from one pseudo-bulb. I should like to know if it is unusual for *C. cristata* to do this. The plant has five pseudo-bulbs with pairs of inflorescences, but the flowers are not so fine as in the single spikes. It appears that what is usually the growth has developed into a flower-spike. It behaved in the same way last year and made the new growth from the base of both flower-spikes about an inch from the bulb. The plant is in a 10-inch pan and is very robust; last year it had thirty-one spikes of bloom and this year it has forty. I have had it photographed recently and would send you one, but I am afraid if I waited until they are developed the flowers would be too far gone to send, as they have been out some considerable time now."

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Manuring Sweet Peas (*A. Roy*).—

It will be quite safe to use the Sweet Pea manure every ten days at the rate you suggest. Regarding the watering with some other guano, we advise you to be careful with this. If you use it very weak it may do good; but without knowing exactly what it is we cannot advise you definitely on this point. However, use it weak and often, and so err on the right side. Do not commence feeding until the first flower-buds are discernible.

Treatment of Dahlia tubers after cuttings are taken (*Ignoramus*).—

If you have rooted sufficient cuttings to produce the required number of plants, the old stools may well be thrown away. If you desire to keep them they may remain in the boxes, cutting off all weak growths to their bases and leaving only the two most sturdy shoots to each stool. Give them very cool treatment—a cold frame will do—and keep them near the glass. It will not be safe to plant them in the open until the end of May, when they should be put out the same as the young plants now in pots.

Pruning a Polygonum (*F. W. H.*).—You may prune *Polygonum baldschuanicum* at once, spurring back the young wood to within a few inches of the base if your plant is outgrowing its position. If, however, it has lots of room for development, it will do very well without any pruning. In fact, examples left to grow naturally over some old tree or rustic support and left untouched for several years give an excellent account of themselves. Should a number of the inside branches die they may be removed if the work can be done without injury to living branches.

"Broken" Prince of Austria Tulip (*A. S.*).—The Tulip sent is a "broken" form of Prince of Austria. This means that the peculiar change, which florists call a break, has taken place. Every Tulip, with certain exceptions, begins life as a self-coloured flower, and then suddenly, after the lapse of a few or many years, the colour changes and becomes striped. Until last year I do not remember having seen any "broken" Prince of Austria; then I had one in a bed of about 150. This form has no special value, but if you or your employer like it, I advise you to mark the fifteen and carefully ripen them off. They will end their days in their new dress.—J. JACOB.

Raising ornamental Gourds (*A. E. S.*).—If you know how to raise Vegetable Marrow plants under glass, you cannot do better than treat the Gourds the same. Sow the seeds in 2½-inch or 3-inch pots, one in each pot, the second or third week in April, and place them in a temperature of 60° to 65°. When the seedlings appear move them to a house where the temperature is 10° lower, keeping them near the glass. If they become pot-bound move into 4½-inch pots, gradually inuring them to cooler conditions ready for planting out early in June. Under the circumstances we think it would be wise to cut back the *Daphne* after it has finished flowering, and thus induce it to push up new growths from near the base.

Diseased Tulip (*E. T. E.*).—The *Tulipa fosteriana* bulbs sent are badly affected with the fungus *Botrytis parasitica*, and there are also mites, though in all probability it is the presence of the fungus that causes this trouble. It is impossible to say if the germs were present when the bulbs were bought. It may have been so. We find, however, that this fungus appears when decayed or decaying organic matter is in the soil, and when the conditions of the environment have been favourable to its growth. These are warmth, damp and want of air. These three factors combined are only too ready to promote its development. The fungus probably grows for a time unnoticed in the soil, and then attacks the plant just about the soil level or a little below. It then rapidly extends down the stem into the bulb, which in turn begins to decay. If nothing was added to the virgin loam when

potting, and nothing used to cover the pots that would set up decay, it points to the germ being present in the bulbs when bought.—J. JACOB.

TREES AND SHRUBS.

Fir tree in bad condition (M. M. W.).—The specimen of *Abies nordmanniana* you send is badly attacked by a species of *Chermes*, probably *C. abietis*. It often infests this particular Fir, and, curiously, selects this particular species from among numerous other sorts. The fact may frequently be noticed of every example of *A. nordmanniana* being attacked by the insect while all the other Firs growing in the vicinity are left alone. This insect, or an allied species, however, attacks other conifers, and *Pinus Strobus* may often be seen infested with it. In the event of your specimens being badly infested cut them down and burn them and water the ground where they stand with boiling water. If the attack is not bad you can cure it by syringing the trees once every nine days for the next two months with the following mixture: Take from a quarter to half a pound of soft soap and one pint of paraffin and mix together into an emulsion. To this add five gallons of soft or warm water, mix well together and keep the mixture stirred while applying it to the trees.

Planting a Wistaria (K. B.).—You may plant a *Wistaria* at once, or, if you obtain an example established in a pot, the planting may be done any time within the next two months. The most suitable soil for it is rich loam, not too heavy. You will not require to do any pruning, other than removing the ends of the shoots which are not well ripened, until the plant has covered the allotted space, unless a lot of breast-wood is formed. When this is the case, keep the main branches nailed up and spur the breast-wood in to within a few buds of the base. This may want doing twice a year—July and February.

Pruning *Pyracantha* and *Ceanothus* (A. B.).—You may prune your *Pyracantha* at once. If it has grown out a long way from the wall cut it well back. This will result in a loss of flowers and fruit for one year, but you will get a good supply the next. If it is not far from the wall, less vigorous pruning will be required, and you will save some of the flowers and fruit for this year. It is very often, however, found to be advantageous to give a *Pyracantha* a hard pruning now and then. You do not say whether your *Ceanothus* flowers in spring or autumn. If it is a spring-flowering sort, prune it as soon as the flowers have fallen; if an autumn-blooming variety, prune at once, spurring the wood back to within a few buds of the base of last year's wood.

THE GREENHOUSE.

Potting Zonal Pelargoniums (Rev. E. B. P.).—As your plants are two years old we presume that you have some special reason for retaining them. In the ordinary way young plants would have been secured from cuttings inserted in the autumn, and, if cuttings were inserted now, nice young plants for flowering during the autumn and winter would result. If you decide to retain your plants as they are, turn them out of their pots, remove the old drainage and any sour, loose soil that may be present at the bottom and top of the ball of soil and roots, and then loosen a few of the side roots with a pointed stick. Pots 2 inches more in diameter than those they now occupy will be large enough, and these will need one large crock or small oyster-shell over the drainage hole, and a few smaller pieces around and over the large pieces. The best soil is good fibrous loam three parts, and sand one part. If the loam is not very fibrous, add a small proportion of leaf-soil or Cocoanut fibre. To each bushel of soil add a 5-inch potful of fine bone-meal. Pot moderately firmly and water carefully until the plants are established.

Malmaleons and Roses (J. P.).—The association of these is not a good plan, and the mildew is most probably caused by the coldness and the incessant draughts, coupled with the moisture and the syringing. As the Roses are planted out, your only course is to move the Carnations and give the Roses more congenial treatment. Old plants of Malmaleons not infrequently exhibit in winter time the paleness of leaf seen in the specimens sent, and a little soot water or weak liquid manure at the root, in conjunction with a more active root condition, will be of much assistance to the plants.

Making the most of a greenhouse (E. H. T.).—You do not say a word as to the structure and its position, or whether it is heated, but we should say a good plan will be to fill it with Tomatoes during the summer, and in the winter it can be used for the storing of bedding plants to be sold next spring. We do not know of any book dealing with the subject.

Moving a greenhouse (Leanto).—It will be quite possible to convert your lean-to greenhouse into a span-roofed structure, and the roof, as per sketch, will not be too flat. With regard to the last part of your question as to the plants that would thrive in it, we are in the first place handicapped by the fact that you give no idea of its size other than its width, there being no mention of the length. We see there is a boiler marked on the plan, so if you purpose to devote your attention to flowering plants, there is nothing to prevent your growing the usual series of greenhouse plants that are of simple cultural requirements. Such things as *Fuchsias*, *Pelargoniums* of different sections, *Begonias*, *Lantanas*, *Cannas*, *Lilium longiflorum* and similar subjects will keep the house gay during the summer, and in the autumn there are *Bouvardias*, *Lilium speciosum*, *Salvia splendens*, *S. azurea grandiflora* and *Chrysanthemums*. For the early months of the year, different bulbous plants such as *Tulips*, *Hyacinths*, *Narcissus*, *Crocus*, and *Scillas* may be potted in the autumn and taken into the house soon after Christmas. These will furnish a bright display, and in addition you may grow Chinese *Primulas*, *Cinerarias*, *Cyclamen* and *Lily of the Valley*, all of which will flower before the summer occupants of the structure display their floral charms.

ROSE GARDEN.

Rosa wichuralana and its history (G. O.).—The word "*wichuraiana*" is derived from the discoverer's name, Herr Wichur, who was a German botanist. He accompanied the Prussian expedition to China in 1859-61, and during that expedition the species was discovered. This botanist was suffocated in the year 1866. In the "*Index Kewensis*" *R. wichuraiana* is mentioned there as *R. Luciae*. It was not until about the year 1895 that an American, Mr. Manda, took the species in hand and hybridised it with other Roses, which produced such sorts as *Manda's Triumph*, *Pink Roamer* and, later on, *Gardenia* and *Jersey Beauty*. *Evergreen Gem* came to us from the United States. The well-known *Dorothy Perkins* originated also in America, its parents being the species and the Hybrid Perpetual *Rose Mme. G. Luizet*. The species is a very low, trailing plant, with bright glossy foliage and large clusters of pure white single blooms, blooming in August. It is very readily hybridised, and is capable of vast improvement in the hands of the skilful hybridist.

Climbing *Devoniensis* with injured growths (J. A. D.).—You were quite right in your surmise that the growths are suffering from the effects of the winter. In the case of the above-named Rose, the rank growths it will so freely produce are so seldom really well ripened that they fall an easy prey to the ravages of the frost. Good sound, hard wood rarely suffers so much as the soft pithy wood. Your best plan will be to cut these growths away another year. You should protect the shoots in some way, for it is a very tender Rose. As regards *Carmine Pillar*, the old wood which is blackened is the result of injury by frost, and *Crimson Rambler* has suffered the same in many places. It is very strange that the old wood suffers like this while the new wood escapes; but the fact is that the energies of the plant seem to be centred in the young growths; and this teaches us a lesson—that is, to discard the old. Had this been done in August or September last, the plant would have been all the better for it. It is, however, not too late to remove them now, as we fear you cannot expect good trusses of bloom from frost-injured wood. We do not believe that the plants have been injured by the sewers, and do not hesitate to attribute the trouble to the frost.

KITCHEN GARDEN.

French vegetable gardening (A. S. W.).—The writer of the article in the *Daily Mail* on French gardening at Thatcham in Berkshire has wisely omitted, as you say, reference to cost of this style of gardening, nor does he furnish his readers with any balance sheet. He states, for instance, that the temperature in the frames was up to 80° while it was snowing outside, yet says not a word as to how such heat was obtained. Certainly in such cold weather no manure bed would give that heat for a week, and only a powerful heating hot-water apparatus could do so continuously. This one fact alone

suffices to throw doubt on the entire story. Admittedly French cultivators do beat our home growers in methods and in enterprise and labour. With them "*la petite culture*" is a species of slavery almost—but, at least, it is all for themselves. Only where both ordinary manure and liquid manure or sewage is plentiful can the description of culture under cloches, handlights and frames as described in the newspaper article be carried out, as the soil has to be made a sort of perpetual manure bed. The suggestion that Melons are being grown in frames throughout the dead of winter is absurd, and shows that the writer of the account you sent was both ignorant and gullible. We cannot give you any idea as to the cost of providing an acre of ground with frames, cloches and handlights. It is really a matter for some trader who deals in these things. But you might get some local carpenter or builder to give you a price for a long series of stout rough wooden frames some 6 feet wide and long enough to take some ten or twelve lights, each 6 feet by 4 feet. In such a series of frames you could no doubt grow during the winter Cauliflowers, Lettuces, Carrots, early Potatoes and dwarf Peas, and get such crops much earlier than from the open ground; but once you had such crops, whether few or plenty, you would have to find a good market for them, and one as near home as possible, as long carriage by rail soon eats up profits. We have no wish to discourage you, but begin, if you do, in a small way at first, and thus see how far such a business may grow into success.

Information about *Asparagus* (J. S. B.).—Have you not seen the articles that have recently appeared on "*Asparagus for Amateurs*"? They practically answer all your queries, and for the preparation of the bed kindly refer to them. The best time for planting is the end of March or early in April. Plants two years old are best where early returns are desired. We cannot say what the variety is that you mention, but *Conover's Colossal* and *Giant Argenteuil* are splendid sorts.

MISCELLANEOUS.

Size of a bowling green (G. A. K.).—A full-sized bowling green should measure 42 yards square, *i.e.*, the green should measure 42 yards along each boundary.

Secretary of the Royal Horticultural Society (An Old Reader).—Address your letter to the Secretary, Royal Horticultural Society, Vincent Square, Westminster.

Black growths from a well (Mrs. M. C.).—The black string-like growths are the spawn or mycelium of a wood-destroying fungus. This spawn is named *Rhizomorpha subterranea*, and is not uncommon under the bark of diseased Elms. On Elms it frequently gives rise to a large fungus named *Polyporus squamosus*. The white growths belong to the black, and are an abortive attempt on the part of the mycelium to produce the perfect fungus. This the spawn cannot do owing to its unfavourable surroundings. Both growths are common on wooden shoring in mines. It is often phosphorescent. It has nothing to do with the dry-rot fungus.

Bones as manure (H. J. C.).—Bones to be of use as manure may be prepared in various ways. The simplest in your case, having no proper chemical appliances, is to have them broken up quite small, even into dust if possible. The dust particles would become soluble in the soil in the course of a season or a few months, the larger pieces, ranging from the size of a Hazel Nut to that of a Walnut, some two or three years. These latter are best for Vines or fruit trees. Chemists who manufacture manures crush or grind bones into a dust or meal; they also steam them and make a soft quickly soluble phosphatic manure. They also soak them in a bath of sulphuric acid, and thus manufacture what is known as superphosphate, a brown-coloured compound that is also quickly soluble. We fear you could not raise steam to sufficiently great heat to soften the bones. Best smash them with a heavy hammer on an iron floor.

Manure samples (A. Roy).—Short of analysing the two manure samples sent, which would be a very costly process, we subjected the samples to soaking in water for eighteen hours, with the result that the white dust No. 1 is, without doubt, good bone-dust or meal, that is, very finely ground bones, making an excellent phosphatic manure, but because not steamed is slow in dissolving. A pint in a bushel of potting soil for plants would do good. It is also good for Vine or fruit tree borders or *Asparagus* beds, where crops are of a permanent nature. The other, No. 2, is evidently superphosphate, produced by bones dissolved in sulphuric acid. It dissolves quickly, and gives off more ammonia than the other does. This superphosphate, with one-third in bulk of sulphate of ammonia mixed, should make excellent Sweet Pea manure. You might add, to make a complete manure, one-third of the whole of well-crushed kainit or potash; this mixture should be used sparingly.



TEA ROSE HUGO ROLLER.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

OUR FLOWER SHOW.

OWING to the great demand for THE GARDEN since we published the schedule of prizes in connexion with our show in July several numbers are almost out of print. As some of our readers may, later on in the season, wish for certain back numbers, we would impress upon them the importance of carefully collecting all the coupons. We have received many letters expressing entire approval of our coming show, which will simply be a friendly rivalry between those of our readers who wish to compete. The date of the show is Wednesday, July 29, and it will be held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, London, S.W.

SCHOOL GARDENS.

(First Prize Essay.)

INSTRUCTION in gardening is undoubtedly of great value to the scholars of our village schools. The interest which is taken in their allotments by the boys is proof of the suitability of this instruction, and the fact that every rural boy hopes to have a garden of his own some day is an inducement to him to acquire a knowledge of the art. The patience and perseverance inculcated at this early period of their lives is of incalculable benefit to the boys; moreover, they look upon the gardening lesson as a recreation, and, I am informed by the schoolmaster here (who is an expert gardener), that the combined theoretical and practical instruction which he imparts has had most happy results. The boys take great delight in their work, and it is found that it makes them better scholars, encourages such excellent habits as observation, method, tidiness, economy and interest in the garden of the home.

One is glad that gardening is now included by the Board of Education in the curriculum of schools. The subject, however, not being compulsory, is, I am afraid, only taught, as a rule, where the head teacher has the inclination and ability; but it is pleasing to note that many of our county councils have taken up this important matter seriously and have appointed county instructors to organise and teach classes in cottage gardening.

LAYING OUT AND SIZE OF PLOTS.

Given a piece of land 24 yards by 20 yards and fourteen pupils (i.e., the Board of Education's regulation number), I would divide the land into nine plots, each 5 yards long by 5 yards wide with a path 1 yard wide all round, dividing the plots from the flower borders (each 1 yard wide) on the east and west sides, and from the fruit break (3½ yards wide) on the north side, and

from the necessary tool-house, etc., on the south side. The southern portion of the ground should be arranged for, 1, a look-up house for tools; 2, a covered shed for keeping wheelbarrow, Pea and Bean sticks, Bamboos, &c.; 3, a manure heap, which is, perhaps, one of the chief means of bringing about the best returns from the garden; 4, frame, where the boys should be taught how to prepare a hot-bed; 5, Rhubarb bed; and 6, herbal break.

Dividing the ground into allotments is far better than having a general garden. Two boys cultivate each plot, which leaves two vacant allotments. One is to be used by the instructor as his demonstration plot and the remaining one as a seed or nursery bed. The arrangement of the boys is an important matter, and the following plan, which has worked very successfully for a number of years, may be recommended:

Let the numbers (1 to 14) represent the boys, placed according to size and ability:

1 2 3 4 5 6 7 8 9 10 11 12 13 14

No. 1 (the best) takes No. 14 (the weakest) as a partner, No. 2 takes No. 13 as a partner, and so on.

CROPS TO GROW.

Fruit.—With regard to the fruit trees and bushes, and indeed the seeds, it should be remembered that a good thing takes up no more room than an inferior one, and, further, no more attention is required; therefore, it will be advantageous to start only with good, well-tryed sorts. Apple trees, good varieties and suited to the locality, should be planted at the back of the Gooseberries and Currants. Gooseberries and Currants should be of the "one leg" type; they are easier to clean, and produce better results. The following Apples, Gooseberries and Currants are reliable: Apples (cooking): Lane's Prince Albert, Warner's King and Keswick Codlin. Apples (dessert): Cox's Orange Pippin, Peasgood's Non-such and King of the Pippins. Gooseberries: Whinham's Industry, red; Whitesmith, white; and Early Sulphur, yellow. Black Currants: Lee's Prolific and Black Naples. Red Currants: Red Dutch and Raby Castle.

Vegetables.—The drills to run from north to south, 9 inches to 10 inches apart. Take one season for example: Shallots, one row; autumn-sown Onions, one row; spring-sown Onions, two rows; Parsnips, two rows; Carrots, long and short (one row of each), two rows; Spring Cabbage (to be succeeded by Leeks in trench), one row; Potatoes, one row; Runner Beans, one row. All these 2 yards of each. Winter Greens (Broccoli, Kale, Brussels Sprouts or Savoys), two rows; 1 yard. Alter the list of vegetables slightly year by year, e.g., let Celery take the place of Leeks and late Peas take the place of Runner Beans, and, of course, change the ground for the crops annually.

Flowers.—Sweet Peas and hardy annuals should form the east border. The following list of hardy annuals, which should be sown out of doors early in April, may be selected from: Mignonette, Larkspur, Malope, Shirley Poppy, Godetia, Candytuft, Sunflower and Nemophila. The following perennials have not the pernicious

spreading habit of so many of their class, and can all be raised from seed sown in the open seed-bed in June to flower the following season: Pentstemon, Antirrhinum, Hollyhock, Pansy, Delphinium, Polyanthus, Forget-me-not, Wall-flower, Lupin and perennial Phlox.

TOOLS REQUIRED.

The tools required for each pupil are spade, garden fork, rake, draw hoe and Dutch hoe. There must also be a serviceable wheelbarrow, a brush and three garden lines.

METHODS OF TEACHING.

All practical work should as far as possible be preceded by demonstration lessons in school, illustrations to be given on the blackboard. These should afterwards be reproduced by the boys in their note-books or diaries, *e.g.* (a), the sowing of seeds, as Parsnips, long Carrots and Beet, should be shown on blackboard thus: ∴ 4 inches to 6 inches, ∴ 4 inches to 6 inches, ∴ 4 inches to 6 inches, ∴ drill. This method saves labour and seeds. There is no need to sow thickly all along the drill for such vegetables as mentioned. (b) Pruning and grafting operations may be easily illustrated on the blackboard, and form very interesting and instructive work at the subsequent drawing lessons. The demonstration plot (No. 5) should be the ground where the practical teaching is given. The teacher should prepare the ground, open drills or trenches, sow seeds and shut drills, the boys standing round as a class. The pupils should do similar work on their own plots, and here it must be mentioned that no measurements between rows should be permitted, the object being to train the eye of the young gardener.

A diary should be kept by each scholar and dates of preparing the ground, sowing, cropping, &c. should be recorded. These diaries must be a special feature of the work; they should be carefully inspected, marks awarded periodically, and the books finally given to the scholars at the end of their school life for future reference. Autumn is, of course, the best time to start laying out the school garden. Lessons should be given in school on trenching (bastard and real), drainage, manures, soils and the uses of the various tools.

The month of July should see the gardens at their best, and this is the time for the annual inspection. No difficulty should be found in securing a judge. The head-gardener from some neighbouring gentleman's place can be relied on to come and pass judgment on the different plots. Prizes should be provided, ranging from a spade (the coveted first prize) to the useful weeding fork, a most excellent type of which, with flat steel prongs at a cost of a few pence, is to be had to-day.

In conclusion, may I say a word for the girls? Let the flowers be their care. Experience shows that as gardeners girls are at least the equals of their brothers, and among the upper classes women as gardeners have achieved name and fame. I should also like to add that in my humble opinion there are few more pleasant sights than well-cultivated and kept allotments. There is no more pleasant, healthful, refining and profitable way of spending a man's leisure hours than in the cultivation of a plot of ground, either as an ornament to his surroundings or as a means of supplementing his earnings by the vegetable produce which he obtains, and it is the proud boast of a Briton to be able to say that the "Cottage Homes of England" are distinguished in this respect from those of almost every other nation. If this country is to keep up her distinguished name in this respect, we must train up the rising generation with a thorough knowledge of horticulture, and since THE GARDEN has given such prominence to school gardens it would be a decided acquisition to add such a useful paper to the ordinary school literature and magazines. G. M. WALDRON.

Bluetts, Peterston-super-Ely, Glamorgan, South Wales.

PRIZES FOR READERS.

MARCH COMPETITION—AWARDS.

IN this competition essays on "School Gardens" were invited. The prizes are awarded as follows: The first prize of four guineas to G. M. Waldron, Bluetts, Peterston-super-Ely, Glamorgan, South Wales.

The second prize of two guineas to Mr. Henry J. Orchard, Helmingham, Stowmarket, Suffolk.

The third prize of one guinea to Mr. A. E. Burgess, 16, Briscoe Road, Hoddesdon, Herts.

The fourth prize of half-a-guinea to F. W. Mosedale, 263, Edward Street, Nuneaton.

Although the number of essays sent in was not so great as in some former competitions, the quality was very high. The following is a summary of the views most generally expressed in the essays: Single or dual plots, with demonstration and reserve plots, is a better system than one large plot. The schoolmaster, if qualified, makes the best teacher; gardeners, generally speaking, do not make good teachers. All work done should be entered in a note-book, to be presented to the scholar when leaving school, thus providing him with a mass of useful information for reference. The children should, in addition to being shown how to do a thing, be told why it is necessary to do it. We very highly commend the essays from the following, all of which were of exceptional merit: M. E. Dishusall, S. E. Hymans de Liel, Thomas Down, Dorothea B. Allwork, James Colville, G. H. Webster, George W. Naish, William Lucas, W. H. Morton, Winifred S. Baker, M. Dearden, Henry J. Neal, T. O. Jones, Thomas Alexander, R. Findlay, Victor H. Lucas, Edna M. Gunnell, Ruth L. Hopkins, "A. N. T.," Arthur J. Cobb, John Botley, John Rhodes, Fred Hudson, S. W. Grimble, Rev. A. A. Kerridge, H. Tomalin and "Northants." One well-thought-out and written essay was sent without name or address.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

April 21.—Devon Daffodil and Spring Flower Show.

April 22.—Royal Botanic Society's Show, Regent's Park, N.W.

July 29.—Flower Show for Readers of THE GARDEN at the Royal Horticultural Society's Hall, Vincent Square, Westminster.

Shropshire Horticultural Society.—The annual report and statement of accounts of this remarkable provincial society for 1907 are of a most gratifying character, and the committee are to be congratulated on securing such good returns during the unpropitious weather experienced last summer. The total receipts from all sources amounted to £5,922 12s. 8d., this being £283 17s. 5d. in excess of 1906. The number of annual subscribers steadily increases, and the takings at the gate on the two days of the show also give a substantial increase over those of 1906. The balance in hand after the expenses of the year had been met was £786 11s.

The Nurserymen, Market Gardeners' and General Hailstorm Insurance Corporation, Limited.—The thirteenth annual general meeting of this company was held at 41 and 42, King Street, Covent Garden, on Friday, the 3rd inst. The accounts showed an increase in the year both as regards premium income and interest. The year had been peculiarly free from hailstorms, but two further claims had been settled since the accounts were closed. During the thirteen years the premium income had increased from £681 1s. 9d. to £2,476 13s. 10d., which showed

that the company was meeting a distinct need and becoming better known. A dividend of 7½ per cent. and a bonus of 2½ per cent., making £1,000 in all, was declared, and £1,500 added to the reserve fund, making the reserve £13,500. The invested funds at the end of the year amounted to £23,969 0s. 7d. The company were not paying big dividends, but were building up their reserve fund against heavy claims which might come in at any moment. The area insured now amounted to over 35,500,000 square feet of glass.

Weather in North Wales—a bad outlook.—The weather since the New Year has been very wet. Cold winds and hail showers have prevailed, and the outlook in this part of the country is serious, not only for gardeners, but farmers alike. Many fields are too sodden for tillage, seed-sowing up to the present is out of the question, and everything points to a very late season owing to the condition of the land. I append the total amount of rain for the three months ending March 31, 1908, viz., 11.48 inches, against 6.69 inches for the three months ending March 31, 1907, which gives 4.79 inches in excess of 1907.—J. S. HIGGINS, *Rûg Gardens, Corwen, North Wales.*

Mr. Robert Sydenham's Business.

Our readers will doubtless learn with interest that from May 12 next the extensive seed and bulb business established and built up by Mr. Robert Sydenham, Tenby Street, Birmingham, will be carried on under the title of Robert Sydenham, Limited. In converting this business into a private limited company it has not been done with a view to raising more capital, but with the idea of giving a direct interest in the business to those members of the staff who have worked hard with Mr. Sydenham in the past. We are sure that all our readers who know him will be pleased to learn that Mr. Robert Sydenham will still retain full control as governing director, and will be quite as interested and active in the business as before, so that orders will still receive the same courteous and prompt attention.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Cotoneaster angustifolia in Victoria, B.C.—A few years ago I was much interested in this shrub, when I saw it first mentioned in THE GARDEN. As soon as it was put on the market I obtained a plant from France and the following year I secured ten more. They all grew well, except one, which died; in fact, it never made a start. A year ago this winter we had 22° of frost and they got frozen badly, being in an exposed place, but they broke out fine in the spring, and last summer the first plant I imported had a fine lot of yellow berries on it. The other nine never had a flower on them. I have sold them all now, but have young stock raised from cuttings and some grafted on the Hawthorn.—G. A. KNIGHT, *Mount Tolmie Nursery, Victoria, B.C.*

Rabbits and wire netting.—May I add something to your answer to "Eaten Up" in a recent issue? Rabbits will burrow under wire 6 inches deep in one night. If, however, the wire is buried 6 inches and another 6 inches at the bottom turned outwards, the rabbits will never get under it. A rabbit, when he wants to burrow under anything, begins close up to it, and when he comes down to the horizontal piece of wire he gives it up as a bad job. Also 2-inch wire will let through young rabbits, and it is only a case of two or three days before they will be too big to get out; 1½ inch mesh is the only safe one. I have had wire down for ten years as above. At first the rabbits tried to get through, but in all the ten years no rabbit has ever burrowed under.—FRED STREET.

Borecole or Kale.—At no time does the value of this, the hardiest of all green crops, come home to us with such force as in late winter and early spring, when the severity of the winter will have cleared the kitchen garden quarters of most green crops except the hardy Kale. The great improvement in the quality of vegetables (notably Potatoes and Peas) of late years has not been so marked in relation to the Brassica tribe, and yet the very useful trial of Borecoles (Kale) carried out by the Royal Horticultural Society at their Wisley Gardens in 1907, and which were inspected by members of the fruit and vegetable committee in the spring of that year, disclosed the fact that considerable attention had been given to the improvement of this, what may well be termed the poor man's most useful winter and spring vegetable. It was found that, growing side by side with old types and strains, the following, in the estimation of the judges, were distinctly in advance of the older ones, and to each of which an award of merit was recommended: Chou de Russia (Carter), Dwarf Moss Curled (Carter), Cottagers' (Barr), Cottagers' (Carter), Cottagers' (Veitch), Selected Dwarf Curled (Kent and Brydon) and Tall Green Curled (Veitch). At the following meeting of the fruit and vegetable committee Kale Chou de Russia (an old Russian stock) was thought so highly of, especially for its great hardness, as to be deserving of a higher award, and a first-class certificate was recommended.—OWEN THOMAS.

Hyacinths at Vincent Square. It was a matter for surprise to learn that the Dutch growers of bulbs who were over here to represent the donors of the liberal cash prizes offered at the recent meeting of the Royal Horticultural Society for Hyacinths in pots were disappointed with the examples exhibited for those prizes. Surely they of all persons should know that bulbs of such fine spike-producing form are not now grown by them, or, if so, they are not put on the British market. The best of the spikes seen in the recent competition were small compared with the very fine ones that used to be seen in the old days at South Kensington when some famous home growers used to compete. If Dutch growers continue their prizes, they must furnish competitors with bulbs that have gone through the process of spike-creation before sending them over here. But, after all, from either a home decorative aspect or for competitions, is the game worth the candle? No growth or culture can make the Hyacinth other than a dense, formal, tubular spike, that has in respect to its stiffness no equal among flowering bulbs. On the other hand, we have now a marvellous selection of graceful Daffodils, of beautiful cup-shaped Tulips, of lovely Irises, and many others, all cheap, easily grown, and productive of great variation in form and of exceeding beauty. None of these emit that strong perfume which so often in a greenhouse or room renders the Hyacinth a trying plant. Nothing more wretchedly stiff and formal, as well as bizarre, has, perhaps, ever been seen at the Horticultural Hall than the huge collection of Hyacinths in pots staged at one end, the product of bulbs such as are commonly classed as bedders. Why so many should have been thus grown it is hard to say, but it was inconceivable that such an exhibit assisted to popularise Hyacinths. If it be really desired to encourage bulb culture in pots, let us have classes for six kinds and four kinds, distinct, to be shown plunged in moss, thus bringing in Hyacinths, Tulips, Daffodils, Scillas, Crocuses, Muscaris, Irises, or any others to furnish good variety.—A. D.

The acclimatisation of foreign shrubs.—Your correspondent "E. H. G." in THE GARDEN for the 28th ult. may be interested in learning that for several years past the Matipo or Pittosporum undulatum has grown with me on a heavy, wet, clay soil without any protection during the winter, and that it flowers freely. It is now a standard tree about 6 feet high. I collected the seeds from a large tree, in

which the laughing jackasses were playing, in the Zoological Gardens in Sydney in the year 1887. The Loquats also grow here without any protection: these were from seeds obtained in Japan in 1895.—ARTHUR SHILLITOE, *Sydenham Hill, S. E.*

—"E. H. G." may be interested to hear that Pittosporum tenuifolium, a New Zealand shrub, has been doing well in the open ground without any protection for eight or nine years here in Norfolk. There are several specimens growing in various parts of the garden, all more or less exposed, some 6 feet or 7 feet high already. Two small ones reared in a Cornish garden died the first winter, as transplanted shrubs when sent from the South-west of England to the East are so apt to do; those now doing so well here were reared from seed gathered from the same Cornish garden, raised under glass, potted separately when big enough, and kept under slight protection for the first two or three winters. Specimen sprays are enclosed. Is *P. undulatum* the same or a larger-leaved variety? In Gauntlett's catalogue *Pittosporum undulatum* is called Australian *Daphne*.—M. A. P., *Harleston, Norfolk*. [*Pittosporum tenuifolium* and *P. undulatum* are two distinct plants; the former comes from New Zealand, and the latter is native of Australia. *P. undulatum* has much larger leaves and heads of fragrant white flowers. The specimen sent was that of *P. tenuifolium*.—ED.]

A beautiful white Orchid.—I see that you welcome photographs of interesting



A GOOD PLANT OF THE WHITE-FLOWERED
COELOGYNE CRISTATA ALBA GROWN BY
MR. P. FLETCHER, BACUP.

plants, so I enclose one of *Coelogyne cristata alba*. It occurred to me when I had cut half-a-dozen spikes that it would make a good photograph for THE GARDEN—that accounts for the gaps.—P. FLETCHER, *Holmes Villa Gardens, Bacup*. [We thank our correspondent very much for the interesting photograph.—ED.]

The Megasea-leaved Primrose. It would, I think, be useful to compare some experiences with this bold and pleasing Primrose (*Primula megaseaefolia*), which is so handsome and distinct that no one who knows it will be disposed to question the justice of the award of a first-class certificate given for it by the floral committee of the Royal Horticultural Society. This is a sufficient commendation for those who know it not, but it is when we come to the actual cultivation of the plant in the open air that some comparative experience will be useful. If I recollect aright, it was first distributed by Mr. Sprenger of Vomero, Naples, although I am subject to correction on this point. I know that I had it from him at the time of its introduction, and that I was one of the first to grow it in the open air in Great Britain. At that time I was in hope that it would prove a hardy perennial with me, and it is its subsequent behaviour with me and with others with whom I have been in correspondence and communication that induces me to pen these notes upon the plant, and to ask for the results of the trials of others. Its native habitats lie, I am informed, in shady and moist

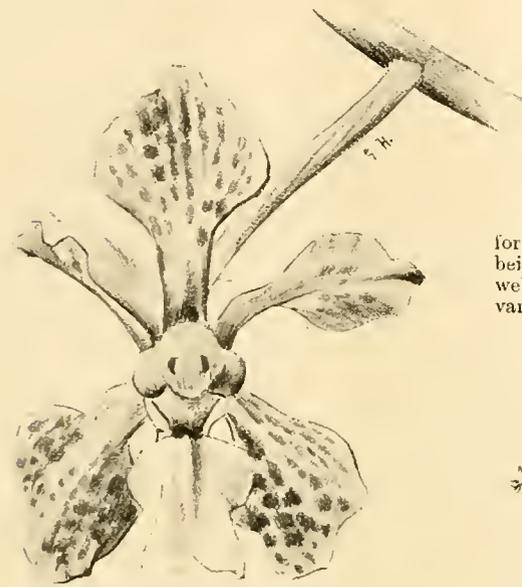
ravines, and it certainly appears to do best in shady or half-shady places, planted with its roots within touch of water, although the crowns are well above it. There it will thrive fairly well, if the climatic conditions are favourable. Here, however, the trouble lies. It is a winter bloomer, and however desirous we are of having hardy flowers at that season, we must admit that there are few which will long retain their beauty in a severe time. This severe weather, after a year or two of successive mildness, proved the weak point with *Primula megaseaefolia*, for a hard winter came on, the flowers that were open were destroyed, and the most advanced buds crippled, while the leaves themselves were injured. In order, then, to maintain the plant in health and beauty, it had to be covered with a hand-light in winter, so that I have reluctantly come to the conclusion that with us it is more properly a Primrose for the mild district or for cultivation in the greenhouse or conservatory.—S. ARNOTT, *Dumfries*.

THE WARREN GARDENS, LISMORE, IRELAND.

ON the 25th ult. I paid an exceedingly pleasant visit to Miss Currey's extensive Daffodil grounds at Lismore. Warm rain had fallen almost the whole of the previous day. It had been the first real growing day of the year, and accordingly Miss Currey, who, I believe, had actually seen the leaves and stems of her favourites grow, was in the very best of spirits and full of hope for a good season, although the damp autumn and winter had been so trying. Coming straight from the Northern Midlands of England the earliness of Southern Ireland was a revelation. I had not a single Daffodil out at home, but here Henry Irving and Golden Spur were over and glorious Maximus in full perfection, Sir Watkin about half out and numerous dear old-fashioned flowers of the early historic age of Daffodils in bright patches, scattered here and there within the large walled garden, which, from its precious contents, she appropriately names "The Holy of Holies." These survivals of the past (Regina Margherita, Her Majesty, Mrs. H. J. Elwes, Oporto Yellow, Lismore, Leda, Bishop Mann, Humes Giant, Lobularis, Nanus and many another now almost forgotten and probably unknown to the younger generation of Daffodil lovers) have a warm corner in their owner's heart. They remind her of her early struggles and her early friends. Did not King Barr himself pick out Lismore from a little clump of *Cernuus* seedlings, and were not some of the others the very varieties with which she first started on her now well-known and prosperous business?

To-day none of these would gain an award from the Daffodil committee. They do not come up to the florist flower standard, and varieties which do not do this, although they may have a great decorative or highly-paying market value, have to go through the world as plain "Mr.," without any mystical letters after their name to give them distinction. We badly want a new "Order of Merit" to separate and to mark such as these. But I am digressing. The whole of the grounds were a picture of order and neatness. Deep trenches divided the beds and work was in full swing. Here were some women roguing, and there some boys weeding, a few were picking flowers, and directly after I left Miss Currey herself was going to gather in preparation for an exhibit in London the following Tuesday. It must not be thought that these old stagers are all that are grown. They are a mere drop in the ocean. On a field where in the distant past had stood a leper "hospital," and immediately opposite Monalaur (Hill of the Leper) were large breadths of the best standard varieties, while the greater part of the "Holy of Holies" had, in patches of varying size, many

of the best of the newer ones. Plenipo was fine; King Alfred, sturdily and strong; Sirius, just showing his brilliant trumpet; Artemis, a real fine incomparabilis, almost ready for market; others (the vast majority of course) still keeping themselves warm in their nice green coats, waiting patiently for the wand of spring to touch them with its liberating warmth and moisture, when they would suddenly appear among their sisters at the ball and take part in the Daffodil dance, the gayest of the gay. Mrs. Robert Sydenham (Magni) all in pure white, with her elegantly frilled trumpet and firm broad perianth, excellently proportioned; Atalanta, another white beauty, with a long shapely trumpet of the palest ivory; Duke of Leinster of the incomparabilis,



in his gay uniform of brilliant orange scarlet and creamy white; The Geraldine, in brilliant scarlet and white; and Warrior, the brightest of them all, with his rich yellow perianth and deep scarlet cup, will all be there to give grace and beauty to the brilliant company.

I think it will be gathered from what I have said that Miss Currey caters for two distinct classes of customers—the fancier, who wants the florist's type, and the gardener, who wants something decorative, something, say, that can be cut for the house or brighten the border. The soil of Lismore and the methods of culture adopted at the Warren Gardens are such as ensure firm, hard, well-ripened bulbs. I wish everyone could see as I did photographs of Lismore bulbs, cut open and placed side by side with others from richer and more highly-manured land. They would then see why Miss Currey's American customers write so often to congratulate her on the way her bulbs travel. It is irritating to buy firm specimens that have been highly fed and find soft bulbs and poor results when they flower. One custom that obtains at Lismore is giving certain varieties a sort of "Jubilee" rest. A proportion of the bulbs are planted by themselves and allowed to remain for two or three years undisturbed; by this means Miss Currey considers the stock is kept strong, and certainly with her "it works," for the foliage of all her bulbs looked the picture of health. I noticed among the Daffodils a few heads of Darwin and May-flowering Tulips, all in splendid condition. Mrs. Moon was being grown for an English dealer in considerable quantity. Gesneriana was also largely cultivated. I do not wonder at Miss Currey saying, "No Tulip sells so well." A look at the packing and drying sheds concluded my visit, and I hurried away just in time to catch my train to Waterford. J. JACOB

ORCHIDS.

BEAUTIFUL WINTER-FLOWERING ORCHIDS.

CALANTHES.

AMONG the many beautiful and useful winter-flowering plants of fairly easy culture where reasonable accommodation is to be had, *Calanthe vestita* and *C. Veitchii* should find a place. Though Orchids, their successful culture should in no way strike terror into the heart of anyone. *C. vestita*, which is a natural species, was introduced into European gardens about the year 1848 from the East Indies, while *C. Veitchii* is a hybrid between *C. rosea* and *C. vestita*, and is one of the earliest of the late John Dominy's many successes at hybridisation among Orchids. It flowered for the first time in 1859. *C. vestita* produces a spike carrying numerous milk-white blooms nearly 2 inches across, with a yellow blotch in the centre of the flower; in the subvar.—*rubro-oculata*—the blotch is reddish purple, and has a very beautiful effect. *C. Veitchii* produces a spike carrying frequently thirty-six to forty deep rosy pink flowers, the spike itself being from 3½ feet to 4 feet in length when well grown. Though the culture of the two varieties is practically identical, as a rule



A NEW ORCHID: VANDA SUAVIS PALLIDA.

(Single flower, natural size.)

C. vestita is the earlier-flowering variety. When the flowers are past the pseudo-bulbs should be stored in a dry intermediate temperature, entirely withholding water. About the month of April signs of fresh growth will be noticed from buds situated at the base of the pseudo-bulbs. When this occurs the pots should be removed to a moister atmosphere, and where the syringe can be used between the pots no water should be given until after the potting, which is generally done as soon as young roots appear.

For potting quite clean pots of various sizes should be prepared. Pots of 4½ inches to 5 inches diameter are large enough for single bulbs of *C. vestita*, but for *C. Veitchii* larger sizes should be used; 6-inch pots for single bulbs and still larger ones if three or four bulbs are to be grown in one pot. The sizes named are large enough for the flowering pots, into which the bulbs

must be placed, as a shift is not to be recommended. The soil I prefer consists of one-third each of good fibrous peat, loam and dried cow manure rubbed through a three-quarter-inch mesh sieve, in addition to which chopped sphagnum and also broken charcoal and sand (enough to give the whole a gritty touch to the hand) should be added. Turn out the pseudo-bulbs, shake away all the old soil, remove any two year old bulbs and nearly all the old roots—which perish as the flower-spikes pass away—leaving just enough to help as a support in keeping the bulbs in position in the new pots. The latter should be filled to one-third with clean crocks, filling the pot up to the rim with the prepared compost. Place the bulb on the top and make firm, finishing off so that the base of the bulb is level with the top of the pot.

The pots should then be returned to a good growing temperature varying from 70° to 75° in the day and from 65° to 68° at night. A little ventilation may be given when the higher temperature is reached in the day-time. Syringe between the pots two or three times a day, but give water sparingly until the new roots are running freely through the soil.

If the house in which the *Calanthes* are grown is naturally a dry one, a very fine misty spray over the foliage once a day at closing time may be given, but not otherwise, and even then not sufficient to cause any water to run down into the centres of the young growths. As the leaves develop a little shade from the sun should be given during the brightest part of the day, but as the pseudo-bulbs finish growth the shading can be dispensed with. When the bulbs begin to form plentiful supplies of water will be needed, and diluted cow or sheep manure water two or three times a week. The flower-spikes appear generally about the end of the month of September, when a neat stake should be placed in the pot to tie the spikes to as they increase in length. If this is not done the spikes grow in all directions, sometimes very awkwardly. As the spikes develop the foliage will begin to turn yellow and die away. Less water will then be necessary, but not withholding it entirely until the spikes are cut. Keep a sharp look out for a flat soft scale, which is the chief enemy to the *Calanthe*. If its appearance is noted, the leaves must be immediately sponged with tepid water and soft soap.

The pseudo-bulbs of *C. Veitchii*, which are often from 9 inches to 12 inches in length, have a depression or neck about halfway, and great care must be exercised in working among plants of this variety, as they soon snap.

Bryanston Gardens, Blandford. J. JACQUES.

VANDA SUAVIS PALLIDA.

This is a beautiful specimen of a comparatively little-known genus. The plant shown was a large one, and was carrying a very fine inflorescence composed of twelve fully opened flowers. These are creamy white with numerous yellowish green spots over the sepals and petals. The leaves are lanceolate, opposite and of a rich deep green colour. It was shown by Theodore Pauwels, Esq., Orchid Villa Nursery, Meiselsbeke Station, Belgium, at the Royal Horticultural Society's meeting on the 17th ult., when it received a first-class certificate.

ODONTOGLOSSUM PULCHELLUM.

This pretty plant is still in flower, and it is one of the easiest to grow in the genus. The flowers occur on erect spikes and are pure white, excepting a little yellow centre. A plant I noted in flower during the week was carrying twenty-five of these pretty spikes, making a very nice show. *O. pulchellum* thrives well in any cool, moist and well-ventilated house, and may be freely watered as long as root and top growth are active. No regular resting season is required, but a diminution of the water supply is advisable in late autumn. H.

THE ROSE GARDEN.

MR. EDWARD MAWLEY'S
ANALYSIS, 1900—1907.*(Continued from page 177.)*

TURNING to the table, Bessie Brown again heads the list, and will continue to do so until we get a very wet season. The surprise to most people will, I think, be to find Dean Hole third in the analysis; and the season was by no means favourable either. I find on referring back to last year's article I predicted that both Dean Hole and Hugh Dickson would soon be found higher; the one jumps to third on the list, and the other to eighth (from being No. 61). Lady Ashtown also rises. Other Roses that make their appearance for the first time are Gustave Grunerwald (a garden Rose first and an exhibition Rose afterwards), Countess of Derby, Mrs. T. Roosevelt, destined to take a higher position, as likewise will Betty and William Shean. The latter will probably be found in the first twelve before we are much older. Which are the best twelve Hybrid Perpetuals or Hybrid Teas? That is a question that I am more often asked I suppose than any other by the budding exhibitor; and it is not easy to answer, as there are so many things to take into consideration. The analysis does not answer it, although it helps one considerably in arriving at a solution. An ideal exhibition box of twelve Hybrid Perpetuals or Hybrid Teas should, I think, contain at least four crimson or dark Roses—and there are only two in the first twelve, or three if you count Ulrich Brunner—three white or flesh, and the remaining five should be some shade of pink or yellow. New varieties must also be taken into consideration if you are to keep up-to-date.

The list supposes that a certain number at any rate of maidens will be cultivated, and I suggest that a small exhibitor would do well to grow a fair number of each variety of the following. The three whites or flesh-coloured varieties are easy to pick out—Bessie Brown, Mildred Grant and Frau Karl Druschki; the four reds are Ulrich Brunner, Hugh Dickson, A. K. Williams and Marquise Litta; the five pinks, Dean Hole, Mrs. John Laing, Caroline Testout, Lady Ashtown and William Shean. All these varieties are fairly generous with exhibition flowers; in other words, their flowers are more likely to be perfect. For instance, plant for plant, Hugh Dickson will give you twice as many exhibition flowers as J. B. Clark, and where your number of plants is strictly limited one must grow those sorts that are likely to give you most opportunities of showing. Given a perfect flower of each, probably J. B. Clark is the finer form; but you so seldom get it, and so we shall find Hugh Dickson and similar kinds being grown more and more every year. I was interested to see that the Nickerson Roses (as they have come to be called) each figure well up in the tables, the Hybrid Tea being third, the Hybrid Perpetual fourth and the Tea fourth, although all of them were necessarily of recent introduction. In the new Nickerson competition this last qualification is done away with, and the result will give us the best red, pink, white and yellow Rose (irrespective of date of introduction) in cultivation, not from the exhibitor's standpoint, but as an all-round Rose. Before leaving the Hybrid Perpetuals and Hybrid Teas one notices that Messrs. Alex. Dickson and Sons of Ireland are the raisers of the first three Roses on the list. I hardly anticipated Dean Hole would so soon take the place of Frau Karl Druschki. I do not think anything short of a magnificent red Rose will cause the white to take a lower place. Is Avoca going to be good enough, or are we to wait for an Alexander Dickson?

HERBERT E. MOLYNEUX.

AMONG THE ROSES.

WHAT a lot there is to do now if you are a lover of Roses and are determined to "do well"! How delightful it is, too, to see the evenings lengthening out and giving us longer working days. Rise early now and get to work among your Roses if you want real success. There are so many things to think of. Most readers will have finished their pruning by the time these notes are in print. This is a very late spring. I did not begin to prune my Hybrid Perpetuals till the 23rd ult. Remember after pruning to look out for buds going to break in places not wanted—i.e., where the growths from them would crowd too much, grow inwards or cross one another. Scratch all these off neatly with the thumb-nail.

Use the hoe constantly after every fall of rain now. Constant hoeing is far better than summer mulching. If you want a really good tool let me recommend you to write to Messrs. H. G. Norton and Co., High Street, Cheltenham, and order a "Gayton rake." It is really a three-pronged rake designed by the writer many years ago and now made by this firm. It beats anything ever made for this work, will go anywhere and get over the ground thoroughly, quicker and better than any hoe. I find a 6-foot handle to it the most useful, though I have all sizes.

Keep a sharp look out for green fly in odd sheltered spots. They may be found if carefully searched for. Every one of these destroyed now means a lot of trouble saved later. Early in March I carefully dusted round all my plants with old soot as a preventive against mildew. Certainly if we want to fight this terrible pest successfully we must keep up the constitution and hardness as much as possible. I have been spraying during the last few weeks all the sorts that were attacked with this awful fungus last year with Mr. George Bunyard's "Medela." Q.

ROSE INSTITU-
TEUR SIRDEY.

This is a deep golden yellow Rose of exquisite beauty of colouring, and destined, I think, to take a foremost position. The glowing colour reminds one of that beautiful Trollius Orange Globe, and, compared with William Allen Richardson, the variety named above is of a much more fiery golden in the centre. Under glass it is especially good, and the growth is as vigorous almost as Mme. Ravary, a variety it surpasses in colour and in fulness, but I am rather afraid outdoors it will not equal it in vigour. If we could but impart this colour into a Rose of the type of Mme. Ravary, we should be going a long way towards reaching our ideal of a golden bedder. P.

THE GREENHOUSE.

THE CINERARIA.

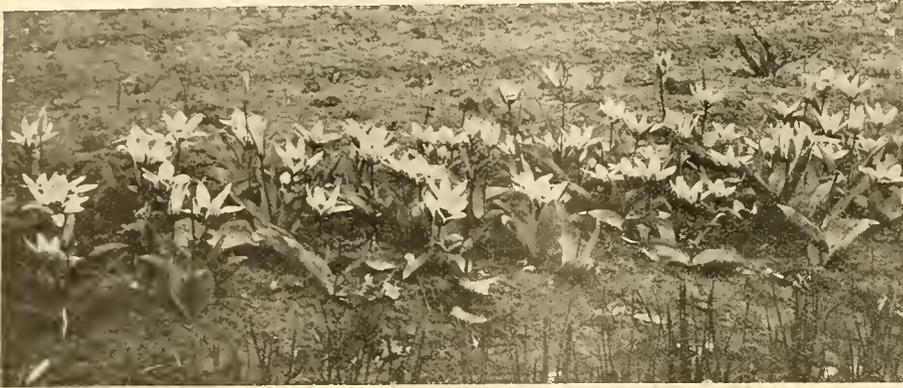
SINCE the introduction of the stellate or "star" Cineraria, Cinerarias have held a high place in public favour. They are delightful plants for use in rooms or the conservatory, and their cultivation is not difficult. The old florist's type of Cineraria was formerly largely increased from the offshoots springing from the base of the plants. This method of propagation is now seldom practised, as it is possible to procure good seed which has been saved from the best of the individual strains in cultivation.

SEED OF THE CINERARIA

may be sown in May and June, and, as a rule, the plants raised in May will give the best results; but plants raised from a sowing made in June provide late flowers during the following April and early May. If an early display is required, plants may be raised in April which will flower during November and December. The seed may be sown in well-drained pans or pots filled with finely-sifted soil. A suitable soil consists of loam one part, leaf-mould two parts and silver sand one part; this should be thoroughly mixed. Fill the seed-pots to within an inch of the top, making the surface soil moderately firm and perfectly even. This can easily be accomplished by the use of an empty 3-inch pot, or, better still, a small, perfectly smooth piece of wood (circle-shaped) to which a short handle is attached. Sow thinly and cover with a slight covering of fine soil. As the term "fine soil" is so often used and may lead to some



A TYPE OF THE WHITE-FLOWERED CINERARIA IN MESSRS. JAMES AND SON'S NURSERY.



A BED OF THE FINE TULIPA KAUFMANNIANA.

confusion, it may be as well to state clearly here that the bulk of the soil used in the pots should be passed through a quarter-inch mesh sieve. A thin layer of soil which has passed through a finer sieve should be prepared, on which the seed is sown, afterwards covering the seed lightly with a sprinkling of the soil passed through the finest sieve. A sieve for preparing this fine soil for seed-sowing can be easily made by procuring a piece of perforated zinc about 9 inches square, and tacking this to a small wooden frame. Failure in raising choice seedlings is often brought about by covering the seed with coarse, unsuitable soil. After sowing, give water through a fine-rosed watering-pot, and place in a frame or house which can be kept fairly close until the seeds have germinated. Cover the seed-pots with a piece of glass and a little moss, taking care to remove this as soon as the seedlings appear.

CINERARIAS GROW VERY FREELY,

and should not be allowed at any stage to suffer through becoming pot-bound. It is not necessary to prick off the seedlings, but as soon as they begin making their second leaf they may be potted singly into 3-inch pots. The soil used should consist of the best loam at hand, leaf-mould and sand, passing this through a half-inch mesh sieve. Care must be taken not to cover the hearts of the plants. Place the plants in a cold frame, which must be kept close and shaded, sprinkling them both morning and evening with soft water during the first week after potting. After this time air may be admitted gradually at first, increasing the amount as the season advances. The plants should be grown as hardy as possible, night air being admitted when the weather permits. Never allow the plants to become crowded, or the result will be weak growth, which renders them liable to attacks from aphid and disease.

REPOTTING IS NECESSARY

as soon as the pots are full of roots. Some growers shift the plants at once into the pots in which they are intended to flower, but, as a rule, it is advisable to give them an intermediate shift into 4½-inch pots. The best position for the frame in which the plants are growing during the summer months is under the north wall of some building. Slugs are very fond of the young tender leaves of the Cineraria, and will, if not prevented, destroy the plants in a very short time. It is always advisable to place a sprinkling of soot on the ashes on which the plants are arranged; this should be renewed from time to time, also the base of the pots examined, as it is here that the slugs frequently hide during the day. When the foliage of the plants suffers from any cause their beauty is greatly impaired, therefore every care should be taken to maintain the same in a clean, healthy condition. Give the plants their final shift when they are ready, using rather more loam of a coarser texture than at the previous potting, and see that the roots

are not dry before they are turned from the pots. Where there is plenty of room a few of the strongest plants may be potted into 9½-inch pots, and these will form very fine specimens, but for general purposes 6-inch and 8½-inch pots are large enough. From the first appearance of the flower-buds well-diluted manure water may be given twice weekly.

ROBUST PLANTS MUST BE ENCOURAGED

from the first, and then the culture of the Cineraria is not difficult, but weakly plants are liable to fall a prey to numerous enemies. Mildew is sometimes troublesome, and as soon as it is noticed dust the foliage and soil with sulphur. Fumigation with Tobacco paper was often attended by serious risks to the plants, but now the destruction of aphid can be safely accomplished by using Richard's XL All Vaporising Compound. When the routine treatment is carefully carried out the Cinerarias amply repay for all the care bestowed upon them, and they range among the best of our greenhouse plants for producing a bright display of flowers.

Munden Gardens, Watford. C. RUSE.

[Our illustration is of one of the white-flowered Cinerarias now in their full beauty in Messrs.

James and Son's nursery at Farnham Common, near Slough. We have frequently described this beautiful race in THE GARDEN, but never have we seen them in greater perfection than this year. The many houses filled with the flowers are a wonderful picture of intense and refined colour, whites as pure as a snowdrift, deep purple, crimson and blue, either self or with a white centre, an attractive and welcome variation from those which are of one shade. Such a dazzling display we have never seen. The star or stellata Cinerarias are represented by beautiful colours, one, a self crimson, having the brightness of a summer flower.—Ed.]

TWO INTERESTING NOVELTIES.

I ENCLOSE two photographs which may interest you. One is a double Cyclamen which turned up in a batch I had last year; the other, and perhaps more interesting photograph, is a drooping form of *Primula obconica*. The flower-stems at first are erect, then, just as the buds begin to open, they bend over until they hang quite down below the pot, and when the stem reaches its full length it bends again close to the flower-head, this time in an upward direction, thus showing the flowers to full advantage. The plant, I imagine, will be a beautiful subject for hanging basket work.

Brahan Gardens, Perth. E. A. STENNING.

OVER-FORCED TUBEROSES

ONE of the principal causes of failure with Tuberoses is giving the plants too much heat at the start. It matters little how good the bulbs are; if more than an intermediate heat is given previous to the flower-spikes showing, failure will occur. My first proof I had of this was with a batch of extra large, firm bulbs which were potted early and placed in a stove. Growth was rapid and vigorous, which led me to expect great things; but not more than one in a dozen threw up a flower-spike. My experience is that a bottom-heat of, say, 70°, with a top-heat of 55°, is a safe one till the flowers appear. After this an increase may be given, and the plants assisted at each alternate watering with liquid manure. It is best to subject the bloom-spikes to a cooler house for a few days before cutting them. J.



A PENDULOUS-FLOWERED PRIMULA OBCONICA GROWN BY MR. STENNING.

THE FLOWER GARDEN.

THE WATER LILY TULIP.

(TULIPA KAUFMANNIANA.)

ONE of the newer species of Tulips that come from Central Asia is *T. kaufmanniana*. It was found in 1876 or 1877 in Turkestan by Dr. Albert Regel. The illustration gives a good idea of the general effect of a bed of this lovely flower. It resembles nothing so much as a mass of white Water Lilies, and an appropriate English name for it would be "The Water Lily Tulip." It flowers with me from the middle to the end of March, and, if the situation suits it, will come up year after year; in fact, owing to its habit of forming "droppers," it is a little difficult to eradicate when once it has occupied a certain spot. I often see it in gardens grown singly or in twos or threes, but this gives nothing like such an effect as a bold mass. Seen then on a bright sunny day, with every bloom wide open, it is a fine sight. The perianth varies from yellow, through primrose to white, while the three exterior segments have very often a brilliant splash of red on the outside. It grows about a foot high, and the individual flowers are 2 inches to 2½ inches long. Ordinary good garden soil suits it very well. It seeds freely, but I have been told that plants raised from English-ripened seed are not as strong and vigorous as those from abroad.

JOSEPH JACOB.

A BEAUTIFUL HARDY FLOWER.

(GAURA LINDHEIMERL.)

THIS pretty slender branching species makes a very useful plant for massing in large beds, and it may be grown in the herbaceous border with good effect. Although introduced some fifty to sixty years ago from Texas I do not think, for the above purposes it is grown as much as its merits deserve. From a packet of seed sown at the present time in pans, clean, well drained and filled to within half an inch of the rim with a sweet sandy soil and stood in a gentle warmth to hasten germination, the young seedlings will soon appear, and when large enough prick them off into shallow boxes at about 3 inches apart. Shade them from the sun and encourage the plants to make headway, after which the boxes may be placed in a cold frame until they can be stood out in a sheltered position. The plants should be of nice size for planting out by the end of May. The individual blooms are not much in themselves, but the light feathery stems so abundantly produced form a great relief to the more flat-growing subjects.

PHLOX DRUMMONDI.

OF late years these have been greatly improved, and the different colours may be used for various purposes with excellent effect. Beds filled with the soft delicate pinks or the richer scarlets as a

groundwork, relieved with other suitable tall-growing subjects, make a very pleasing show. If sown in March and forwarded in heat, the separate colours being kept correctly named, fine plants for bedding out will be ready by the first of June.

Wrotham Park.

H. MARKHAM.

A BEAUTIFUL ROCK GARDEN PLANT.

(ADONIS AMURENSIS.)

ONE of the earliest rock garden plants to bloom is *Adonis amurensis*, the most recently introduced and probably the least-known member of the family to which it belongs. A native of the Far East, it occurs in Asiatic Russia, on the banks of the lower Amur, in the Islands of Saghalin, Tezo and Northern Nippon, the central island of Japan. A few years ago it was introduced from Japan to our gardens, and where successfully cultivated is much appreciated for its beautiful golden yellow flowers, which appear during the dull month of February. In Japan, *Adonis*



A DOUBLE-FLOWERED CYCLAMEN GROWN BY MR. STENNING.

amurensis is largely cultivated, and the flowers enter into the composition of many of the tasteful floral arrangements for which the Japanese are so justly famed. To the Japanese it is known as "Fuku Juso" or "The New Year's Day Plant," and is usually employed in combination with Plum blossom as a decoration for New Year's Day, a date which in the old calendar corresponds to our February 1.

In a horticultural work published in Japan, some twenty-one varieties of this plant are described, the flowers of which vary in colour from white through various shades of yellow to red; some forms are double, and others have petals cut after the manner of *Dianthus laciniatus*. At present only two forms are in cultivation in this country—the type and the one with double flowers, both of which are yellow, and it would appear desirable to introduce some of the other varieties with flowers of a different colour. *Adonis amurensis* is a perennial plant about a foot in height, with finely-divided Fern-like foliage and large flowers of a golden yellow colour.

H. SPOONER.

TREES AND SHRUBS.

STACHYURUS PRÆCOX.

AS is the case with many of our deciduous spring-flowering shrubs, *Stachyurus præcox* hails from the Land of the Rising Sun. Two other species are also known, one of which occurs in Central China and the other in the Himalayas, but these have not yet been introduced to general cultivation. *Stachyurus* belongs to the family of which *Actinidia*, *Stuartia* and *Camellia* are other members frequently seen in gardens.

In Japan, *Stachyurus præcox* is very common in mountain forests and at sea level in Yezo, appearing as a graceful spreading shrub some 10 feet high, with flexible semi-scandent branches clothed with thin, oval, lance-shaped, pointed leaves 4 inches to 6 inches long and toothed at the margins. In the axils of the leaves of the young wood spikes of flower-buds form in summer and early autumn, and in very early spring, before the new leaves appear, these develop into drooping racemes 2 inches to 3 inches long, crowded with many bell-shaped yellow blossoms. Although small individually, being not more than one-third of an inch across, these flowers appear in such profusion and so early in the year that they render the shrub decidedly attractive and ornamental. A somewhat sheltered spot should be chosen in which to plant it, as, although it can withstand the cold of our winters, the rains and rough winds of spring often destroy the flowers in exposed situations. H. SPOONER.

AN UNCOMMON SHRUB.

(EUPTELEA POLY-ANDRA.)

AT the present time this shrub is almost unknown in England, though it is to be found

in Continental catalogues, and, strange to say, it does not appear in the Kew Hand List of Trees and Shrubs. When better known, however, it is sure to find a place in all good collections of shrubs, especially where those with brilliant autumnal colouring are sought after. From our experience with this *Euptelea*, which extends over several years, it can claim to be quite hardy and is not injured by spring frost, as one would expect it to be from the tender appearance of its young leafage. It is a moderate grower, and would in time apparently make a well-formed shrub neat and refined in growth, with little or no necessity for pruning. I am unable to say whether the flowers are ornamental, as it does not appear to produce these in a young state, but the foliage when mature much resembles some of the smaller-growing entire-leaved Vines, and in the autumn puts on very attractive red and yellow tints. It is a pity more thought is not given to the shrubs which have brightly-coloured foliage in the autumn; there are many of them, and they add greatly to the beauty of the garden.

A. E. THATCHER.

GARDENING - FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

WINDOW GARDEN.—For immediate displays window-boxes should be planted with Wall-flowers and Forget-me-nots. The Golden Wallflower makes the better contrast. Window-boxes in shady or rather sunless positions should be planted with the Creeping Jenny and some of the better hardy Ferns. In a little while the effect will be most interesting, and throughout the summer they will present a nice green appearance. The Tufted Pansies may still be planted in window-boxes in a fairly sunny position. They must have good rich soil and be planted firmly; their display should commence within a few weeks and continue till the autumn.

Chrysanthemums.—Plants of the early-flowering varieties that are well rooted and have been carefully hardened off in a cold frame may be planted in sheltered beds and borders outdoors. These plants should make the garden gay from August onwards. The decorative varieties that are to be grown and flowered in pots should be kept sturdy by admitting air freely to the cold frame. On fine days the frame-lights may be drawn off altogether. Plants in pots measuring 3 inches in diameter, if well rooted—and this can be determined by turning out the more forward plants—should be repotted into others 5 inches in diameter. Make up a compost consisting of three parts fibrous loam, one part leaf-mould, half a part decayed horse manure, a dusting of wood ashes and a good quantity of coarse sand. Well mix the heap of soil, and afterwards repot the plants that are ready, doing this firmly.



1.—OLD WINDOW GERANIUM AFTER WINTERING AND NOW READY FOR CUTTING BACK.

Subsequently return the plants to the cold frame to get established.

The Vegetable Garden.—Plant Potatoes now for main-crop supplies. These should be ready for lifting in the late summer or early autumn. Onions for pickling purposes should be sown without delay. A good open, sunny quarter of the garden answers well for this crop. In this case it is better to sow the seeds broadcast,

raking them in carefully. Good soil is not desirable, and beyond keeping the bed free from weeds nothing further need be done. Sow Short Horn or Intermediate Carrots forthwith for successional supplies. These Carrots should be ready in late July. Sow the seeds about half an inch deep and in rows 9 inches asunder. Soil that has been well worked and not recently manured should be selected for Carrots.

The Fruit Garden.—At this period early Peach trees on walls outdoors should be disbudded. Thin out the side shoots and rub off those that are developing at right angles to the wall. When the blossoms fade and fall it is a good plan to examine the trees, and, should there be the slightest suspicion of insect pests, dust the affected parts with tobacco powder. Autumn-planted fruit trees may have their prospects improved by pinching back the unripe ends of the shoots. By these means it is possible to make a good foundation for the trees. The young shoots of Grape Vines should be disbudded now. Retain the strongest and most promising of those with fruit in embryo where three or more shoots have developed together.

Hardy Flower Garden.—This is a busy period. Annuals of all kinds if not already sown outdoors should be sown at once. If the seeds be distributed thinly where the plants are to flower, the results in July and August will be quite satisfactory. Among the better annuals may be mentioned the Larkspurs, Lupines, Malope grandiflorum, Candytufts, Shirley and other Poppies, Nasturtiums, Sweet Peas, *Nigella hispanica*, *Nemophila insignis*, *Eschscholtzias*, *Saponaria calabrica*, *Clarkias*, Cornflowers and *Linum grandiflorum*. Sweet Peas that were raised in pots may be planted in their flowering quarters if the plants have been properly hardened off. A pot with five to six seedlings will suffice for one clump. The clumps should be about 3 feet apart in rows, and the rows about 4 feet asunder. Take out the soil 18 inches deep and fill in two-thirds with well-rotted manure. Return the garden soil, level and then plant each potful of Sweet Peas in the centre of the clump. Insert small stakes for their support when they are planted. Those who prefer the Sweet Peas in rows should take out a trench as for Celery, filling this in in the same way as advised for the clumps, plant a double row of the Sweet Peas so that the plants are arranged alternately near the sides of the trench and observe a distance of at least 6 inches, or preferably 9 inches, between each plant. By these means beautiful Sweet Peas may be grown and the plants come into flower in late June or early July.

The Greenhouse.—Those who desire an early display of Primulas should sow seeds of the Chinese varieties at this time. The resulting plants should be in flower in the midwinter. For successional displays sow in May and June to flower in January and February next year. Loam and leaf-mould in equal parts, and these passed through a fine sieve, and the free addition of coarse silver sand will make a suitable compost if well mixed. Fill this in in nice clean seed-pans and make fairly firm. Make the soil moist by allowing water to percolate through the hole in the bottom of the seed-pan. Sow the seeds thinly and cover with a fine layer of dry soil. Cover with a square of glass and place in a temperature of from 55° to 65°. D. B. C.

STANDARD TRAINED WINDOW GERANIUMS.

THOUGH the Zonal Geranium is the greatest of all favourites of the window gardener, it is rarely

that one sees it trained in what is known as standard form, viz., the form shown in the illustrations. And yet it is eminently adapted to this mode of training; it forms a somewhat unique window ornament when so trained, and, moreover, makes a capital screen. The plant illustrated made such a screen for several years in a Berkshire cottage window, which it almost filled with leaf and blossom for several months in the year. One point in favour of these standard



2.—STANDARD GERANIUM 2½ FEET HIGH IN WINDOW: RESULT OF PRUNING FIG. 1.

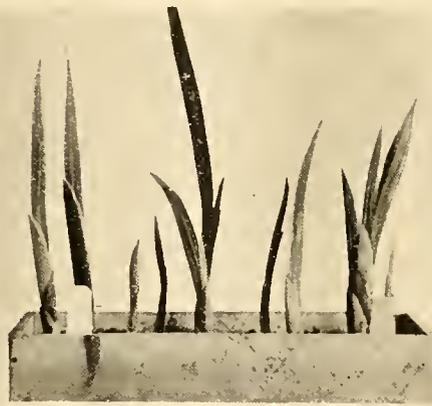
Geraniums for windows should not be overlooked, and that is that they fill the upper part of the window—a part which is generally left somewhat bare.

To grow one of these plants, one of the strongest of the cuttings struck last autumn should be selected now, and grown on well all the summer, or until it is as high as the cultivator desires. Meanwhile, no side shoots should be allowed to develop, all buds on the stem being rubbed out as fast as they show signs of coming to life. When the desired height is reached, the end of the main and only stem should be pinched out with the thumb and finger, which will leave the plant in possession of several good leaves. From each of these leaf axils a side branch will, or should, issue, and as many of these as are required to form the head of the standard should be retained. Four is a good number. These four shoots may be trained in any way that the owner may fancy, but the best form for a window is, undoubtedly, the fan-shaped, shown in the illustration. After the plant has flowered each year it should be allowed to rest for the winter, keeping its soil then decidedly on the dry side. Early in spring it should appear somewhat like that in Fig. 1, and should then be pruned by cutting back all the shoots made in the previous year to within an inch or so of the point of origination. If this is done each year the plant can be kept in a comparatively small pot, and it will not soon overgrow the window space. A cut-back plant breaking with new growth is shown in Fig. 2, at the stage when it should be tied out, as in Fig. 1. (The late) E. J. CASTLE.

PROPAGATING CHOICE GLADIOLI.

It is, of course, well known that most, if not all, of the florist's varieties of *Gladiolus* may be propagated by means of spawn, as the tiny cormlets that are produced on the larger corms are called, and, although this system answers very well for ordinary purposes, it has the drawback of several years having to elapse before the plants resulting from these cormlets reach a flowering size. It is also fairly well known that corms possessing two or more eyes can be cut while dormant into as many pieces as there are eyes, with a fair hope of success. Here, again, the cultivator has a difficulty to contend with, some of the dormant pieces refusing to start into growth when planted, or, if they do, the growth made is so weak and unsatisfactory that nothing is gained by the operation. This cutting of the corms will, of course, only be resorted to where it is desired to make the very most of a variety for some particular purpose, as, however successfully it is performed, the flowers for the ensuing season must be forfeited, because, even should any appear, it will be wise to remove the buds as soon as they are seen.

Having a few choice varieties last year that I particularly wished to propagate, I varied the above plan somewhat, with most satisfactory results. Instead of cutting the corms while they were dormant, they were planted whole in a deep box, as shown in Fig. 1, soil containing a good proportion of leaf-mould and Cocoanut fibre refuse being used. The box was placed in a warm greenhouse (45° to 50°) near the glass until the plants had reached the stage shown in the illustration. Some of them had two strong shoots, as shown in Fig. 2, and these I decided to cut, the operation being performed with a clean, sharp knife from top to base, as shown in Fig. 3, taking care to secure one shoot and a number of roots to each portion. The cut surfaces were then dusted with powdered charcoal in the orthodox manner, and the sections potted separately into 3-inch pots, using soil containing one-third leaf-mould and a good sprinkling of sand for the purpose. The plants were kept rather close in the greenhouse for a fortnight, receiving a light syringing overhead daily, and at the end of that



1.—SPROUTING GLADIOLI BEFORE PLANTING.

time they were placed in a cold frame, the pots being plunged in ashes and the plants gradually inured to the open air. After a fortnight or so in the cold frame they were planted in open quarters, and at the end of the season each cut portion had produced a flowering size corm and a number of cormlets.

The corms that only produced one shoot were allowed to remain in the box until thoroughly hardened, this being accomplished gradually to prevent any check to the plants, and then transferred to the open, disturbing the roots as little as possible. Even where propagation is not desired it is a good plan to start choice varieties into growth under glass, blindness being thus usually obviated. The plants take to the treatment very kindly and grow away and flower without any check whatever. It is, of course, absolutely necessary to avoid coddling them at any period of their growth.

This procedure may be regarded by some as very elaborate, but one only devises it for special purposes, the results, as compared with those obtained from cutting the corms when dormant, fully justifying the extra trouble taken. H. E.

TREATMENT OF ROSES UNDER GLASS.

UNLESS it is the intention of the grower to really force the Roses, care should be taken not to subject the plants, especially those that are in the structure permanently and trained under the roof-glass, to too much artificial heat. Rose trees do not require much artificial heat in spring, and not any in the summer time; they receive sufficient from the sun's rays.

VENTILATION AND CLEANLINESS

are very important points in the successful cultivation of Roses under glass, and must receive very careful attention. The ventilators should be opened fully except when cold east winds are blowing; then certain ventilators should be opened to admit air without causing a direct draught on to the foliage. From Teas and Hybrid Teas three crops of flowers may be secured every year, so that a number of young shoots will grow more or less in profusion throughout the spring and summer months. If these young shoots become badly infested with aphids, they will get a check and the flower-buds will be malformed. Fumigation on two successive evenings when the weather is calm will clear the foliage of the pests, and, following the fumigation, syringe the trees thoroughly and wash off the dead aphides and their excrecence. It is wonderful how luxuriantly the trees will grow after such treatment. If mildew appears on the leaves, syringe them with soapy water. Gently boil 4oz. of soft soap for twenty minutes in one gallon of water, and then add 2oz. of flowers of sulphur and boil all together for ten minutes longer. Half a pint of this mixture to one gallon of rain

water will be a sufficiently strong dose to use. AVON.

AUTUMN-PLANTED ONIONS.

A BED of autumn-sown Onions is an important crop in all gardens, and beginners may take them in hand and succeed with this subject, provided they can give them suitable quarters and rich soil of good depth. These Onions are generally sown in late August, although there appears to be a feverish anxiety with some people to begin earlier; but this is quite unnecessary. We will not go into the question of raising the plants just now, but confine our attention to the spring planting of the best plants in the seed-bed. As we have already remarked, the quarters must be deeply dug—it is better to trench the ground—and plenty of good lasting manure worked in. A dressing of soot dug in when the ground is prepared is very beneficial. Before planting the ground, which should be left rough on the surface for a time to become sweet and friable, must be broken up with a fork and then raked over and levelled. Plant these autumn-sown Onions in beds in rows. The rows should be about a foot apart, and the Onions about 9 inches from each other in the rows. If possible, lift each plant with a trowel, so that the roots are not disturbed more than can be helped. Take special pains to plant firmly and evenly, and within a week or two of the planting the periodical hoeing between them must begin. The hoeing must not be continued for more than about a month, as it will then be necessary to give the Onion bed a good mulching with thoroughly rotten manure that has been passed through a coarse sieve. Spent Mushroom bed manure is excellent material for this purpose; that obtained from an old hot-bed will answer equally well. Keep the ground moist all through the growing period, using manure water during their most vigorous-rooting season. Lift the bulbs as soon as the leaves turn yellow or become seared. These Onions do not keep very well, but will last until the later supplies come in. Ailsa Craig, Giant Rocca, Globe and White Leviathan are good sorts to grow.

Autumn-sown Onions may be purchased in the spring from several sources, many of the leading Scotch firms making special provision for supplying the needs of those who do not care to raise them from seed.



2.—GLADIOLUS WITH TWO SHOOTS: A SUITABLE CORM FOR DIVIDING.



3.—THE SAME CORM DIVIDED READY FOR POTTING UP.

THE TOWN GARDEN.

GROWING SALADS.—It is always a matter of surprise to me that more town dwellers do not produce a portion at least of their own salads. I venture to affirm that no matter where the produce is purchased it will not taste as crisp and sweet as that which has been produced in our gardens, and is cut perhaps half-an-hour, or even less, before it is required for use. Assuming that the garden is kept quite free from cats, we can produce our own Lettuces, Radishes, Mustard and Cress, Tomatoes and Water-cress, and a neighbour of my own even went as far as to attempt the culture of Beet and Celery, but I should hesitate to recommend others to follow this example, for the results were hopelessly bad. Except in the case of Tomatoes, all the kinds mentioned can be readily grown without the use of frames, and if these are not at command it is always easy to procure the necessary Tomato plants at comparatively small expense.

LETTUCES.—To grow these satisfactorily, the seeds should be thinly sown in seed beds specially prepared for the purpose by incorporating with the top 3 inches or 4 inches of soil an equal bulk of flaky leaf mould or failing that flaky manure. Directly the seedlings are large enough, thinning out should commence, and when the young plants are of suitable size they should be transplanted at about 1 foot asunder or less, according to the variety. Plants left in the seed bed after the position assigned to the transplanted ones is fully occupied will, of course, develop and prove useful. Two splendid Cabbage Lettuces for this purpose are Continuity and Tom Thumb, while of Cos varieties Sutton's White Heart and Paris Green will take some beating. It may be mentioned that if a glut comes and the plants cannot be used rapidly enough as salad, they can always be boiled for use as a vegetable even after they have bolted, but to obviate this care should be taken to make small sowings at fairly frequent intervals.

RADISHES.—These are excellent town plants, provided that the soil is in thoroughly good condition, but on poor, badly worked ground they grow so slowly that they are never as crisp and tender as they ought to be. Therefore, let the soil be deeply dug and manured according to judgment prior to being made moderately firm for the reception of the seeds which should be thinly sown. The sowings should be small and made at frequent intervals, and water must be given to keep the plants in constant progress. It will be wise in the majority of gardens to thread the beds with strong black cotton or tanned netting to keep the birds at bay, as I have found that the town sparrow is apt to carry the thinning out beyond a reasonable degree. French Breakfast is an excellent variety.

MUSTARD AND CRESS.—These plants are so popular and so largely grown that it is not necessary to give more than a word or two to them in passing. Both grow splendidly either in the border or in boxes, and it is easy to have a supply of young fresh produce throughout the year if it is required. Cress is slower in germinating than Mustard, and the seeds should be sown about three days earlier for the two kinds to be ready for cutting at the same time. In neither case should the seeds be covered.

WATER-CRESS.—That this can be easily grown without running water and in any shady corner of the town garden may occasion some surprise, but nevertheless it is a fact. The essentials are good soil that will hold moisture either in boxes or in the open garden, some seeds, plenty of water and a determination that the soil shall never be allowed to approach within measurable distance of dryness. It is due simply to the latter point that failures occur. Seeds are sown in soil that is favourable and the seedlings and plants are watered in the ordinary course in precisely the same manner as other things, but this will not do.

H. J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANT HOUSES.

DENDROBIUMS that have been kept cooler during the flowering stages will now be making growth and emitting roots around the base. They should be either top-dressed or placed in larger pots and stood in warmer quarters in order to complete their growth. The shading of all houses that require attention should be seen to without delay, as the sun now is daily increasing in power.

Winter-blooming Plants, such as Salvias, Eupatorium and Coleus thrysoides, placed in warmth a week or two since, will now have grown enough to take cuttings: a few old plants of Coleus are very useful if grown on the second year, as they make fine heads of bloom. Cuttings taken now will probably do better than if taken sooner, as they get away quicker. Pelargoniums should be kept syringed and those showing flower assisted weekly with weak manure. Pinch later varieties and pot for the last time.

PITS AND FRAMES.

Continue to prick out annuals, doing this before they become crowded, or they weaken very considerably. Calceolarias should be kept free from aphid, and pay strict attention to watering, dewing them overhead with a fine spray of soft water and give a weekly watering of soot water.

Chrysanthemums.—Continue to pot on those that are ready and stand on a cool bottom.

KITCHEN GARDEN.

Asparagus Beds should have a dressing of salt, as this will benefit the plants and check weed growth.

Beet.—Sow main-crops the end of the week and also Beans and Peas for succession. Sow, where possible, in isolated rows, as these crop much better and the produce is much finer. Scarlet Runners may be sown in pots or boxes for planting out next month. Carter's Emperor is a marvel, both in quality of produce and quantity. Sutton's A1 and Prize Winner are also most reliable varieties.

FRUIT HOUSES.

Vineries.—Keep the earliest house well supplied with moisture and give a thorough watering with Le Fruitier or Vine manure. Keep all the laterals well pinched back so that the leaves get the full benefit of sun and air. Look over the bunches and see that each berry has enough room to develop. Muscats coming into flower must be kept warmer, and when actually in flower a temperature of 75° by day will not be too much. When Muscats are in good and vigorous health there is no difficulty in getting a good set at this season, though it is just as well to go over the rods and give them a sharp tap about midday.

Tomatoes in fruit must have occasional supplies of liquid manure. Successional batches in flower should have artificial setting and be kept somewhat drier; later in the season this does not matter, as the plants get more air and set quite readily. Cut Cucumbers as soon as they are ready, as they weaken the plants if left on later. Keep smaller or younger plants well watered and close to the glass so that these make sturdy growth.

HARDY FRUITS.

Sweet Cherries have an abundance of bloom showing. It is a good plan before they actually open to give the trees a good spraying with quassia water so as to prevent aphid attacking them, and a search should be made for these pests frequently so that they can be attacked before

they get a footing, otherwise they are difficult and troublesome to dislodge.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CLERODENDRON BALFOURL.—Few stove climbers are more beautiful or showy than this when growing at all naturally. The blossoms are too well known to need describing, and they are very freely produced when the plants are healthy and strongly grown. Various modes of propagation have been tried; taking cuttings of young shoots 6 inches long or less with a heel, and placing them in strong bottom-heat, is a favourite plan with some growers.

Campanula persicifolia grandiflora.—How well suited are the varieties of the Peach-leaved Campanulas for pot culture and gentle forcing! For the latter purpose, however, those plants are best where the potting was done early in the autumn and the plants in some degree established and ready for the purpose. I find it a good plan to pot up some sturdy pieces into 7-inch pots now and plunge them outside for a full season. If hard forcing is to be successfully accomplished, then without disturbance and given plenty of liquid manure when growth begins such plants will yield several beautiful spikes of their snow-white flowers.

FRUIT UNDER GLASS.

Figs.—Trees in active growth will now require more water, and those carrying heavy crops of fruit will need more than usual care. Trees in pots in the earliest house should be liberally treated to manure water every other time of watering. In the case of bush trees, stop and tie out as they require it, while with those trained either on walls or under the roof-glass the young growths should be regulated so that they may not touch each other.

HARDY FRUITS.

Mulching Fruit Quarters.—The value of annual mulching of all quarters devoted to fruit is not fully appreciated. Good stable or farmyard manure is the best possible dressing for fruit plots, and where lime is deficient in the soil a little of this may be added; but in many soils this element is already quite enough in evidence. Useful as it is, used in due ratio with other substances, it is easy enough to get too much lime in many soils. For stone fruits of all kinds it is especially valuable, and if Peach borders and the soil around Plum and Apricot trees had a little more of it and less humus there would be often more fruitful growth and less fruit dropping at stoning-time.

KITCHEN GARDEN.

Onions sown in boxes in January will now be ready for planting out, and though they will put up with some little inconvenience in the matter of room, they must not remain much longer in boxes or they will be starved once the roots are so entangled as to cause a bad start. Any that are potted on singly may remain in their pots for another week or two, as they are in no danger and are best planted after the roots have well grasped the soil.

FLOWER GARDEN.

Outdoor Chrysanthemums.—If an increased number of plants are required, the roots should now be divided and planted in boxes in sandy soil. Every single shoot with a root attached will quickly develop into a stocky little plant if it is to be kept close for a time. The more robust the plants are the greater is the prospect of a good crop of bloom. Plants growing at the foot of south walls will need renovation after the long damp winter we have had.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

DAFFODILS AT VINCENT SQUARE.

THERE is no doubt 1908 is a late season for Daffodils. The display on Tuesday, the 31st ult., was small in quantity and rather poor in quality. But as last summer was so sunless and dark, I fear we shall see "want of character" (as the experts generally put it) all through the season. If a bulb has not been properly ripened it cannot do itself justice when the flowering time comes, any more than a runner in a race for which he starts untrained. Again, there was next to nothing before the committee. Four flowers were shown for an award of merit, but none receive the coveted honour. These were: Mervyn, a small shapely Emperor; Felicity, an early canary yellow Magni; William Baylor Hartland, a fine, very large and early bicolor; and the tiny, but extremely interesting, White minor (a counterpart of minor, only pure white). The most interesting group was that put up by Mr. Dawson of Penzance. It contained, as his exhibits always do, a number of absolutely new flowers. Judging from the space mapped out for him, he must have expected to stage a great many more than he actually did. The late season and unpropitious weather baffled him. Still, there were some nice flowers. Estelle, a handsome artistic-looking bloom, with a large pale yellow perianth and wide red-edged cup, the whole hung from the stalk, like a spider, supported by its single thread; Althea, a large graceful incomparabilis, with Almond-shaped divisions of the perianth, which was pure white, and a large spreading cup with a broad edge of a taking shade of dull red; Chough, a flower that I saw Mr. Felton looking at very hard, it has a big red cup of curious irregular outline, but the perianth is a little "rough"; Orchard Yellow, one of those flowers betwixt and between the Magnis and Medios, striking on account of its deep yellow colour; Fusee, a large, red flat-cupped bloom, with a yellow perianth; Doreen, very neat, with its Engleheartii type of red-edged cup and a pale primrose reflexed perianth; Nora, a giant Leedsii, with a nice frilled centre; Northern Light, one of my favourite incomparabilis type; and Leonard, a magnificent white Magni, were among those on this stand that took my fancy. The last-mentioned (Leonard) is most distinct, and this is something in these days when we are getting so many nearly alike. It has a very flat "double triangle"-shaped perianth, and a fine, bold trumpet, ivory white, with very little fluting or frilling. Some connoisseurs might think it a little large, and on that account condemn the flower; but to me it seem just right. Miss Currey from Lismore sent over a very pretty exhibit. The individual flowers were nothing very particular, but the whole had a glorious golden effect, which was heightened by the introduction of a few fiery cups, such as Sirius, Flambeau, C. J. Backhouse, Coral, Torch and Topaz. Messrs. Barr and Sons' flowers did not come up to their previous exhibit of the 17th ult., but a big firm like them must have awkward seasons "between times," when good flowers are scarce. Peter Barr was, however, conspicuous, and, though small, in good form.

The collection staged by Messrs. Cartwright and Goodwin was noticeable for two reasons, first, because they are a "brand-new" firm, and, if I mistake not, this was their maiden appearance in public; and, secondly, because they had nearly twenty pots of different varieties as well as a beautiful little lot of cut blooms. It was an excellent start and richly deserved the silver Banksian medal which the committee awarded it. It is evident they have got hold of some exceptionally good things. Mervyn (mentioned before) is a real "show table" flower, and it will be interesting to see it when cut from the open ground; it is a cross between Emperor and Tenby, and early.

Évangeline in the centre was a flower worthy of the place of honour. It was a white Homespun, but it had a pale yellow cup. This is Irish, but I think it describes what I mean. Felicity, White Lady, Citron, Alton Locke, Glitter and Glory of Nordwijk were some of the others in this fresh-looking group. I must congratulate the new firm on their start.

JOSEPH JACOB.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Tulip bulbs (C. C.).—There is no reason why your Tulips should not bloom next year, providing you have planted them in good soil this season, and give them good culture until the leaves naturally turn yellow. When only one leaf is formed it generally indicates that the bulbs are too weak to flower. We advise you to give the beds a mulching with well-decayed manure, keep all weeds down between the plants and allow the leaves to obtain all the light possible. There is no such thing as male plants in Tulips; the male and female organs are produced in the same flower. Certainly growers can distinguish bulbs that are too weak to flower from those that are strong enough to do so.

Saxifragas pyramidalis and S. longifolia (E. C. C.).—The small Saxifragas which surround the parent ones can either be left where they are, seeing, however, that they have some soil put about them in which to root, or taken off and planted separately, either in the rock garden or in pots, now or as soon as the parent plant flowers. If the latter is not going to bloom this season they can be removed at once. If you allow them to remain in a clump together they do not form such handsome rosettes or give such good plumes of flowers, and, as both are perfectly hardy, they can be put on the rock garden quite well. Your large ones not looking healthy is probably due to their being about to flower. The rosettes which bloom are exhausted by the flowering and die afterwards. We may add that you cannot have the true *S. longifolia*, well named the Queen of Saxifragas, which does not produce offsets, and can only be raised from seeds.

Moving Crocus corms (E. M. L. B.). As you have to remove your Crocuses this spring it will be much the best to at once replant them, disturbing them as little as possible. The thing to aim at is to get them to ripen off as naturally as possible. If you put them away in silver sand until the autumn they would probably be too weak to flower next year. We are assuming, of course, that you must for some reason lift them before the leaves naturally turn yellow. Regarding your Daffodil bulbs we are not quite sure what you mean by them being blind. If you mean that they are not going to flower this year this may be because the bulbs are too weak, and we do not advise you to throw them away. Give them good treatment, affording the foliage plenty of sunshine and fresh air, and, above all, do not disturb them until the leaves naturally die down.

They may then be lifted, and providing they are not diseased should be strong enough to flower next spring.

Treatment of Omphalodes (E. C. B.).—Sow the seeds in a warm position either in the open or in pots to be transferred bodily to the border when large enough. If the soil of your district is light and warm there will not be much difficulty in growing the plant.

Planting Iris stylosa (Ard Coille).—This charming Iris should be planted now if it has done flowering with you, but it may also be planted in August. It should have the sunniest and most sheltered position you can give it, and be among stones if in the open.

Fungus on Sweet Pea plot (G. E. J.).—You give us no indication whatever as to what the fungus is like, but assuming that it originates from the manure, we do not think it is likely to harm the Sweet Peas. We advise you, however, as a precautionary measure, to pull or hoe it up as soon as possible.

Seeds of alpinas (Enquirer).—If you write to Messrs. Thompson and Morgan, Ipswich, for their seed list, you will find many of the free-growing alpine plants enumerated and seeds offered for sale. It is not clear from your letter for what purpose the plants are desired, but doubtless by request the above-named firm would mark their list to suit your requirements. Many good alpinas are easily raised from seeds, others require every care. If you care to send fuller particulars, we might be able to give you more definite assistance.

Planting Hepaticas (Ard Coille).—These are roots, not bulbs, and they are best planted as soon after flowering as possible. They may be planted later, but do best when planted early. Hepaticas form a section of the genus Anemone, and are sometimes called simply Hepaticas. Correctly, however, they should be called Anemones, and Anemone Hepatica is the true name of the common Hepatica, the large-flowered one from Transylvania, frequently called Hepatica angulosa in gardens, being correctly *A. angulosa*. An American form is *A. acutiloba*.

Information about bulbs (A. E.).—The various bulbs enumerated by you, in fact, bulbs in general, make their growth after the flowering season is past. We advise you not to disturb your border of bulbs in any way, especially as you have such a miscellaneous assortment therein. If the border has been well dug and the soil is fairly good, it would be, perhaps, the better way to leave it altogether untouched and not lift any of them even when dormant. Treated in this manner there would probably be a few losses, but on the other hand some would be more vigorous than newly-planted ones. In your opinion the soil is rather poor, a thorough watering with weak liquid manure may be given at once and repeated in about a month's time. One effect of leaving bulbs untouched for a second season is that they flower a little earlier than newly-planted ones.

Diseased Carnations (C. C.).—The Carnations are attacked by a small nematoid worm named Tylenchus or eelworm of gardeners. They attack the collar of the plant, causing it to swell. There is really no cure. Only a few of the plants sent were attacked. Destroy all affected plants and replant the sound ones elsewhere. The worm in question is microscopic. The millipedes sent merely feed on the decaying tissues of the Carnations, and are not the cause of the decay. Give the ground a good dressing of quicklime after the Carnations have been removed; this will destroy any of the pests left in the soil. If any plants are again attacked, destroy them at once.

Treatment of Iris reticulata (S. P. E., Birmingham).—Iris reticulata is not everywhere a success, but it thrives under so many and varied conditions that we advise you to leave yours in the ground to see if they will become permanently established. No glass will be needed over the bulbs, as after the flowering season is past the plants make their growth and perfect their bulbs for another year. In time the foliage dies down, and the bulbs may then be lifted if required. They should not be left out of the ground for any great length of time, and if they cannot be planted within a week or two a very good plan is to lay them in a box and cover with sand. A light sandy loam that is at the same time effectually drained and a warm, sunny position suits this Iris best. Even when established it is often preferable to lift the bulbs every second year and replant them, as it can then be seen if there is any trace of disease about them. As yours were planted only last September, if the conditions are much as above indicated, we advise leaving them undisturbed for another year. The Magnolia would succeed perfectly well under the conditions named by you.

THE GREENHOUSE.

Bulbils on Aspleniums (Ard Coille). It is not quite correct to say that when the bulbils form on the fronds of *Asplenium bulbiferum* the fronds gradually wither and die. We have seen fronds remain quite green for many months after the bulbils appeared. The latter do, however, make the fronds look rather old and dejected, and if one can spare the time, and the bulbils are not wanted, there is little doubt but what the life of the frond would be prolonged were the bulbils picked off as early as possible.

We have no doubt that the Cinerarias you enquire about have been grown in a poorly lighted structure and some distance from the glass. This, together with inadequate nourishment, would make the plants tall and weak looking, and the flowers small and of poor colour.

Pelargonium leaves diseased (A. C.).—The Pelargonium leaves are attacked by a fungus which often gives trouble, especially in the case of highly-fed plants or those that have been kept rather close and warm. We should not be surprised if, in the first place, the mischief originated from the attacks of aphides or green fly, as apparently there were traces of them on the younger leaves enclosed. Spraying with a solution of permanganate of potash for the fungus and vaporising for the aphides, with a free circulation of air, will bring about a cure.

How to grow Caladiums (Enquirer).—In advising as to the culture of Caladiums we will commence with the present time, when the corms or tubers are either quite dormant or just starting into growth. If they have been wintered in sand, they must be taken therefrom and carefully examined, cutting away any sign of decay that may be visible. A mixture of loam, peat or leaf-mould and silver sand—that is to say, the same sort of soil employed for many stove plants—is very suitable for Caladiums. As these plants require the temperature of a stove, it is very necessary that the soil be taken into the house some hours before using, as a check set up by cold soil is very injurious. Pots from 3 inches to 5 inches in diameter, according to the size of the corms, are very suitable for the first potting, as it is better to shift them when the roots are active than to put them into full-sized pots at once. In potting place a little sand just at the base of the corm, and then press the soil down moderately firm; beware, however, of making it too hard. After being potted, little water will be required at first. The supply must, however, be increased as growth takes place, and when the foliage develops and the roots are active a fairly liberal amount of water may be given. After potting, Caladiums need a structure in which a minimum night temperature of 60° is maintained. This may be 10° or 15° higher during the day with advantage. If the pots can be plunged in a gentle bottom-heat, so much the better. Shading must not be overdone, though from about the middle of April a slight shade during the hottest part of the day will be beneficial. Apart from the water at the roots, a fair amount of atmospheric moisture is very helpful, but particular care must be taken in the use of the syringe, as the young leaves are exceedingly brittle. As the pots get well furnished with roots, a little weak liquid manure should be occasionally given. Caladiums can be brought into a room for three or four days occasionally without injury, provided the leaves are mature and the plants have been gradually hardened a little. During the summer less fire-heat will, of course, be needed, but enough should be given to ensure that the lowest night temperature is not at any time below 60°. Of course, it will generally be higher. In the case of the varieties with massive leaves, it may be necessary to support each leaf with a neat stick. Aphides sometimes attack the young leaves, but they can be destroyed by vaporising with the XL All Vaporiser.

FRUIT GARDEN.

Peach tree foliage injured (C. J. N.).—The injury to the foliage bears a close resemblance to that caused by what is known as Peach blister, but it is unaccompanied by any trace of the usual fungus which is the cause of blister, and therefore we are forced to the conclusion that the injury is the result of sunburn or scald. This is not an uncommon complaint, especially at this early season of the year when the foliage of the Peach is so very tender. The burn is caused by the sun striking on the tree while the foliage is damp and before air is admitted in the morning. The way to prevent a recurrence is to ventilate earlier in the morning; indeed, the safest and best way is to leave a small amount of air on the back ventilators all night, excepting, of course, when the weather is rough and cold.

Colour for back wall of vinery (J. R.).—We do not think any material advantage would be derived from having the wall a dark colour. It is true that the wall would absorb more heat coloured thus than it would if white, but the temperature would not be so likely to remain steady. In our opinion there is little to be said for or against your suggestion.

Shoots of outdoor Peach tree injured (W. D.).—We think with you that the injury to your Peach tree shoots has been caused by frost acting on gross and immature wood of the previous year's growth. We notice a rather deep wound on the thicker branch, as if caused by rubbing against some hard substance. This has been known to cause a similar injury, especially where the hard substance has happened to be galvanised wire. We should lift and replant the tree early in the autumn. This will have the effect of preventing such strong growth in future.

Seedling Apple for inspection (A. P.).—Unless you can improve the flavour of your seedling Apple by grafting it on another stock and by good cultivation, we do not think it good enough to keep. We already have better flavoured varieties.

MISCELLANEOUS.

Information about Laurustinuses and Lilacs (Moor Hen).—To succeed with Laurustinuses and Lilacs you should have your ground well trenched, and in the case of the Lilacs enriched by the addition of manure and good loam. For Laurustinuses you might add a little peat or leaf-mould during the planting operations. You may obtain plants at once, if possible; but, if you are unable to do so before the end of April, leave it until the autumn. When you plant the Laurustinuses, stake each plant carefully, as they are rather bad subjects to establish if allowed to be blown about by wind.

Insect of the beetle family for inspection (Vinea).—The insect that you sent is the common cockroach (*Stylophaga orientalis*), and, as you say, it is most destructive to all kinds of vegetation under glass. They delight in dry and warm situations, where they hide during the day, coming out and commencing to feed as soon as darkness falls. At Kew they are a great plague, very fine specimens abounding in the Palm house. The most effective means of destroying them are as follows: Procure some glass jam jars, quarter fill them with sweet oil, and then place them in a slanting position among the plants that the pests attack. The cockroaches will commit suicide in the oil. Or take some pieces of brown paper 2 inches square and place a daub of phosphorus paste about the size of a large Pea in the centre of each. Lay these among the plants in the evening and collect them next morning. A curious thing about this poison is that some nights the cockroaches will eat nearly all of it and on others they will scarcely touch it.

Loam and sand (Novice).—True, fibrous loam can be obtained only from an old pasture, because it is the roots of the grasses which furnish the fibre. Where the soil is of a good medium or firm loam, the turf and spit of soil may be from 5 inches to 6 inches thick; where of a rather light or sandy loam, or of a stiff clayey nature, the thickness of the turves should not exceed 4 inches. Any such loam turves should be stacked, grass downwards, for from six months to nine months, if possible, to enable the grass to decay and the soil to be sweetened before using. The sand employed should be sharp, clean, white, quite free from clay, and be used with the loam just as the latter may be stiff or sandy. A stiff loam needs an admixture of one-tenth part sand; a light sandy loam will need one-half that quantity. For seeds and cuttings the proportion of sand has to be greatly increased. The proportions given are for strong potted plants. Certainly fibrous-rooted Begonias need rather more sand than would Fuchsias or Geraniums. Soil thrown up by moles is quite unfit for potting purposes, as it lacks fibre, and, being subsoil, lacks also fertility and sweetness. It is fit only to spread about thinly on grass or other soil. We should prefer using old garden soil to mole-hills, especially if, after being rough screened, there is mixed with it well-decayed leaf-soil, sharp white sand, and a small proportion of stable manure, well beaten up to give fibre. Without fibre soil in pots runs together and bakes so hard that air is excluded and roots cannot run. What you describe as red soil is no doubt what is commonly termed yellow virgin loam. That is the best of all loams for potting. A black soil usually is either peaty or boggy or contains too much sand. Still, you have to make the best use of such soils or loams as may be had in your locality. It is not possible for us to determine whether common pot plants will do best in your native loam or in old garden soil. Why not try them in both mixtures and note the result?

SOCIETIES.

THE HORTICULTURAL CLUB.

THE TULIP.

AFTER the usual monthly dinner of this club, held at the Hotel Windsor on Tuesday, the 31st ult., under the chairmanship of Mr. W. A. Bilney, the Rev. Joseph Jacob gave an extremely interesting lecture on "The Tulip and its History." The cult, as he pointed out, was one of considerable antiquity, since even as far back as 1554 their beauty was appreciated and recorded by noted botanists of the time, and both Clusius and Gerard refer to them in 1573 and 1597. By 1634, indeed, the Tulip had attracted so much attention and had produced so many varieties in evidence of its peculiar sportive character that the Tulip mania commenced, new forms fetching fabulous prices far and away exceeding even those realised by the rarest Orchids of to-day, one bulb of an unnamed form actually being sold for £5,000. Speculation, indeed, reached the verge of insanity, and it is recorded that two bulbs only of a rarity existing, the owner of one paid a small fortune for the other, which he at once destroyed to render the remaining one "unique." Madness could hardly go further, and it is therefore not a matter for surprise that a reaction followed, so that in 1637 Tulip fanciers of the speculating kind tried to realise, with the result that a "slump" followed, the States General of Holland stepped in and instituted regulations, and by 1638 common-sense had reasserted itself. Eventually, in 1730 to 1740, popular taste turned to American plants and Tulip cultivation fell into the background, but the varieties by this time ran into thousands.

The first double Tulip (*T. lutea centifolia*) is recorded in 1665, and Parrot Tulips came to the fore in 1690. The origin of these appears to be somewhat mysterious, since they agree when in form with no known species. France appears to be the locality where they are first recorded. The curious fact was stated by the lecturer that in a catalogue issued at the end of the eighteenth century the quoted varieties of *Ranunculus* far exceeded those of the Tulip, two bulbs of each of 500 kinds being offered for £30. In 1820 to 1840 there was waged the war between the florist Tulip connoisseurs of the North and South, the former considering the character of the marking to be the first essential and the latter the purity of the flower. The precise shape of the flower was also a vexed question, Glenny fixing it as a cup embracing one-third of a sphere; Groom, another authority, at one-half; and Slater, a third expert, at nine-sixteenths. In 1849 the National Tulip Society was founded and Tulip cultivation was greatly in favour. In tracing the history of the flower up to the present date the lecturer interpolated with the data above cited a number of very interesting facts relating to the introduction of new varieties and species. There is no doubt that we owe the majority to the East, but it appears to be somewhat an open question how far the native Tulips of Italy, France and elsewhere may not have played their part, while curiously enough the wonderfully distinct section of the May-flowering Tulips appears to be due to survivals in old cottage gardens from an unrecorded source. The subsequent discussion was rendered more interesting by the presence of Mr. Krelage of Haarlem and Messrs. Barr, Ware, Wallace and Jenkins, all experts in this particular line. Mr. Druey mentioned a colony of *T. undulatifolia*, a fine scarlet form which he met with in the vicinity of Smyrna, the bulbs being massed in hard, bare, stony ground, the heat of which at midday was so great that the hand could hardly bear it, a point indicating the need of bright sunshine for perfecting the bulbs. Some interesting remarks were made concerning that unique peculiarity of the Tulip, namely, the "breaking," as it is called, of the flower into coloured forms, which are preceded in the seedling, for, it may be, six or seven years, by altogether different and uniform tints so that the breeder's patience is often sorely taxed before he can know what is the result of his sowing. The address was so full of the results of research that it is to be hoped it may eventually take such form as to permit of its publication in the Royal Horticultural Society's Journal. A hearty vote of thanks was accorded to the lecturer and also to Mr. Krelage and the other experts who had contributed to the subsequent discussion.

MANCHESTER ORCHID SOCIETY.

THIS society made an earnest effort for extended support and patronage by the ample proportions of their exhibition held in St. James's Hall on the 1st and 2nd inst. The display of Orchids was generally considered the finest ever staged in Manchester, both in bulk and quality, and during the brighter part of the weather the various exhibits were seen to great advantage.

Messrs. Armstrong and Brown, Tunbridge Wells, set up the finest display yet seen in the North, and this fully deserved the society's gold medal and an illuminated vote of thanks awarded. The display was arranged in three half-circles, with a large Palm as a centre for each. The central group contained *Odontoglossums* carrying strong spikes and *Dendrobiums* in variety, and the side groups were chiefly composed of *Dendrobium nobile virgiale*, these being supported by other well-known kinds in quantity. Messrs. Cypher, Cheltenham, also secured a gold medal for a meritorious display, in which *Dendrobiums*, *Odontoglossums* and *Oncidiums* were utilised to great advantage. Messrs. Charlesworth, Bradford, were also awarded a gold medal for a collection of high merit, in which *Miltonia bleniana grandiflora*, *Brasso-Cattleya Bradshawe superba*, *Odontoglossum His Majesty* and many others were prominent. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, also received leading honours for a large display of the best kinds, with the addition of a charming display of Carnations, pot Roses and Palms. Messrs. Cutbush, Highgate, were also deservedly awarded a gold medal for an extensive display of hardy forced plants, in which Lilacs, Azaleas, Rhododendrons, Laburnums, &c., were effectively staged.

The following exhibitors were awarded silver-gilt medals: The Liverpool Orchid Company, Gateacre, for an extensive display, including masses of *Dendrobiums*, *Cattleyas*, *Odontoglossums*, and other kinds; Messrs. Sander and Son, St. Albans, for a small but effective display of *Lelia-Cattleya Empress of Russia*, excellent plants, *L.-C. Lucia* and many fine types of *Athuriums*; Mr. J. Robson, Altrincham, exhibited a stand in which *Dendrobiums*, *Odontoglossums*, *Cypripediums* and cut Roses were prominent; Mr. W. Thompson, Stone, staged a valuable and interesting collection; Mr. F. A. Ward, Northenden, was well to the fore, chiefly with varieties of *Odontoglossums*; Messrs. McBean, Cooksbridge, had a large display in which *Odontoglossums* were in strong form.

Silver medals were awarded to Mr. E. Ashworth, for choice *Cypripediums* and *Odontoglossums*; Messrs. Frank Dicks and Co., Manchester, for Cinerarias and cut flowers; Mr. J. McCartney, Bolton (two medals) for the competition in the Thompson's cup and Low's cup; Messrs. Moore and Co., Leeds, for Orchids; Messrs. A. J. Keeling and Sons, Bradford, for a collection of Orchids; Mr. R. Ashworth, Newchurch, for *Odontoglossums*; Mr. J. E. Williamsor, Stretford, for a small but choice lot of Orchids; Mr. J. Bromilow, Rainhill, for a pleasing lot of *Cypripediums*; and Messrs. Diekson, Brown and Tait, Mauchester, for a collection of *Dafodils* and *Primula kewensis*.

Bronze medals were awarded to Messrs. A. Warburton, A. Jensen, Hayward's Heath; and Mr. J. Edwards, Sherwood, for table decoration.

THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

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COLOUR IN BEDDING OUT.

IT is only by the skilful juxtaposition of colours that flower-beds are made beautiful, for a combination done without care or taste will displease, no matter how fine the varieties of plants. No gardener of to-day would dream of mingling scarlet and magenta, but there are smaller mistakes still made; for example, all flowers described as pink are grouped together, though salmon pink is, in reality, pale or diluted scarlet, and rose pink is of the magenta or carmine family.

A FEW SIMPLE RULES

may be borne in mind when planning or planting beds. One is that rose pink be accompanied only with crimson, purple, lemon, cream, white, lavender or mauve, except when the pink is exceedingly pale, in which case it looks well with royal blue and blue-violet. Salmon combines excellently with terra-cotta brown, such as the tint of crimson *Coreopsis*; with indigo blue, such as deep blue *Salpiglossis*; with lemon, orange, grey-blue, like the tint of the *Ageratum* or "blue" *Asters*; and also with maroon-purple, as well as cream and white. Scarlet is gaudy, yet admissible with orange or yellow; indeed, a bed leading up from white through cream, lemon, amber, orange, vermilion, to a deep scarlet centre proves a charming one. Bright blue or blue-violet or blue-lavender look their best with cream or lemon or blush pink or apricot, but can be used with orange, scarlet or rose-pink for very gay effects. Red, purple, mauve and lemon are very pretty together; magenta is made softer in hue by being mingled with cream.

THE ARRANGEMENT OF COLOUR

is nearly as important as its choice, for too large a preponderance of one tint will spoil the beauty of a bed, while another may be injured by too slight an admixture of colour. For example, a white bed never pleases if there are just a few spots or a thin line of a bright hue, such as scarlet or royal blue in it; this gives a mean appearance, an all-white filling would be far preferable. A bed of royal blue *Phacelia campanularia* with a narrow edge of a rose-pink flower would not attract much admiration, for the eye would, unconsciously, look for more of the pink. *Phacelia* plants alternated with rose-pink

Asters will, however, produce a satisfying display. It is interesting to make a close study of all these matters.

Take, for instance, a bed in which is a large centre portion of scarlet, then a wide outer portion of snow white, finally a narrow edge of amber; the colour combination is not faulty, yet it will not actually delight the eye. Take, instead, a bed with scarlet centre mass, encircle this with a broad ring of amber and let the edging belt—not too narrow—be of the white—or, better still, cream—and the display will prove one of the best in the garden. The colours melt softly one into the other, while a ring of orange between the amber and scarlet and one of lemon between cream and amber would yet more improve it.

THE JUXTAPOSITION OF BEDS

is fully as important as the juxtaposition of colours in any given bed or border. When we survey a lawn we see all the bedding out that is upon it probably; certainly when we walk over the turf we get the effect of several of these beds that lie near together, and if their colours clash we shall not be charmed. A bed of magenta *Petunias* close by one of scarlet *Verbenas* will disgust instead of charming the artist's eye. To manage to have beds of many different coloured plants yet keep the garden landscape artistic is not so difficult, however. We can use beds of all-white flowers to separate those of gay ones, or groups of silver, gold or ruddy brown foliage plants. It has been said that a bed of Chilean Beet, *Coleuses*, *Alternanthera* and *Iresine* placed between two typical beds of magenta *Petunias* and scarlet *Geraniums* will make them bearable occupants of the same 12 feet of turf.

FOLIAGE PLANTS IN FLOWER-BEDS

are serviceable for dividing gay tints that would otherwise clash; gold leaves, perhaps, do this best of all, but bright green foliage is as useful as crimson or bronze, and the silver tint of *Pinks* and *Cerastiums* has many uses. Carpet-bedding designs invariably contain numerous foliage subjects, and this is the reason they give so subdued and beautiful an effect when seen from a short distance. It is the fashion to object to geometrical patterns, but it may be doubtful whether the present style of filling all beds with blazes of colour has as much to recommend it.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

April 28.—Royal Horticultural Society. Exhibition of flowers, plants, &c. Special show of Auriculas and Primulas, 1 p.m. to 6 p.m. Lecture at 3 p.m. by Mr. Edward White on the "Profession of Landscape Gardening." Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

April 29.—Royal Horticultural Society. School teachers', &c. examination, 6.30 p.m. to 10 p.m. Royal Horticultural Hall, Vincent Square, Westminster.

Our Coming Flower Show.—

Several readers have written suggesting that vases should be provided for the bunches of cut flowers, Sweet Peas, &c. at our forthcoming show to be held on July 29. We have pleasure in stating that vases, tabling and dishes will all be provided. Of course, where exhibitors desire to show Roses or other flowers usually shown in boxes these must be provided by the exhibitor, as also must fancy vases required for table decorations.

Prizes for Agricultural Students.

The Board of Agriculture and Fisheries have received from Mr. Martin Suttan and Sir George Barham, on behalf of the Dr. Fream Memorial Committee, of which the Earl of Jersey was the president, the sum of £200, the income from which will be applied to provide a prize of books to be competed for each year by students in the science of agriculture. So long as an examination is held by the National Agricultural Examination Board for the National Diploma in Agriculture the prize will be awarded to the person who obtains the highest marks in that examination. Owing to the generosity of an individual donor the Board will be in a position to award a sum of £5 as a Fream Memorial prize at the next examination for the diploma.

American Gooseberry mildew.—

On the 8th inst. Lord Carrington received at the Board of Agriculture a deputation composed of the following delegates from farmers' clubs in Kent: Mr. J. D. Maxted (chairman), Messrs. G. Mount, W. W. Berry and E. S. Salmon (mycologist to the South-Eastern Agricultural College, Wye) of the Canterbury Farmers' Club; Messrs. G. E. Champion, B. Champion and T. Edmunds of the Maidstone Farmers' Club; and Messrs. H. Chapman and S. Lee of the West Kent Farmers' Club. Mr. Maxted, in introducing the deputation, remarked on the seriousness of the possible introduction of the American Gooseberry mildew into Kent, and on the large financial interests at stake in the county. Mr. E. S. Salmon said that since the appearance in England of the American Gooseberry mildew the outlook for owners of Gooseberry plantations in Kent has been one of considerable anxiety. The pest had, to quote the Board of Agriculture's own words, "rendered the cultivation of Gooseberries unprofitable wherever it has appeared, and in some cases impossible." At the last meeting of the Kent County Council a resolution was passed unanimously that an application should be made to the Board of Agriculture for an order (to be issued now) to empower the council, in the event of any outbreak, to order the grower to destroy immediately the diseased bushes, and not to allow the grower the alternative of pruning as at present permitted by the Board's orders issued to affected counties. The Kent County Council passed a further resolution that in all cases of compulsory destruction of diseased bushes, the grower shall receive some compensation; this compensation to be paid out of the rates only, if it cannot be obtained from the Board of Agriculture. Mr. W. W. Berry laid stress on the importance of the matter from the labour aspect. Taking the acreage of Gooseberries in Kent as 6,000 acres,

he pointed out that the wages bill would be not less than £60,000 annually; and asked whether it was not worth while to spend a little in compensation in order to preserve so important a crop to the county. Lord Carrington received the deputation sympathetically, and expressed the desire to do all he could to keep Kent free from the disease. The payment of compensation from Treasury funds was not at present possible, but the whole matter was under consideration. If the means adopted should prove during the course of the summer to have been ineffectual to stop the disease from spreading in the various affected counties, the Board would be prepared to take more drastic steps.

South-Eastern Agricultural College, Wye.—A meeting of the governors of the South-Eastern Agricultural College was held at Wye on the 13th inst., Lord Ashcombe presiding. The resignation of the vice-chairman, Mr. George Marsham, was accepted with sincere regret, and Mr. F. S. W. Cornwallis was appointed in his stead. The principal, Mr. M. J. R. Dunstan, reported an attendance of 122 students for the spring term, and that 123 had already entered for the summer term, commencing on June 1. The establishment of professorships of agriculture and agricultural zoology in connexion with London University is under consideration. Members of the college staff are actively engaged in research work in mycology, soil bacteriology, animal digestion, frost protection of orchards and other problems of agricultural and horticultural importance. A troop of the East Kent Yeomanry has been formed of the college students, who will go into camp with the regiment at Aldershot.

The Western New York Horticultural Society.—The proceedings of the fifty-third annual meeting of the above important American society, held at Rochester, New York, on January 22 and 23 last, are now published in book form, and include some interesting papers and discussions. An experiment, mentioned by F. C. Stewart, botanist at the New York agricultural experimental station, respecting the gumming or gummosis of stone fruit trees is worth a trial. He stated that Van Hecke, an European investigator, had found that trees that received 3lb. of common salt about the roots were free from the disease, while untreated trees were nearly ruined. This experiment, of course, needs confirming before the treatment can be regarded as an absolute cure, but it is so simple that all who have trees affected should give it a trial. A unique feature of this society are those prizes known as the Ellwanger prizes. They are offered yearly to members of the society for the best maintained private place with regard to ornamental and fruit trees, and for the best private collection of large and small fruits. The whole of the essays are of a practical nature and cannot fail to be of great value to the numerous members of the society. The secretary is Mr. John Hall, Granite Buildings, Rochester, New York.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Garden soil, wasps and tetanus.

I observe that a correspondent in your issue of the 11th inst. recommends the application of garden mould as a cure for the sting of a wasp. Though the intention of the writer is doubtless of the best possible, and his advice may seem to him to be fully justified by his experience, may I be permitted to point out the risk and danger of applying garden earth to the punctured skin, for it is well known that soil is the favourite habitat of the tetanus bacillus. Only within the past month the coroner for North-east London (Dr. Wynn Westcott) has held two inquiries on infants dying from tetanus (lockjaw) produced

by the application of Fuller's Earth (which is a real soil); and he informs us he has on an average four such cases every year. The *British Medical Journal* (the 11th inst.) has a paragraph on this important subject, and I think the fact to which I am referring cannot be too widely known.—M. D.

Destroying wasps.—I was much interested in your article on wasps a few weeks since, and write to call attention to a remedy for their sting (as also of bees) not generally known. Cut an Onion in two and rub it gently for 10min. or 15min. on the affected part, and the pain is almost entirely relieved. I have tried it after being stung on the lip and on the neck. If stung in the throat, I believe sucking an Onion would be the best remedy that could be used in this dangerous position.—B. ADDY, M. D.

Naming Sweet Peas.—I fear I cannot congratulate Mr. Aldersey on his "imaginative powers" re the naming of Sweet Peas, judging by the list of sample names he has given on page 174. Out of the sixteen names three are "Pearls," although two have diverse prefixes. On such a basis he might have had the whole sixteen as "Pearls," giving fifteen out of the number some diverse prefix. But with some others why adopt such odd appellations as Jarjoon, Sycra Lee and Romani Rani, unless Mr. Aldersey is a follower of George Borrow and an admirer of the Romany language? While naming of new varieties will go on I trust those names will be at once simple and pleasing. Few, indeed, will care to adopt a gipsy jargon, but Gipsy, Fairy, Columbine, Coquette, Charmer or Cinderella would all be pretty names and specially suited to such graceful flowers as Sweet Peas.—D.

Peach tree buds dropping.—Your correspondent "R. K." (page 172) omits stating whether the trees have been infested with scale or aphid, also whether they have been sprayed with any of the many preparations that are on the market for the destruction of these and other pests. After carefully reading his letter, it appears to me that the roots of the trees are in a healthy condition, and therefore the cause of the disaster must be sought for in the treatment which would externally affect the buds. Spraying the trees during their resting period with a strong solution of caustic alkali may cause the trouble, especially if the operation is delayed until the buds are ready to open. Many experienced fruit-growers are cautious when applying this preparation to their fruit trees, especially to stone fruit, experience having proved that the annual spraying of these trees with caustic alkali may be injurious. Spraying with petroleum emulsion also requires care. The petroleum is a sure incentive to trouble if not thoroughly mixed with the water before being applied to the trees. Both these preparations are excellent when used with discretion for the destruction of the various pests which affect fruit trees, but if used too frequently or too strong the results will prove disastrous. Trees growing under glass are sometimes injured by fumigation. It frequently happens that other plants are cultivated in the same structure as the Peaches; these plants become attacked by aphid, and fumigation is resorted to to clear the pest at a time when the buds on the trees are in a critical condition. This has sometimes been the cause of the trees casting their buds. The two varieties mentioned as being the chief sufferers, viz., *Violette Hâtive* and *Dymond*, are, as a rule, prolific, and possess a hardy constitution when grown in this country. The former has proved to be a suitable variety for forcing, while the latter, owing to its hardiness, is generally recommended as a suitable Peach for outdoor cultivation, although it may also be successfully grown under glass. It is most essential that the wood of Peach trees be thoroughly ripened during the autumn.—C. RUSE, *Munden Gardens, Watford.*

The cat nuisance.—Your correspondent "S. G. G." asks for a means of preserving his plants from the ravages of cats. If he procures some short pieces of Holly with about two or three dry or withered leaves on and sticks them between his plants about 8 inches or 9 inches apart, the cats will soon leave him in peace. This is an old remedy and usually proves effectual when all else fails.—S. MARTIN, *Clarewood Lodge, Bickley, Kent.*

Sowing annuals.—I read with interest the remarks on page 141 on sowing annuals in borders. After preparing soil in the way there mentioned I have found it a good plan, instead of sowing broadcast, to mark off stations with small sticks about 18 inches long, and sow a few seeds round each stick, cover up with the prepared soil, and the sticks may then be used for carrying the strands of black cotton as a protection against birds. It is surprising the number of clumps one can sow in this way from a small packet of seed. The germination can be watched more closely, which is in itself a pleasure to the enthusiast, and should heavy rains cause the soil to cake a small Canterbury hoe may be used between the stations with safety, the seedlings being finally thinned to one at each stick.—G. NICHOLLS, *Bletchworth.*

Sowing Mistletoe seeds.—May I point out a little error your contributor of "Sowing Mistletoe," in the issue for the 21st ult., makes *re* "As the male and female flowers are produced on separate plants, one of each at least is necessary to secure a crop of berries." According to George Nicholson, "the flowers are dioecious or monoecious," and this is forcibly illustrated here at York, where one may at any time see a nice piece on an Apple, worked from berries originally placed in an incision in the bark and at present carrying berries, although quite alone and a great distance from any other plant, the nearest one also carrying berries. This is growing among other trees half a mile away—proof, I think, that male and female flowers are carried on one plant.—T. C. [It is true that Nicholson refers to the whole genus as being dioecious or monoecious, but he makes no special reference to the common Mistletoe (*Viscum album*), which is generally considered to be dioecious, that is, female flowers are produced on one plant and male on another, hence our correspondent's letter is most interesting. Perhaps he will kindly send flowers when the plant is flowering.—Ed.]

Daffodils for early work.—At the close of some remarks upon the early Daffodils at Vincent Square on March 17th, the Rev. Joseph Jacob observes: "I could not help thinking how much we have to learn about which are the best sorts for early work in the end of January and February." If this passage applies rather to recent introductions, there is not only much truth in it, but for the amateur who has a large assortment of varieties at his command, a very wide field for experiment, and not a few surprises to boot. Such surprises will ever be of a two-fold nature, and there will be, doubtless, as many prizes awaiting discovery as there are blanks to record. The latter term may require a little explanation, as the "blanks" do not of necessity represent the absolute failures, but rather those varieties which, not expanding kindly, obviously impress the experimenter with the fact that the artificial heat has in their case been misapplied, and, in reality, is irksome in the extreme. What is required in a forced flower of a Daffodil is a characteristic bloom, not an undersized or miserable representative, around which even well-informed men will either speculate rashly or hesitate as to its identity. With good bulbs and rational treatment, the variety that will force at all is often enough a superior thing to its fellow in the open air, and points of interest of beauty and refinement are revealed of which the ordinary observer previously had little or no knowledge. Quite

apart from the early start, which is essential always, and the season of preparation for rooting under ordinary conditions in the open air, there is a further need for care and discretion when bringing in the pots to the greenhouse and the immediate treatment bestowed. Fresh from the plunging bed not a few err in subjecting the pots of bulbs to over-dry conditions, and these, if long continued, are sure to militate against success. Then, again, inadequate supplies of moisture are responsible for many indifferent results in forcing all bulbous-rooted things, and there are other items of culture of equal import. The period of flowering in the open air is by no means a reliable guide as to their behaviour when being forced. Some, indeed, as the common Lent Lily (*N. pseudo-Narcissus*), *N. biflorus* and the May-flowering *N. poeticus*, refuse to appear above the soil even after weeks of forcing treatment, and will appear at their usual time after the pots are again turned into the open air. *N. poeticus ornatus* is most impatient of heat, and if too early applied the variety is distinctly sulky, and a later introduced batch will often precede the first in flowering. Few would expect that Horsfieldi, *Empress* and *grandis*, flowering in the order given, in the open, would come altogether when being forced, and not infrequently the latter is the first to expand. *Maximus* forces well, too, but its shyness is proverbial. *Albicans*, *cernuus* and *C. pulcher* are easily forced, and in this state are more chaste and beautiful than ever. *Barrii conspicuus* is far more beautiful when grown under glass and comes well and early. Chaste and elegant are terms easily applicable to the typical *Leedsii* and *L. superba*, and if not suited to market work, they are very dainty and graceful when seen in the sitting-room. Other forms of *Leedsii* also respond very readily.—E. JENKINS.

Sweet Pea streak.—What is this disease commonly called streak in Sweet Peas? I am of opinion that various causes of failure are, and will be, put down to this rather remote and insidious disease until a definite diagnosis can be given. The writer of this note noticed a rather peculiar circumstance in connexion with a row of Sweet Peas in a garden in which he was serving several years ago. This particular row was intended for supplying cut flowers late in the season and the seed was not sown until the end of April. An ordinary drill was prepared and the seed sown in the usual manner, perhaps rather thicker than is now customary. The seed quickly germinated and the plants grew apace. Supports were afforded in the shape of Pea-sticks. The plants still grew and remained perfectly healthy until they were about 3 feet in height. At this their growth stopped, although to all appearances they remained healthy for some time. Every effort was made to induce the plants to grow, but without success. After remaining in this condition for a few weeks, a cream-coloured stripe was discernible running the entire length of the stems, otherwise the plants were quite green, and a stranger would not notice anything wrong with them. In this condition they remained throughout the season until cut down by frost. Was this the streak disease? I have not seen this peculiarity since, but I have frequently seen flowers striped during a spell of cold, wet weather, and have heard of this being caused by "stripe disease." Cold, heavy soil requires an abundance of leaf-mould, road-scrappings, &c., incorporated, if Sweet Peas are to be grown really well. I am inclined to think that wet, heavy soils, with the addition of grubs that attack the roots, are often the cause of disease.—C. RUSE.

Birds plucking Primula and Polyantha blooms.—Can you or any reader suggest any way of preventing chaffinches and greenfinches from picking off the flowers of *Primulas* and *Polyanthus*? Black thread will deter sparrows, but other birds seem to care nothing for it.—FESTINA LENTE.

TREES AND SHRUBS.

THE HEATH GARDEN.

OUR native Heaths may be classed among the most beautiful members of the British flora, and they and one or two allied plants are responsible for some of the most gorgeous natural effects imaginable. Everyone can call to mind the showy nature of wide expanses of Heather and Ling spreading over hundreds of acres of hill-sides and moorlands, while equally lovely sights are produced when these two subjects are seen growing in companionship with the autumn-flowering Gorse (*Ulex Galli*). Although it is impossible to reproduce these effects on Nature's extravagant scale in the garden, it is possible to have very charming pictures by the judicious use of the various Heaths. If the cultivator is unable to copy Nature in the production of broad effects, he scores in the case of variety, for not only is he enabled to collect for his use the several hardy sorts which are found growing wild in our isles, but he has the advantage of a number of exotic ones, the majority of which are extremely beautiful and different in habit and flowers from the British species.

Not only are the hardy Heaths an extremely beautiful group of plants, but they are exceedingly useful, for one and all bloom with the greatest freedom, the flowering period extending over a considerable length of time. Some sorts, in fact, may be found in bloom for four or five months of the year, while with a collection of the various hardy sorts flowers may be gathered at all times of the year. With such a beautiful and free-flowering group, it goes without saying that they are extremely popular, and representatives are rarely seen in gardens where peat-loving plants thrive. Some idea may be gleaned of the usefulness of this particular group of shrubs by the fact of several firms of nurserymen making Heaths the principal feature of their trade, while in some large establishments they are propagated extensively for private use. In the Royal Gardens, Kew, during late years considerable use has been made of Heaths, numerous large tracts of ground being covered with the various spring, summer, or autumn flowering sorts.

It is an excellent plan when beginning their culture to form a garden for them and kindred plants, keeping out coarse or strong-growing things which would be likely to rob them of food and moisture. At Kew the custom prevails of planting large masses of Heaths; then, as "dot" plants here and there, rare shrubs are introduced which require light soil and special attention. It is found to be an excellent plan, and several shrubs that are somewhat tender while young have been enticed to grow out of their delicate stage by the protection afforded to the roots and lower parts of the stems by the close-growing Heaths.

If space is no object, when the Heath garden is being laid out it will be found a good plan to form large masses of each section; if, however, space is limited a more enjoyable feature can be produced by planting a large number of sorts rather than a larger mass of one or two varieties. A particularly pleasing group can be formed of the Mediterranean Heath (*Erica mediterranea*) in several varieties. This, when mature, attains a height of 12 feet or 15 feet, but it takes a long while to grow to those dimensions. About eight years of age it may usually be found 3 feet or 4 feet high, and from the age of two years it will have produced its reddish flowers freely. In addition to the type there is a compact dwarf variety called *compacta*, a variety with white flowers and another with glaucous leaves. The tall and short varieties planted in patches are effective, as they give the group an undulated appearance.

The two white-flowered tree Heaths, *Erica arborea* and *E. lusitanica*, are an excellent pair of ornamental shrubs, which collectively, singly or

intermixed with the Mediterranean Heath form very showy groups. The former grows into a very large bush with dark green foliage and innumerable fragrant white flowers, which are at their best during April and May. *E. lusitanica* is distinguishable from the last named by its upright, plumed habit, brighter green leaves and longer, unscented flowers. A good companion for the last-mentioned pair is *E. australis*, a rather straggling plant with large red flowers. It blooms during March and April.

Two excellent dwarf spring-flowering plants are *E. carnea* and *E. mediterranea hybrida*. The former grows into a dense carpet-like mass with red flowers, which begin to open in February and last until May, while the latter grows somewhat taller and has a longer flowering period. It is not uncommon to find flowers open in November, while by February they are in first-rate condition, and continue so until May. It is freer than the ordinary Mediterranean Heath and has a longer flowering period, the flowers of the latter not opening until early March and being all over by the end of May. After the spring-flowering set is over we have a blaze of colour from *E. cinerea*, one of our native species. This is sometimes found but a few inches high and at others upwards of a foot. It always blooms well, the flowers being reddish purple. There are, however, forms with white, red, rose, deep purple and various intermediate shades of coloured flowers. Other Heaths which bloom about the same time are the Cross-leaved Heath (*E. Tetralix*) and *E. ciliaris*. The former may be met with, having red, pink or white flowers, while the blooms of *E. ciliaris* are red in colour. The autumn-flowering section begin to bloom in August, and some of them continue in flower until December if the weather is mild.

One of the most beautiful of this set is the Cornish Heath (*E. vagans*). This grows from 18 inches to 2½ feet high, and bears innumerable pink or light red flowers. Closely-related sorts are multiflora and grandiflora. *E. maweana* is a dwarf autumn flowerer related to *ciliaris*; it is extremely ornamental and bears large quantities of deep red flowers. Possibly the tallest of the autumn-blooming section is *E. stricta*; this is of upright growth and bears reddish flowers. Should space permit, the Ling (*Calluna vulgaris*) could be appropriately admitted into the Heath garden. Of this there are varieties with white, pink and red flowers, while some have golden leaves. In stature some grow but a few inches high, and others 2 feet to 3 feet. The best possible

POSITION FOR A HEATH GARDEN

is a hillside on peaty ground, for, although it is not really essential that peat should be present in the soil for their successful cultivation, the best results are usually obtained from ground naturally of a peaty nature. Providing the soil is free from lime or contains it in minute quantities only, it is quite possible to grow first-rate specimens in loamy soil, and anywhere where a *Rhododendron* will grow Heaths may be expected to do the same. Next to peaty ground, light loam or sandy ground will be found the best rooting medium, and this will be greatly improved if it is trenched 1½ feet in depth and a few inches of peat and decayed leaves forked into the upper layer. It is inadvisable to excavate beds to a depth of 18 inches or 2 feet and fill them up with peat. Far and away better results are obtainable if a few inches of peat is forked into the surface soil of the natural ground. Even when lime is prevalent in the natural soil and this has to be removed, it is better to partly fill the bed with sandy soil free from lime than with peat.

The time to plant is not of great moment, any time between August and March being suitable, providing the weather is not very dry or frosty. The plants should be trod firmly into the ground, and as soon as they are planted a good watering should be given, followed by a top-dressing of decayed leaves. One point in the cultivation which is worthy of attention is the cutting back of the shoots after flowering is over. This cutting

back of the branches removes the seeds, and the plants are not impoverished as they would be were seeds perfected. It also has the result of keeping the plants compact.

PROPAGATION

is usually effected in two ways—by cuttings or by layering. The former is the most satisfactory method and is productive of the best plants. Cuttings of tiny shoots are made during late summer and early autumn, and are inserted in pots of sandy peat and stood in a close propagating case until rooted. As soon as roots are formed they are hardened off and placed in a cold frame for the winter. About May they are transferred to nursery beds. By frequent attention to stopping, nice bushy plants may be obtained in two years from the time the cuttings were inserted.

Layering may be done at any time, and consists in weighting down branches with pieces of stone into loose soil. The branches should be left undisturbed for twelve months, then be planted in nursery borders for a year previous to being placed in their permanent positions.

While enumerating the spring-flowering Heaths mention ought to have been made of *E. Veitchii*, a tall-growing white flowering plant. Its chief peculiarity is its floriferous nature. It was introduced by Messrs. Veitch of Exeter a few years ago.

THE OSOBERY (NUTTALLIA CERASIFORMIS).

The genus *Nuttallia* was so named to perpetuate the memory of Thomas Nuttall, professor of natural history at Philadelphia and author of several works on American botany. There are two species in the genus, one of which, the Osoberry, is cultivated in our gardens. A native of North-west America, *Nuttallia cerasiformis* was discovered by Douglas on the banks of the Columbia River, where it forms a small forest tree about the size of *Amelanchier Botryapium*, which it suggests in appearance. It is also common in moist places in California. Under cultivation it forms a shrub or small tree from 2 feet to 12 feet high, with numerous shoots developed from the base. In early spring, before the leaves appear, it produces large quantities of greenish white flowers in small drooping racemes after the manner of the white variety of *Ribes sanguineum* (the Flowering Currant). It is, however, a member of the Rose family, and closer akin to the Almonds and *Spiræas* than to *Ribes*.

The flowers terminate the young growths, which arise from buds on the previous year's wood. They are dioecious, that is to say, the male and female blooms are produced on different plants. The male plant flowers the most freely, but a casual observer will detect little difference in the appearance of the flowers in the two sexes. A critical examination, however, will reveal fifteen stamens with very short stalks arranged inside the calyx tube in the male flowers, while in those of the opposite sex the stamens are rudimentary and the centre of the flower is occupied by five green carpels. The whole plant has a faint Almond-like perfume when in bloom. The Osoberry seldom sets fruit in this country, although its bluish berries are freely produced in its native habitat. This may probably be due to the fact that the sexes are often isolated under cultivation, or, considering the severity of the weather which is often experienced in early spring, the flowers may be injured by frosts. In its native country the berries, or, more correctly, drupes, are eaten by robins and other fruit-eating birds, though they are most bitter to the taste and have a heavy odour of bitter Almonds. As an ornamental shrub the value of *Nuttallia cerasiformis* lies in its earliness and the freedom with which its flowers are produced. It succeeds in almost any garden soil, and needs little pruning beyond thinning when the branches become too crowded. H. SPOONER.

THE ROSE GARDEN.

AMONG THE ROSES.

A FEW hints now may be useful to our rosarian readers. Remember only plodding perseverance with patience will overcome all difficulties! Examine now every plant carefully at least once a day till July. See that no dead wood is left anywhere. Be careful how you walk about the Rose beds when the ground is sodden; and every time you trample on the soil for spraying or anything use the hoe afterwards as soon as possible. I always have a "Gayton" rake with me and wherever I have to tread I rake before moving on. In dry weather, where dormant buds do not seem to start into growth, nothing helps them better than a spraying of soft water, only just enough to wet the plants. Do this after the sun is off them in the evenings. It is wonderful how it softens the wood, and so helps the buds to push out. Those varieties which produce a number of flowers at the ends of their shoots want disbudding; remove the buds not required as soon as possible, being careful not to injure those that are retained. The plants receive less check to their root-action if this is done by degrees. Carefully and gradually thin the buds, as by suddenly removing all but one small bud the flowers are never so perfect. It is no good disbudding small decorative sorts such as Dwarf Polyanthas, as it does not make the blooms of these any larger. Never allow too many shoots, as spindling growths never give good blooms, and if the plants become too crowded they have no chance of ripening their wood properly; in fact, it is fatal in many ways, so remember it always pays to remove superfluous shoots. When one sees that the buds are going to send out triple shoots, scratch off or neatly cut away two, always leaving the best one. When hoeing or raking look out for cockchafer grubs, as they will often go for the roots of Roses and damage them. Always be on the look-out for pests of all kinds. Finger and thumb from the first beats anything, even for keeping down aphid; in fact, for maggots or any pests. For example, later on when the cuckoo-spit or spittle fly appears, if you spray or syringe only the froth is washed away, which means the little beasts simply require a lot more sap from the plant to replace it, and if an insecticide is strong enough to destroy this pest, it is most likely strong enough to injure the foliage. The only way is to remove the spittle with the finger and thumb, and then find the insect and kill it. One or two of these sap suckers just a very few days on a shoot means, at any rate, no exhibition bloom on that shoot. Look over all foliage most carefully. If you find any eaten or rolled, hunt for the grub, pinch the rolled leaves and so kill it. Do not try to pick them out, or they will drop to the ground and be lost. If you dislike staining your fingers, wear gloves; but search diligently for all caterpillars in the early stages, so as to kill them when just hatched out. Search for them on the shoots, the foliage, and in the bud. Beanstalks laid about are good earwig traps. Whenever I find an ant's nest I get a dredger of Keating's powder, turn over the nest with a spade or trowel, and smother them with a heavy dusting; this is most efficacious. Look out for suckers; when they do not pull clean out they must be cut right out. Leave any part of them and they will soon grow up again. Q.

ROSES WITH EXTRA TALL STEMS.

LOOKING through "London's Encyclopædia" the other day I came across a note of his referring to a tall Briar stock some 15 feet in height and which carried seven different varieties of Roses. This was in a Paris garden. He also found some of similar height at Malmaison and the Grand Trianon. Why cannot we have some of this

description in this country? It would not be impossible, because we sometimes meet with very tall Briars in our woods. There can be no question but that a very tall Briar, budded with, say, Dorothy Perkins or Hiawatha, would be a most glorious feature of any garden when the tree was fully developed and well supported against gales. These wichuraiana Roses might readily be trained to a single stem by using their own growths, and when the desired height was attained allow them to droop over in shower-like profusion of growth, but they would be very slender for some years, whereas a real good Briar would have more staying power. If there are any very tall weeping Roses in the country it would be interesting to hear of them from readers of THE GARDEN. P.

PENZANCE BRIARS ON ARCHES.

The delicious fragrance of the foliage of these Roses makes them welcome at all times, and it may not be generally known that they make fine displays when grown upon arches, although such display is very fleeting. They might well be associated with a late-flowering sort if the arches are fairly wide, because one may always restrict these Roses to two or three long growths if it be desired. If only one sort of Briar can be planted I would advise Anne of Geierstein if real vigour is needed. It is one of the most vivid-coloured of the lot, and has a most lusty habit, with rich deep green foliage and reddish spines. For a more moderate growth Lady Penzance is the best, and its charming coppery yellow blossoms always please. Some of the finest specimens of these Briars grown as single bushes or columns that I have ever seen I met with in the garden of that ardent rosarian the late Sir Alexander Arbuthnot. They were truly noble examples of what these Briars are capable of developing into if allowed to grow unrestricted. To keep them together hoops were placed at intervals around the stalwart growths, and I am sure some of these specimens were fully 12 feet in height.

I am persuaded we have not exhausted the possibilities of *Rosa canina* in the matter of yielding some novelties. What a good thing it would be if some more varieties of the type of Una were raised. I consider this one of the loveliest of our early-blooming garden Roses, and no one could dispute this if they saw the fine bed of it at Kew Gardens.

We want some amateur to come forward possessed with the same zeal as Lord Penzance to take hybridising in hand of some of our grand hardy species. The late Mr. Girdlestone had tendencies this way; but, alas! he was taken from us all too soon. I think if one raiser would specialise upon one species, and another raiser on another, and so on, we should obtain more striking results that would enrich our gardens with many excellent novelties. P.

ROSE PHILADELPHIA RAMBLER.

I do not know whether last season was exceptional, but the above variety developed a curious trait in the production of green centres to its blooms, which decidedly marred its beauty. Probably this was attributable to the spring frosts, for under glass I do not remember seeing a flower so deformed. It is really a splendid sort for pot culture, although not nearly so free in the production of clusters of bloom as Crimson Rambler, but in richness of colour and exquisite formation of its blooms it is far superior. The crossing of Crimson Rambler with Victor Hugo is said to have given us this Rose; if so, may we not hope for some really fine improvements upon the old Crimson Rambler when crossed with other varieties? There is certainly room for a good brilliant-coloured dwarf sort to supersede Mme. Norman Levasseur, although under artificial light this fine Rose is a great success. We are likely to see this spring forced plants of it in standard form, and they cannot fail to be most useful to the decorator. P.

THE FLOWER GARDEN.

THE FLAME NASTURTIUM.

(*TROPEOLUM SPECIOSUM.*)

THERE is no doubt that many people in the South of England experience some difficulty in establishing this handsome Chilean climber. In Scotland and the North of England it may often be seen growing freely without apparent care, wreathing shrubs and small trees with festoons of its elegant, soft green foliage and dainty vermilion flowers. Like many other Chilean plants, it delights in humid surroundings, though not in stagnant moisture at the root.

WHERE TO PLANT.

Our Southern climate is too dry and scorching, unless special positions are chosen. Good places, not exposed to drying winds or the direct rays of the sun, are often to be found on the north side of buildings, walls, or hedges. Unfortunately, the latter usually require clipping just when the *Tropæolum* is at its best, and for this

cover them 4 inches deep with the compost. Good roots will soon form two or three shoots each, and as they are of a dark colour and inconspicuous at first, it is well to place a few Birch twigs against them as a protection from disturbance. Watering in dry weather is well repaid by the increased vigour of the plants.

SUPPORTS AND TRAINING.

The plant will not cling to the bare wall as Ivy does, but it needs no tying, its leaf-stalks always seem waiting for an opportunity to coil around any available support. We have tried wires strained vertically, wire netting and Hazel boughs fastened to the walls. The strongest and best growth is invariably on the upright wires, but the plant looks far more natural on the boughs or netting, only that the growths become confused and often choke each other. A little attention to training given daily will prevent this. The *Tropæolum* also succeeds well if planted with a commoner creeper and allowed to ramble through it.

SUBSEQUENT TREATMENT.

The thicker stems, where slightly protected, will often survive the winter and grow away



A HARDY ANNUAL (*GILIA NIVALIS*): SEED TO BE SOWN NOW.

reason a wall is to be preferred; the soil, too, is moister, and not so likely to be exhausted by hungry roots. It sometimes grows freely on the north side of Hollies and other evergreen shrubs, especially when the boughs extend for some distance close to the ground. A fine Yew hedge at Paddockhurst had, and perhaps still has, its north side beautified by this climber. The clipping of this hedge was deferred until the *Tropæolum* had finished flowering.

PREPARING THE SITE.

In both heavy and light soils it is generally necessary to dig a hole about 2 feet deep, the larger the better, and place at least 12 inches of garden refuse or decayed manure at the bottom and tread it in firmly; this gives the long white tuberous roots a cool, moist run in summer.

HOW AND WHEN TO PLANT.

Plant in March or April just before growth begins, using a compost of turfy loam and sandy leaf-mould, or, better still, the remains of an old Cucumber bed mixed together. Fill in the hole with the above to within 4 inches of the ground level, lay the roots 1 foot apart each way and

vigorously on the return of warmer weather. An annual mulch of decayed manure is much appreciated and will sustain the plants in good health for several seasons. If they show signs of exhaustion after three or four years take up the tubers, placing them in damp moss to prevent drying, and replant as soon as possible, preparing the ground as advised above. J. COMBER.

Nymans Gardens, Handcross, Sussex.

A HARDY ANNUAL FOR THE BEES.

(*GILIA NIVALIS*).

This charming hardy annual is not met with nearly so frequently as its merits demand, possibly because it is not very well known. In common with the other *Gilias* it likes a rather light soil with an open position, and given these it will make a most handsome plant, as may be seen by the illustration. It attains a height of about 18 inches, the elegant growths being thickly bespangled with the white flowers, which have an orange marking in the throat. Besides this they are most delicately scented and are great favourites with the bees. Other



VIOLA GRACILIS.

(Shown by Messrs. Wallace and Co. at a recent meeting of the Royal Horticultural Society. Natural size.)

good members of this genus are dichotoma, a dwarf-growing plant with pearly white flowers, thus rendering it valuable for edging; tricolor, with flowers of various hues; and coronopifolia, a little-known plant of Larkspur-like habit, but bearing scarlet flowers.

SHORTIA UNIFLORA.

This is a Japanese species of much merit, and with much of the floral character of the North Carolina *S. galacifolia*. The whitish pink-tinged blossoms are of large size, and spring rather freely from a miniature, nearly prostrate tuft of small, leathery, entire, cordate, dentate leaves of a ruddy tint, above which the blossoms rise to a height of 3 inches or more. The plant may for cultural purposes be regarded in the same light as the better-known species, while a brief description of it would be a large-flowered *S. galacifolia* of miniature habit of growth. It was shown by Messrs. R. W. Wallace and Co., Colchester, before the Royal Horticultural Society on March 31, when it received an award of merit.

VIOLA GRACILIS.

UNDER this name Messrs. R. W. Wallace and Co., Colchester, exhibited before the Royal Horticultural Society, on March 31, a delightful Grecian species of *Viola*, with lanceolate, slightly crenate leaves $1\frac{1}{2}$ inches in length. The plant is singularly free-flowering, and the flowers, of an intense royal purple or violet, have a conspicuous white eye, which renders them decidedly attractive. Whether this is an improved form of the

species first described or not we cannot say; certainly the "dull purplish blue" colour cited as belonging to the original plant could hardly be said to adequately portray that of the delightful plant under notice. We think very highly of Messrs. Wallace's plant, and recall the fact that at the last Temple Show a fine mass of it was among the attractions of this firm's exhibits. The plant illustrated received an award of merit.

HELONIOPSIS JAPONICA.

THIS is an interesting and beautiful Japanese plant belonging to the Lily family. In habit it is something like the North American bog plant (*Helonias bullata*), but the individual flowers are larger and not so closely set on the stem. The genus *Heloniopsis* is a small one, consisting nominally of four species, spread over Japan, Formosa and Corea. These are all very similar in habit and appearance and might well be all forms of one species. Only two are at present in cultivation, *H. japonica* and *H. breviscarpa*, both from Japan. *H. japonica* has a wide range on the central mountains of Japan at an elevation of from 2,000 feet to 7,000 feet, and was first introduced into this country by Messrs. Veitch through their collector, Mr. Maries. It, however, was a very scarce plant till recently, when fresh importations were received from Yokohama, and it will soon become more plentiful in gardens on account of its early-flowering qualities. As may be seen in the accompanying illustration of a plant growing in a pan in the Alpine House at Kew, the leaves are produced in a dense rosette, quite close to the ground, and are each 4 inches to 5 inches long and about 1 inch wide at the broadest part. When young they

are green, but gradually become tinged with a bronzy shade. The large Scilla-like flowers are produced six to ten together, in a short raceme, at the top of a stem reaching a height of 8 inches to 10 inches. The colour is delicate rose-purple.

CULTIVATION.

When grown in pans for use in a cold house the plants should be potted up in a mixture of peat and fibrous loam, and grown during the summer months in a shady frame with the pots plunged to the rim in ashes or Cocoanut fibre. Plenty of water is required during the growing season, and the plants should never be allowed to get dry. In the rock garden a shady, sheltered place should be chosen for this plant, such a position that would suit the *Cypripedium*. When suitably placed it is quite hardy, and as the flowers are of good substance they last for a long time in full beauty. The other member of this genus (*H. breviscarpa*) is a smaller-growing plant with white flowers and violet stamens, and was exhibited at a meeting of the Royal Horticultural Society by Messrs. Barr and Sons in March, 1905. A coloured plate of it appeared in THE GARDEN, July 22, 1905. W. IRVING.

COLOURED PLATE. PLATE 1346.

HOW TO GROW GLOXINIAS.

AS with many other classes of plants, there has been a considerable amount of improvement effected in the garden varieties of *Gloxinia* within the last few years, and a visit to the summer show of the Royal Horticultural Society held at Holland House will serve to show the great beauty and the wide difference in flower to be found among them. One notable feature is that the strains of the present day are for the greater part characterised by more compact habit and much neater foliage than was at one time the case. The merits of the *Gloxinias* as decorative plants, as cut flowers for the embellishment of the table and other purposes are now so generally recognised that many nurserymen make a special feature of their culture. Among them are Messrs. Peed of the Roupel Park Nurseries, Streatham, from the flowers in whose collection the accompanying coloured plate was prepared.

While *Gloxinias* are, as above stated, largely grown at the present day, there is one item connected with their culture which is very generally overlooked, and that is their value to the amateur with but a single greenhouse in which a miscellaneous collection of plants is grown. There is a widespread idea that a fairly warm house is necessary for the successful cultivation of *Gloxinias*, which is perfectly correct if it is intended to raise seedlings that are required to flower the same year, but given second season's tubers (which can be purchased at a cheap rate when dormant), they can be flowered in a perfectly satisfactory manner if given the same treatment as the tuberous *Begonias*, whose value to the amateur for the embellishment of the greenhouse is now so fully recognised. These tubers will be about the diameter of a halfpenny to a penny, and if potted in the spring into 3-inch or 4-inch pots, shifting them into 5-inch ones when the roots have made a thorough start, they will flower beautifully in the summer. Of course, they will naturally be later than those which have been grown in a warmer structure. With regard to the cool treatment of *Gloxinias* I may mention that for some years we have had a fine late summer display from tubers wintered in boxes



ONE OF THE MOST CHARMING OF SPRING FLOWERS: SHORTIA UNIFLORA. (Natural size.)

of dry sand in an ordinary greenhouse, where the temperature in winter frequently went down to 42° to 45°, then in spring they were potted into small pots, being afterwards, when all danger from frosts was over, shifted into their flowering pots and stood in a cold frame. The glass was lightly shaded when necessary and the frame shut up early in order to husband the sun-heat. When grown in this way the plants are naturally of a hardy nature (that is compared with those from a warm structure) and consequently they are valuable for the decoration of the dwelling-house, wherein a few days will do them no harm, as well as for the greenhouse itself.

PROPAGATION AND CULTURE.

Gloxinias are, generally speaking, increased by seeds of which superior strains can be obtained from the better-class dealers. The seed, which is exceedingly minute, should be sown in February. A suitable compost is a mixture of loam, leaf-mould and sand, well incorporated together and passed through a sieve with a quarter of an inch mesh. Whether pots or pans are employed, they must be quite clean and effectually drained, and then filled to within half an inch of the rim with the prepared compost. This must be pressed down moderately firm and made quite level, but on no account should it be patted down hard and smooth, as the tender rootlets have a difficulty to make their way therein. Before sowing the seed the soil should have a good watering through a fine rose, and then, while the surface is still wet, sprinkle the seed very thinly. Then lay a square of glass over the pot or pan, and place in a structure with a minimum night temperature of 55°, rising 10° to 15° during the day. No sun should be allowed to shine on the glass, as, if this happens just as the seeds are germinating, the heat generated thereby is apt to kill many of them. When the seed is sown, some cultivators prefer to give it a slight covering of the finest soil, while others use no covering but the glass.

When the young seedlings are above ground the glass must, of course, be removed, and as soon as the tiny plants are sufficiently advanced to handle they must be pricked off into pots or pans. The next shift will be putting them singly into small pots, from which they may be put into pots $4\frac{1}{2}$ inches to 5 inches in diameter. For these later pottings much the same kind of soil may be used, viz., equal parts of loam and leaf-mould with a good sprinkling of sand. It must not, however, be sifted at all but simply pulled to pieces with the hand. As the pots get furnished with roots the plants may be grown cooler, but, as above-mentioned, for growing in an ordinary greenhouse one year old tubers are necessary. After the plants have done flowering and they show signs of going to rest, water must be gradually withheld, and when they are absolutely dormant the tubers may be turned out of their pots, shaken clear of the old soil, and stored in shallow boxes of dry sand.

Propagation other than by seed is carried out by means of leaf cuttings. This is particularly useful for the increase of a plant showing any marked peculiarity, or one that is greatly superior to its fellows. All that is necessary is to take off the fully grown leaves with the leaf-stalk attached to them. Then dibble these upright

into pots of sandy soil, burying the leaf-stalk at such a depth that the blade of the leaf is just level with the surface of the soil. If put in early in the summer and potted off singly when they are well rooted, these leaf cuttings will make nice little tubers the first season.

When Gloxinias are grown in quantity many peculiarities may be noted, one of them being that, as a rule, the purple or purple and white flowers are more vigorous in growth than the spotted ones.

THE EDITOR'S TABLE.

MORE DAFFODILS FROM MR. PETER BARR.

Mr. Peter Barr, V.M.H., sends us another interesting collection of Daffodil species and

a sweet-scented flower supposed to be of hybrid origin; minor plenus, a small double-flowered variety, the history of which is unknown; the rare little triandria concolor; corbularia, from Obar marshes; and corbularia tenuifolia, a smaller-flowered variety from the Geroz Mountains.

AN UNUSUAL CYCLAMEN FLOWER.

Mr. E. Heinrich sends from Planegg, near Munich (Bavaria), a dried flower of a double Cyclamen, purple in colour, with the following note: "With reference to the note under the heading of 'An Unusual Cyclamen Flower' in 'The Editor's Table,' the 4th inst., I send you the flower and leaf of a similar Cyclamen monstrosity which I cut off and preserved last year. As an additional curiosity a second flower-bud is pushing from the axil formed by the leaf and flower." We thank our correspondent very much for sending this curiosity.

KITCHEN GARDEN

DWARF BEANS.

VARIETIES of this useful vegetable are very largely grown by amateurs, and when the amount of delicious Beans that can be grown in a comparatively short time and the limited space required for the development of the plants are considered, it will be found a most profitable crop for the owner of a small garden to grow. It is not wise to sow the seed outside until the last week in April, as the young plants are very tender and so liable to be cut down by frost. Even when sown at this time it is often necessary to have some protection at hand to place over the young plants during cold frosty nights, such as are often experienced during May. If the ground has been dug during the winter and is in a fair condition, all that is required to prepare the bed for sowing is to lightly fork over the surface, breaking up the lumps, and then draw out the drills with a hoe, or in the case of a very light sandy soil holes may be made with a dibble and one seed dropped in each hole. The distance of the rows may be from $1\frac{1}{2}$ feet to 2 feet apart, according to the variety, some sorts being more vigorous than others. The distance between the plants in the rows should be from 6 inches to 10 inches. Place the seeds from 3 inches to 4 inches apart and thin out as soon as the rough leaf appears. Cover the seeds with about $1\frac{1}{2}$ inches of soil.

After treatment consists in keeping the ground free from weeds and applying occasional heavy waterings during dry weather. Successional crops may be sown up to the middle of June. If the ground is very dry when late sowings are made, water the drills before sowing, also allow the Beans to soak for about six hours in water; this will greatly assist germination. Late crops are much benefited by a mulching of rotten manure.

Gathering the crop is an important matter. The only way to keep the plants bearing is to gather all the Beans as soon as they are of a suitable size. Two varieties which have been proved excellent in various soils and climates are the well-known Canadian Wonder and the new variety of moderate growth but a prolific cropper called Sutton's Evergreen.

C. RUSE.



THE RARE HELONIOPSIS. (From a photograph taken in the Alpine House at Kew.)

hybrids from his Scottish home. Pallida præcox, from France and Spain, is the largest among them, the trumpet being exceedingly long. Queen of Portugal, a small-flowered canary yellow Magni, is interesting as being a natural hybrid found in Portugal. Spurius is another Magni of medium size, with deep canary yellow perianth and golden trumpet, that is semi-wild in Holland. Golden Spur, too, as found in a semi-wild state in Holland, is very rich in colour, and the flower sent by Mr. Barr had a rather longer trumpet than usual. Henry Irving very nearly resembles the flower of Spurius, except that the perianth is rather paler. Bicolor of Tuscany and Scotia appear to be synonymous, although the first named had a rather longer trumpet. Other interesting sorts were the charming little white-flowered Moschatus, a native of Spanish mountains; odorus rugulosus,

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

COLD FRAME.—At this period I am constantly taking the more tender subjects from the cool greenhouse and transferring them to the cold frame to harden off. In this connexion Geraniums, Fuchsias, Heliotropes, Begonias and other equally tender plants are arranged with a proper consideration for their height and proportions, so that they are easily overlooked and controlled. By these means I hope to plant outdoors in the vacant beds and borders plants that have been carefully hardened off at the end of May or in the early days of June. Bulbous subjects that have ceased flowering I am transferring from the greenhouse to the cold frame—at least, those that are worth keeping. Violets that have finished their display in cold frames I am now lifting and dividing. By these means it is easy to increase one's supply of plants for next season's display of blossoms.

The Flower Garden.—Sweet Peas that were sown in pots quite early in the year are now ready for planting in their flowering quarters, that is, assuming they have been already hardened off in cold frames. If planted in clumps 3 feet to 4 feet apart in rich soil or in holes that have been filled with good well-rotted manure, they should produce blooms in abundance at the end of June or early in July. Should rows be preferred, plant the Sweet Peas 6 inches apart. Hardy annuals of all kinds may be sown now; the resulting plants should bloom in mid-July and later. In some cases the flowering may begin earlier. At this period I am thinking of raising perennials from seed for flowering next year. This is an easy and inexpensive way of obtaining a large number of plants. A bed of soil that has been well worked, in a sunny aspect, will be chosen for the purpose.

The Greenhouse and Conservatory.—Glass structures in which there are plants in flower need to be carefully ventilated, as the temperature rises so suddenly at this season. At this period I make a rule to water the plants in the morning and very strong-growing subjects again in the afternoon if they require it. Well-known greenhouse plants, such as Heliotropes, Geraniums, Fuchsias, tuberous-rooted Begonias, Petunias and kindred subjects should receive their final potting for the present season without delay, if they have not already received this attention. From this timely work the plants

invariably come into flower in really good form in June or July and continue in flower for quite a long period. Carnations that I grow under glass I am just now placing in their flowering pots. The border sorts treated in this fashion yield very handsome flowers. I usually put three plants in a 7-inch or 8-inch pot.

The Vegetable Garden.—The final planting of Potatoes for this year I am about to complete. Many of the earliest Potatoes need attention in the way of hoeing. Keep the hoe busy between the rows of plants, by these means stirring the surface soil and keeping weeds under; draw the soil round about the most forward plants as a protection against late frosts. Beds of early Onions I am thinning already, and by using the Dutch hoe between the rows find that growth is being promoted. The same remarks apply equally well to Parsnips. For July supplies I am making a sowing of French or Kidney Beans, placing the seeds in pots and boxes and utilising the hot-bed and warm greenhouse for the purpose. Asparagus beds should be made up at once if this work has not been done before. What are known as crowns, and these vary from one to three year old, should be planted in specially-prepared quarters and the work done with the greatest care. Never permit the roots to get dry. Plant 15 inches apart in rows and let the rows be 18 inches asunder.

The Window Garden.—Overlook the plants frequently, and, should there be any trace of green fly, sponge with soapy water; this will speedily remove this pest. Dutch bulbs that have finished flowering should be taken outside and planted in spare portions of the hardy border for flowering there next year. As spring-flowering subjects cease blooming the window-boxes should be emptied and got ready with some good soil for summer-flowering plants. It is important that good drainage be provided. Musks and Myrtles should be repotted forthwith, as their growth will soon be very vigorous. Caeti, Aloes and other succulent plants I am now giving more water. D. B. C.

METHODS OF INCREASING MICHAELMAS DAISIES.

THE perennial Asters that are better known under the common name of Starworts or Michaelmas Daisies are becoming increasingly popular, and deservedly so. Not many years since this subject was generally regarded with a certain amount of disfavour, chiefly because of the rampant growth that characterised most of the then known sorts and also because of the dull flowers the plants produced. All this is now changed. During the last ten to fifteen years great advance has been made; types have been improved upon, and numerous beautiful and fascinating varieties are now to be seen in any fairly up-to-date collection of Starworts. As plants for the hardy border in late summer and throughout the autumn they are invaluable.

Lifting of Plants for Division.—There are several methods by which the Michaelmas Daisies may be increased, and the most simple means of doing this is by division. These plants need to be lifted and divided every second or third year at least. Some of the more vigorous sorts make huge roots, and for this reason we would rather divide them annually, or at least every other year. Fig. 1 represents a one year old plant of Aster vimineus Freedom, a variety that is not by any means vigorous, yet the dense, tuft-like growth proves that immense numbers of shoots

will be produced. Assuming the grower desires to increase his stock of plants of this variety, he may, by the aid of a stout knife or other sharp instrument, insert the same well into the crown of the plant, and, with considerable pressure, the old stool will divide up into three or four fairly large pieces, similar to those represented in Fig. 2. The merest novice could deal with a plant in this fashion most successfully, and from such divided pieces grand specimen plants would be developed in the course of the succeeding season. Now, this old plant represents just one species of the Starworts, of which there are



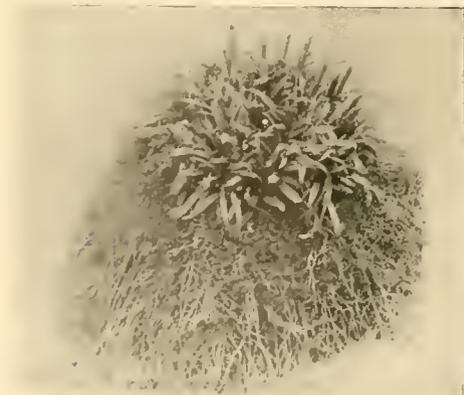
2.—THE SAME PLANT DIVIDED INTO LARGE PIECES.

numerous other popular species, but they may, in almost every instance, be treated similarly.

Other Methods of Dividing the Old Plants.—The simple method of division advocated above would hardly be observed in the case of the choicer sorts. Each little piece is too valuable, and for this reason the most has to be made of the smallest pieces. A plant similar to that represented in Fig. 1 could be divided quite easily into thirty or forty, and possibly fifty pieces, if care be observed in carrying out the division. In order to make this quite clear and that other types may be represented, three smaller divided pieces, each representing a different type of Michaelmas Daisy, are shown in Fig. 3. Each of these small pieces will make handsome plants in the flowering season.

What to do with the Divided Pieces.—There are several ways of dealing with the pieces into which an old plant has been divided. The larger pieces, as shown in Fig. 2, may be planted at once into their flowering quarters. They should be planted quite 3 feet apart, and the vigorous-growing sorts even 4 feet asunder. The smaller pieces may also be planted direct in their flowering quarters, although it is better to first of all plant them in cold frames to make nice sturdy pieces before placing them in their permanent quarters. Plant them in any fairly light, sandy soil and they will then do well. The choicer varieties we prefer to pot up into 3-inch or 3½-inch pots, as they may then be placed in the cool or cold greenhouse, or be arranged in the cold frames. Fig. 4 indicates how the plants look when potted up. Loam and leaf-mould in equal parts and a dash of coarse silver sand is soil that answers well at this time.

Increasing the Plants by Suckers and Cuttings. To produce large and handsome sprays of the Starworts, and to represent them in ideal condition, there is no better method than that of raising plants from sucker-like growths or from cuttings. Any old plant will provide an abundant supply of suckers, as are represented in Fig. 5. These suckers may be inserted in light soil of the kind above described, using boxes, pots, or what is much better, making up a bed of soil in the cold frame and dibbling in the suckers in



1.—OLD PLANT OF MICHAELMAS DAISY LIFTED FOR DIVISION.

rows firmly. Within a short period these suckers make splendid pieces for transferring to their flowering quarters. The spring and early summer should be chosen for taking cuttings. At this period the old plants are producing numerous shoots, any of which, if detached and made into cuttings, will soon develop into plants that will make the garden beautiful with their display in the early autumn. We prefer to insert the cuttings in shallow boxes or pots, using light, sandy soil, and placing these in the cool greenhouse during the rooting process. A cold frame kept close also answers well.

Good varieties are: *Amellus Stella*, *A. Distinction*, *A. Riverslea* and *A. bessarabicus*. Others are: *Acris*, *cordifolius elegans*, *Novi-Belgii* *D. B. Crane*, *N.-B. Cottage Maid*, *N.-B. F. W. Burbidge*, *N.-B. laevigatus*, *N.-B. densus*, *Ericoides* *Hon. Edith Gibbs*, *E. Enchantress*, *E. Sensation* and the type, *diffusus*, *Coombeffishacre*, *laevis* *Chapmani*, *l. Calliope*, *Novae-Angliae*, *Lil Fardell*, *Mrs. S. T. Wright*, *punicus pulcherrimus*, *vimeneus* *Cassiope* and *v. nanus*. It is impossible in this note to mention more than just a few of the best.

TREATMENT OF POT BULBS AFTER FLOWERING.

MANY amateurs are at a loss to know what to do with the bulbs of *Narcissi*, *Hyacinths* and *Tulips* that have been grown in pots after the flowering is over, and many even throw them away under the erroneous impression that they are worthless. It is true that the bulbs are considerably weakened when grown under these, to some extent, artificial conditions, and it is equally true that they will not be suitable for pot work the following year, yet with careful attention to a few details in their subsequent management very good results may be obtained from such bulbs the following spring.

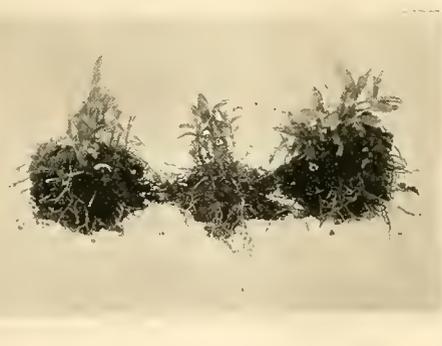
We must first of all bear ever in mind the fact that whatever flowers are to be produced next spring are formed in the bulb during the present summer, hence it is obvious that to get good flowers then the bulbs must have good treatment after flowering this spring. Many seem to think that a bulb, once it has flowered, may well be left to look after itself; but in reality this is just the period when it needs the most care, that is when a future crop of flowers is desired. In the production of this embryonic flower the



4.—TWO OF THE SMALLER PIECES POTTED UP INTO SMALL POTS TO GET ESTABLISHED BEFORE PLANTING OUTDOORS.

leaves play a very important part, hence to cut off leaves from bulbs, pot ones especially, is to weaken the plant to a considerable extent.

The one thing to aim at is to get the bulbs well ripened, which really means that the tissues are fully packed with food for the use of the roots, leaves and flowers the following spring, and to ensure this the bulbs should be treated as follows: As soon as flowering is over remove the old flower-stem and commence to give the bulbs cooler treatment, a two or three weeks' sojourn in a cold frame being the best course to adopt. After this the plants may go into the open



3.—SOME OF THE SMALLER PORTIONS.

ground, either turning the ball out whole into an out-of-the-way border that is quite open or else laying the bulbs in trenches in a nursery bed. Take care of the leaves, and do not disturb the roots any more than is absolutely necessary. Should the weather prove at all dry afterwards, give good soakings with water at frequent intervals, the object being to enable the leaves to die off as slowly and as naturally as possible. When the leaves have quite disappeared the bulbs may either be lifted and stored in the usual way or else left where they are to flower the following season.

Whichever course is adopted, the ground in which they are to flower should be given a good sprinkling with finely-ground bone-meal in October, digging it into the ground before planting in the case of lifted bulbs and carefully pricking it into the soil between those left where planted out this spring. *Narcissi* treated thus may be used for pots the second year; but *Tulips* and *Hyacinths* usually take longer to regain their vigour. Much will, of course, depend upon how early the bulbs were forced into flower; the earlier they are made to flower the weaker they will be. Bulbs grown in fibre are seldom worth retaining, especially those of *Hyacinths* and *Tulips*.

HOW TO GROW SCARLET RUNNERS.

POSSIBLY there is not a vegetable grown that is a more general favourite among amateurs than the climbing Bean known as *Scarlet Runner*, yet, owing probably to its tolerant nature, it often has little good culture or attention given to it. Apart from its value as a vegetable, it is a most useful plant for decorative purposes during the summer months. Planted against an ugly fence, trellis, or in front of any eyesore that may be present in the garden, it will quickly transform it into a thing of beauty, the large green leaves and scarlet or white flowers being freely produced. The plant delights in a deeply-worked soil of a rather cool nature, with a liberal addition of well-rotted manure. Given these, it is not particular as to position. Some of the best crops the writer ever saw were grown under large standard Apple trees, and it will flourish equally well in the open.

Providing the soil was well trenched and manured in the winter, as it should have been, all that will be needed now is to lightly fork it over where the rows are to go. Take out a shallow trench some 4 inches deep and 12 inches wide, and in the bottom drop the seeds 3 inches apart. It is not safe to sow until the second week in May, or even later in Northern counties, as the plants are very tender. Some growers favour a double row, and, where this is desired, the trench should be 18 inches wide, having the two rows 9 inches apart. Where two or more rows are grown, they should be at least 5 feet asunder. After sowing cover the seeds with 2 inches of soil, and then look out for slugs. These pests seem to have a special liking for *Scarlet Runner* seedlings, and in one night they will almost ruin a row. A sprinkling of *Kilgrub* along each

side of the row, according to the directions supplied with it, will usually prove an unsurmountable barrier; dusting freely with sharp coal ashes will also prove effectual in preventing slugs doing much damage.

As soon as the plants are well up supports ought to be provided for them to climb upon. Poles are undoubtedly the best, and where they can be obtained should be used in preference to anything else. Failing these, stout strings fixed in an upright manner will answer very well. They should be fixed tightly about 6 inches apart, a good plan being to fasten a stout wire or cord to stakes driven into the ground firmly 6 feet apart. These stakes should be at least 5 feet out of the ground, so that other wires or strings can be fastened tautly to them at the top, then the upright strings may easily be tied to the bottom wires and stretched and fastened to the top ones. Market growers never allow *Scarlet Runners* to climb; the tops are kept pinched out as they form, and although good crops are thus obtained the pods are frequently of poor quality, owing to contact with the soil. During dry weather a mulch of well-decayed manure along either side of the row, with copious waterings, will be of great benefit.



5.—SUCKER-LIKE GROWTHS READY FOR INSERTION IN POTS, BOXES OR PREPARED BEDS IN COLD FRAMES.

Good varieties are *Carter's Scarlet Emperor*, *Sutton's Prizewinner* and *Webb's Exhibition*.

GOOD POTTING SOILS.

Now that the repotting of greenhouse plants will be in full swing, some consideration of the soil to be used may be of assistance to many who are perplexed over this question. It is the custom of many to advise a different soil mixture for almost every kind of plant, and while this is most likely sound advice, there are very few amateurs who are able to benefit by it owing to the great trouble experienced in getting the different constituents advised. Practically all plants usually grown in greenhouses may be successfully cultivated in one or the other of three mixtures and the majority of them in one. Thus if soil is made up of good loam or decayed turf three parts, leaf-soil or *Cocoanut* fibre one part, and sand one part, nearly all ordinary plants such as *Geraniums*, *Fuchsias*, *Carnations*, *Palms*, *Dracaenas* and *Aspidistras* will thrive in it. The *Cocoanut* fibre is advised as a substitute for leaf-soil where the latter is difficult to obtain.

Ferns and other plants that like a proportion of peat in the soil will flourish in loam two parts, peat two parts, sand one part. *Heaths*, *Rhododendrons* and allied subjects will need loam one part, peat three parts, and silver sand two parts, with thorough drainage of the pots. Given these three mixtures, the ingredients of which are comparatively easy to obtain, the amateur can undertake to grow any greenhouse plant that is likely to fall into his hands. Feeding, of course, can be resorted to in the case of those plants that need more generous diet, a good general proprietary manure being the safest and most generally useful substance to use.

THE TOWN GARDEN.

GROWING TOMATOES.—There is satisfaction in producing any plants in the restricted area of the town garden, but the man who is clever (or fortunate) enough to grow a fine crop of Tomatoes preens his feathers and speaks with full pride to his friends of the wonderful results which he has achieved. And after all there is comparatively little in it, for given moderately good weather and a modicum of common-sense there are few plants that can be more easily grown on the walls and fences of urban gardens. Provide a south or a west aspect, raise or purchase some sturdy, healthy plants, and one has travelled three parts of the way along the road to success, unless wet weather steps in and is prolonged, as this is a condition of affairs that is the reverse of conducive to success in outdoor Tomato culture either in town or country.

Those who determined to raise their own plants in frames will now have them in 2½-inch pots, and they must be kept sturdy by having them well up to the glass and admitting as much fresh air as possible. As soon as the plants have filled these pots with roots they must be moved on into those 5 inches in diameter, in which they can remain until the end of May or early in June, when they will be planted out. At all periods close attention must be paid to the removal of the shoots that come in the axils of the leaves, as a true cordon is the best form for outdoor culture; no efforts must be spared to keep the plants stocky, so that when they do go out to their fruiting quarters they will carry one truss of fruit and be promising another in the form of flowers. Such stuff as this is certain to bring the utmost satisfaction to its growers.

PURCHASING PLANTS.—As it is now too late to raise plants from seeds for outdoor culture those who did not commence earlier must procure their stock of plants by purchase, and I would urge earliness if there is a frame in which they can be kept for about a month. When the purchase is postponed until the day before planting is to be done the plants are often so "proud" through having been grown constantly in a close, warm temperature that they suffer a severe check, and do not thrive nearly as satisfactory as those that have been managed on more rational lines. Buy the plants at once, pot them moderately firmly in a mixture of three parts of loam and one part of leaf-mould, with a little coarse sand, exercise the greatest care not to over water until the roots are working freely in the new soil, admit plenty of fresh air as soon as the plants have got over the shift and excellent material will be at command by the time planting has to be done in about five weeks from now.

THE BEST VARIETIES.—A vast amount of importance is attached by some growers to securing certain varieties, but I have come to the conclusion that it is not so much the particular variety as to the manner in which the plants are managed that goes towards success. There cannot, of course, be the slightest doubt that some sorts are superior setters to others, and if they are procurable I should give the preference in the order named to the following: Carter's Sunrise (this variety did grandly even in such a bad season as last year, but the plants were exceptionally good to start with), Comet, Early Ruby and Supreme. All these are, it will be noted, small fruited, but have big clusters.

It may be well to remind readers that it is common for the first truss of fruit to come with the central bloom large and malformed, and when this is the case it should be at once picked out, as it takes far more energy from the plants than it is worth. When planting out the soil of the stations should be deeply and thoroughly worked, and, if the medium is very poor, some sweet manure should be worked into the second spit sufficiently far down that it will not come in contact with the roots in the early stages. H. J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FRUIT HOUSES.

VINERIES in which early Grapes are swelling fast should be kept well supplied with moisture and liquid manure, at the same time looking over the bunches and noting if any of the berries need removing before the final swelling takes place. Give a little air on the top ventilators early in the morning, and gradually increase according to outside conditions. In bright and warm weather the fires should be shut off quite early, as too much fire-heat may cause an attack of red spider. Should this pest make its appearance, sponge the affected parts at once with soap and warm water. Keep the laterals in check by stopping at every joint. Vines in succession houses should be finally disbudded and tied down gradually.

Peaches swelling rapidly should have plenty of water and liquid manure occasionally. Keep the shoots tied in, and do not allow any more to remain than is absolutely necessary. Close the house with a good heat and with a copious syringing. Guard against pests, and should any appear well mix half a pound of sulphur in hot water, and before cold—say, at a milk temperature—well syringe the trees with it, and repeat for several days in succession.

Strawberries.—The last batches will now require to be housed, cool treatment being the best. Those plants that have finished fruiting, if wanted for planting purposes, should be placed in cool frames. Strawberries now require water in sunny weather twice daily, and up till the fruit commences to colour should be syringed morning and afternoon.

PLANT HOUSES.

Poinsettia pulcherrima.—Propagate this by cuttings, choosing good strong shoots about 5 inches or 6 inches long, and if possible take off with a heel to each. The pots should be ready to put the cuttings in before the latter flag. They make roots in a few weeks, when they should be afforded cool treatment.

Euphorbia jacquiniæflora should be afforded similar treatment. Both these are charming and most useful winter-flowering plants, and no pains should be spared to bring about the best results.

Winter-flowering Begonias.—Rooted cuttings of these should be placed in small pots and another batch put in for succession. Continue to pot *Chysanthemums* as they require it, and more may now be propagated for small decorative work.

Winter-flowering Carnations may be potted and afforded cooler treatment. The first batch should now be ready for 4½-inch pots. *Celosias*, *Cockscombs* and *Fuchsias* must be afforded larger pots as they become ready. Keep the occupants of the stove well syringed and sponged as necessary. Large plants that are growing rapidly should have an occasional watering of soot water or manure, but do not feed plants till they have a pot full of roots and really require assistance.

KITCHEN GARDEN.

Beetroot may be sown now. Carter's Blood Red is a fine main crop. Carter's Perfection, Sutton's Black and Sutton's Perfection are all of the very best quality. A few more rows of the Globe Beet may be sown for early supplies.

Sow Marrows in quantity now for main crop, and plant out in frames or under hand-lights the varieties of Bush Marrow; these fruit very early. More Broccoli, Cauliflower, Savoys and Kales may also be sown in an open spot and protected from birds. Sow Lettuces, Radishes

and other salads frequently in order to keep up a good succession. Hoe Cabbages and give a sprinkling of nitrate of soda.

FLOWER GARDEN.

Keep all beds and borders free from weeds. Stake any plants that require it before they become disfigured. Sow seeds of Wallflowers, *Mlyosotis*, *Delphiniums*, *Canterbury Bells* and *Pansies*. Prepare a border quite in the open, and when the seeds are sown sprinkle a little fine soil over them. Examine early *Roses* on walls, and syringe with quassa extract if the least sign of aphid is seen. Put long stakes to early Sweet Peas and sow again for succession.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

THE sun will now generally afford sufficient heat for plants under glass, and sometimes even shading will be necessary. Abundance of air must be given, and, in proportion to its heat and dryness, an increased supply of water will be necessary, but this must not be given indiscriminately, for plants that are making but little growth will require a much less supply than those that are vigorous.

Training Plants.—This will embrace tying and pinching, for they are aids that we employ to ensure the plants assuming and maintaining some clearly defined form. The earlier the several details in connexion with training are put in hand the better, and the results of careful intelligent work are so marked that the work becomes of great interest. The details, of course, vary with practically every kind of plant that is grown.

Bedding Plants.—These should now be all cleared out of fruit houses, as the latter will be well on the move and the temperature too high and moist for plants that are likely to be planted out of doors in the course of a few weeks; exception may be made in the case of very lately boxed or potted stuff that can have an extra week inside so as to give it a start.

FRUIT HOUSES.

Strawberries.—Plants in pots that have the fruit colouring should be placed in cooler quarters. The flavour of fruit from plants thus treated is usually improved, and they carry better when sent by rail or post. Feed plants that are swelling fruit, placing supports where necessary. Thin out the small weak blooms on plants in blossom. Should mildew become troublesome dust the plants over with flowers of sulphur.

KITCHEN GARDEN.

Tomatoes.—Get all the plants intended for planting outside into 5-inch or 6-inch pots, so that they may be growing on into strong sturdy plants. Place in cold frames, and after repotting keep rather close for a few days, afterwards well hardening them without injury.

Vegetable Marrows.—For raising early plants a few seeds may now be sown singly in small pots; plants thus raised must be carefully hardened.

HARDY FRUIT.

Attend to newly-grafted trees and replace the clay if it has dropped off; see that young or newly-planted trees are breaking where wanted, and if too many shoots grow, rub away those that are not likely to be required.

Peaches and Nectarines.—Most of these will now have passed beyond the flowering stage and will require careful attention with regard to insect pests. If any aphid be seen choose a nice morning and at once set to work with a sprayer or syringe, using some such mixture as a good quassa extract.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

NEW ORCHIDS.

CYPRIPEDIUM BELLATULUM, EXHUMES VARIETY.
This is a very fine form of a comparatively well-known Lady's Slipper Orchid. The plant exhibited was small and only had one flower. This had a rather small dorsal sepal, very broad shell-like petals and a small labellum or pouch. The white ground of the sepal and petals was thickly studded with large circular dots of deep magenta crimson, those on the labellum being much smaller. The foliage is prettily mottled as in the type. Shown by Mr. J. Forster Alcock, Northchurch, Herts. First-class certificate.

CATLEYA SCHRODERÆ THE BARON.

In this plant we have a very fine variety of a good Orchid. The sepals are lance-shaped and pure white, the petals also being white. These are, however, very broad, almost forming a circle, with a sort of crest at the apex. The labellum is rich orange in the throat, then comes a band of deep lilac, and finally a fimbriated edge of white. Shown by Major G. L. Holford, C.V.O., C.I.E., Westonbirt, Tetbury, Gloucester. First-class certificate.

DENDROBIUM BRYNERIANUM, GATTON PARK VARIETY.

A most distinct-looking member of this popular family can be claimed for this variety. The plant shown was carrying nine fully opened flowers, as well as a number of buds. The blooms are of medium size and of a very rich uniform yellow, with the exception of a rich orange marking in the throat. The labellum is the most conspicuous part, this being very large, and fimbriated so as to form a sort of network with the segments. Exhibited by Sir Jeremiah Colman, Bart., Gatton Park, Surrey (gardener, Mr. W. P. Bound). Award of merit.

CYMBIDIUM EBURNEUM GOODSONIANUM.

New Cymbidiums are not so frequently seen as many other Orchids, hence it is pleasing to find an honoured variety. This plant had numerous long narrow leaves and one flower. The latter was of medium size and white with the exception of the prominent labellum and column. These were heavily tinged with magenta-purple. Shown by Mr. H. S. Goodson, Fairlawn, Putney (gardener, Mr. G. E. Day). Award of merit.

All the above were exhibited at the fortnightly meeting of the Royal Horticultural Society on the 14th inst., when the awards were made.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Primroses and Iris stylosa for Inspection (K. C.).—We have carefully examined your plants, and cannot find any traces of disease. In the case of the Primrose there is a hard, gnarled mass from which a few roots are produced, thus proving that the plant, though small, is very old. We think that the fact of the plants being in your possession for some years, and that you have always increased them by division, is the cause of the trouble, and

advise you to procure an entirely fresh stock. It is quite natural for the Iris to look shabby as yours does, but this ought not to have prevented it flowering. It is quite possible that it has been much too dry at the roots. Plants growing under a south wall often suffer in this respect, even when the soil in an open position is saturated, hence we advise you to very carefully watch it during the coming season. Your treatment otherwise seems to have been correct.

White form of Soldanella (T. R. B.).—We have no recollection of a white form of *Soldanella alpina*, while we have a dim recollection of a whitish-dowered variety of *S. pusilla* of years ago. If your plant has flowers of a good white colour it is by no means common; it is a great rarity, and we congratulate you on your find. We hope you may succeed in raising a good stock of it.

Information about Violets (W. S. C.).—The frame to which you refer would do quite well, or any ordinary single or double light frame you have to spare would do equally well. These plants require to be first well grown in the open and lifted carefully for planting into frames in September, placing the frame in a sunny position for the winter. Double Violets do not produce seeds so freely as the single varieties, and frequently the large-petaled flowers produce no seed at all, the seed-bearing flowers being either small petaled or devoid of petals, and they usually appear later than the better-formed flowers. This apetalous character would cause them to be overlooked by you perhaps, but they are usually found under the leaves of the tuft. It is doubtful, however, if in your district you would secure much success in this direction.

TREES AND SHRUBS.

Dead branches on Monkey Puzzle tree (Mrs. R. D.).—There is nothing to be gained by leaving the dead branches at the base of an otherwise healthy *Araucaria imbricata*, and you may remove them at once. Have them cut off close to the trunk with a saw, then the cut surfaces smoothed over with a sharp knife and finally coat over the cut with coal tar.

Cutting back Aucubas (Co. Cork).—It is quite correct to cut back bare and straggling shoots of *Aucubas*, but you must do the work at once, then new growth will quickly be formed. You can cut them to almost any height you like, as they readily break and make compact shrubs. You omit to furnish any particulars about your plants, so that we can only give general advice.

How to prune a Magnolia grandiflora (Kington).—You may prune your *Magnolia* any time from the middle to the end of April. It is not advisable to prune it hard; simply remove dead wood and any branches that have become overgrown. The cause of the ends of the shoots dying is probably due to late growth last year and insufficient ripening; the wood of many trees last year was not so well ripened as usual, and some trees, more especially evergreens, have been injured this year more than is usual by winter weather and cold winds.

Treatment of a Clematis (C. A.).—It is probable that your *Clematis* will start again from the root-stock. Very often dormant buds are found just above the roots, particularly if plants have been increased by means of cuttings. It is extremely doubtful whether the broken piece will root; you would have stood a better chance with it if you had cut it up into pieces of two joints each and inserted these pieces in pots of sandy soil placed in a warm propagating case. By keeping the soil moist in the pot containing the roots, and by keeping it in your greenhouse, you will stand a good chance of new growth starting, which will doubtless produce flowers during late summer or autumn.

THE GREENHOUSE.

Hydrangeas producing blue flowers (A Reader).—The question of *Hydrangeas* producing blue flowers has been before now freely discussed in THE GARDEN as well as in other horticultural journals. Some soils will quickly cause the flowers to turn blue, and this is generally put down to the presence of iron in the soil; but, at the same time, the whole matter is still a subject for conjecture. When grown in pots, one of the most successful methods of treatment is in potting to thoroughly mix about a tablespoonful of sulphate of iron with each peck of soil. Then in addition, as the pots get furnished with roots, put a pinch in the water about twice a week. Another way is to mix iron refuse from the blacksmith's shop with the potting soil; but this does not always lead to the desired change of colour. Alum water is

highly recommended by some in order to turn the flowers blue. The alum should be given at a strength of 1oz. to each gallon of water. To prepare the alum it should be crushed and dissolved in a little hot water. This mixture must be given just as the flower-trusses show, watering the plants with it at intervals of eight or ten days, and discontinuing it when the flowers begin to open. If the roots are very dry the plants must be at first watered with clear water, as the alum would at that time prove injurious.

Crickets in a greenhouse (A. L. L.).—These creatures generally infest warm, dry places; they dislike damp very much. We have found damping well round the pipes and other places in the house that are likely to become very dry and warm effective in keeping them at bay. They may also be trapped by placing some dry hay or other rubbish in a flower-pot and laying the latter on its side in a dry, warm place. Shake the hay over some boiling water every morning.

MISCELLANEOUS.

Grubs in soil (K. R. Image).—The grubs you forwarded are those of a fly belonging to the family Bibionidae, and probably to the genus *Bibio*. The flies may often be found in gardens settling on shrubs and plants; they do not fly well and have narrow black or reddish bodies and rather smoky-coloured wings. At times they appear in large numbers for a few days, usually about the end of this month or the beginning of May. One of the common species belonging to this genus is often called the St. Mark's fly, on account of its generally making its appearance about St. Mark's Day (April 25). They will soon cease to do any injury, as they will become chrysalides. The pests can be killed by making holes rather deeper than where the grubs are working near the plants, say, four to each plant, and placing 1oz. of Vaporite at the bottom of each hole, which should be at once filled in to prevent the gases which are given forth escaping.—G. S. S.

Weedy tennis lawn (M. B.).—It is fortunate that the coarse weeds now plentiful on the ground you have had prepared to sow with grass seeds to form a tennis lawn have come up so early; had they not appeared until the grass was sown they would have choked the grass, and one could not have been destroyed without sowing the other the same. Now your work should be to have every portion of the weedy ground lightly forked over, to extract and pick off every piece or plant of the *Celandine* or other weeds; then at once, when the whole is made quite fine and level, sow the grass seed, well rolling it in. Failing to fork over the ground, then use a push or Dutch hose to cut under all the weeds fully an inch in depth, then have them drawn off with a coarse iron rake, and so leave a fine surface, quite clean and perfectly levelled, ready to sow the grass seed on. If you have not had the ground well trodden over to make it equally firm and level after lifting the Potatoes, that should be done, or later it may settle down into hollows and lumps.

Books on gardening and agriculture (Student).—It is, perhaps, hardly in our province as an horticultural paper to recommend books on practical farming and livestock. Still you may find elementary knowledge in agriculture in Tanner's "First Principles of Agriculture," price 1s., and in Muir's "Manual of Daily Work," price 1s., published by Macmillan and Co., London; also in small books on livestock, horses, cows, pigs and others, each about 1s., published by Upcott Gill and Co., Bazaar office, Drury Lane, London. These cheap books should be mastered before obtaining more expensive ones. "The Book of Vegetables," by G. Wythes, price 2s. 9d.; and T. W. Sanders's "Vegetables and their Cultivation," price 5s. 4d., the former published by John Lane, Vigo Street, and the latter by Messrs. Collingridge, Aldersgate Street, London, should help you so far as vegetables are concerned, and in more general gardening you can hardly do better than obtain "Gardening for Beginners" from the office of this paper. After all, the knowledge acquired by practice and work is indispensable to success.

"Intensive" gardening (Mrs. K.).—The term "intensive," as applied to gardening, simply means thorough or high class. Intensive culture is found as well represented in our best gardens as in French gardens. As to any book on the subject in English, we know of none under that appellation, but if you obtained "Vegetables and Flowers: Their Culture from Seeds and Roots," price 5s. 6d., from Sutton and Sons, seedsmen, Reading, you would obtain in that way the best possible instruction in what may be termed high-class culture of vegetables to be had in any book. So far as the French method is concerned, without doubt what is in such case described as "intensive" applies to their system of cultivating salads through the winter under glass cloches, hand-lights and frames, but that is a costly method. That sort of culture is chiefly done in the neighbourhood of Paris or other great towns, where there is a good market and manure is cheap and abundant. The French people are great salad consumers. So much cannot be said of the British people. Necessarily with the French cultivator, because his plots are small, he trenches deeply, works into the ground plenty of manure, uses liquid sewage freely, also irrigates with canals where practicable and crups every foot of his ground to the utmost of his ability. Systems that with very hard work indeed and long hours of labour may give a profit in France, may be unacceptable to our own people.

Books on various subjects (Enquirer).—Your query apparently reads carnivorous plants and trees, but from the association of the two we conclude that you mean coniferous plants and trees. If so, by far the best work is the second edition of "Veitch's Manual of Conifers." As a botanical work the "Treasury of Botany" will be a great help to you, and on soils "The Soil," by A. D. Hall, M.A., is a good work. You omitted to stamp your envelope.

Names of plants.—H. Fry.—The Violets you send appear to be good flowers of Neapolitan.—J. C. D.—*Saxifraga ligulata*.—D. Edwards.—The Mezeron (*Daphne Mezereum*).—J. A. P., Glastonbury.—*Spiraea coifusa*.—A. K. M.—*Primula denticulata* var. *cashmiriana*. We do not know where you can obtain seeds.—Y. G. Hadden.—1, *Primula denticulata* var. *cashmiriana*; 2, *P. denticulata*; 3, *Matthiola* sp.; 4, apparently *M. sinuata*; 5, *Quercus Ilex* var.; 6, *Primula marginata*. It is most difficult to name such poor specimens.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

The exhibition held on the occasion of the fortnightly meeting, which took place on the 14th inst., was a most comprehensive and interesting one. Daffodils, Roses, and forced flowering shrubs were the most prominent features, and these were exhibited in splendid form by many of our leading growers. Orchids were comparatively scarce, probably owing to the close proximity of the Ghent exhibition. Rock and alpine plants were well staged, and the perpetual flowering Carnation was very largely in evidence.

ORCHID COMMITTEE.

Present: Mr. J. Gurney Fowler (chairman), Messrs. James O'Brien, Harry J. Veitch, H. Little, Stuart H. Low, W. Boxall, J. T. Acock, A. A. McBean, John J. Cypher, F. Mentith Ogilvie, J. Charlesworth, Walter Cobb, H. G. Alexander, W. P. Bound, H. A. Tracey, Gurney Wilson, R. Brooman White, W. Bolton, Frederick J. Hanbury, W. H. White, F. Sander and de B. Crawshaw.

Messrs. James Veitch and Sons, Limited, Chelsea, staged a very pretty little group containing fine plants of *Odontoglossum triumphans*, *O. ardentissimum* lamus, good forms of *O. crispum*, *O. Pescatorei*, two fine plants of the curious *Zygopetalum crinitum*, and a splendid specimen of the well-known *Ada aurantiaca*. All the plants were well grown, and the exhibit was tastefully arranged. Silver Banksian medal.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, staged a nice group containing some well-grown specimens. *Dendrobium barbatulum*, a white-flowered species, the blooms of which are small and densely packed in an arching raceme, *Odontoglossum Pescatorei*, *O. triumphans*, *O. odoratum*, *Dendrobium Niobe* and some choice *Cypripediums* were some that we noted as being specially noteworthy. All were neatly arranged with Maidenhair Ferns. Silver Banksian medal.

From H. D. Goodson, Esq., Fairlawn, Putney, S.W. (gardener, Mr. George E. Day), came an interesting group of well-cultivated plants, including such as *Odontoglossum luteo-purpureum*, *O. crispum* varieties, *O. loochiense* *tracyana*, *O. Adriane*, *Oncidium cunctatum*, *Brassocattleya digbyana*-*mossie* Wagneri, *Miltonia phalaenopsis* and *Masdevallia ignea*. These were well-grown plants. Silver Flora medal.

Mr. A. W. Jensen, Lindfield, Sussex, staged a well-cultivated group of Orchids, some choice unnamed specimens being among them. We specially noticed a very handsome form of *Odontoglossum crispum*, also some good *Cattleyas*. Silver Banksian medal.

Messrs. James Cypher and Sons, Cheltenham, had a very choice little group of Orchids in the annexe. This contained magnificent plants of *Miltonia vexillarium*, a plant of *M. v. virginialis*, the lower petal of which is white; *Dendrobium Apollo-alba*, *Laelio-Cattleya dominiana*, *Masdevallia macrura* and other rare subjects. Silver Banksian medal.

Sir Trevor Lawrence, Bart., K.C.V.O., Burford, Dorset, was awarded a cultural commendation for a magnificent plant of *Dendrobium fimbriatum oculatum*. This plant was about 4 feet high and was covered with its rich yellow fimbriated flowers.

Messrs. J. and A. A. McBean, Cooksbridge, Sussex, had a pretty little group of rare plants, mostly unnamed forms of *Odontoglossum* and *Cattleya*. All were splendidly cultivated. Silver Banksian medal.

FRUIT AND VEGETABLE COMMITTEE.

Present: Mr. George Bunyard (chairman), Messrs. J. Cheal, Alex. Dean, H. Parr, A. R. Allan, J. Davis, G. Reynolds, J. Jaques, Charles Foster, W. Barnes, J. Vert, J. McIndoe, George Wythes, W. H. Divers, C. G. A. Nix, W. Poupard and E. Beckett.

Sir E. G. Loder, Bart., Leonardlee, Horsham (gardener, Mr. W. A. Cook), exhibited fifteen dishes of Apples and Pears in a good state of preservation considering the time of year. Of Apples, Scarlet Pearmain, Profit, Mère de Venage (small), Calville Malingre and Winter Pearmain were in the best condition. Pears were represented by two fine dishes of Catillac and Duchess de Nemour.

Davies's Challenge Rhubarb is a new variety raised by Mr. T. E. Davies, The Nurseries, Syderstone, Norfolk. Two plants were exhibited, as well as a number of bunches. One of the plants weighed 4½ stone and the other possessed ninety-two sticks. The stems were very long, solid and of a very bright scarlet hue outside. It is a most attractive variety, and is the result of a cross between Victoria and Mitchell's Prince Albert. Cultural commendation.

FLORAL COMMITTEE.

Present: Mr. William Marshall (chairman), Messrs. C. T. Druery, W. A. Binley, R. C. Nutcutt, J. Green, T. W. Turner, C. R. Fielder, J. F. McLeod, William Howe, J. Jennings, W. Bain, Charles Dixon, G. Gordon, A. Turner, H. J. Cutbush, Charles E. Pearson, William Cutbush, W. J. James, Charles E. Shea, E. Mawley, R. C. R. Nevill, George Paul and E. H. Jenkins.

Messrs. H. B. May and Sons, Edmonton, filled a long table with flowering plants, such as *Salvia* *Pride of Zurich*, *Roses* *White Pet*, *Mme. Levasseur*, *Princess Ena*, a single pink-flowered *Polyantha* that is very free and charming, the new climbing *Rose Liberty* and other plants. *Cinerarias* of a choice and beautiful strain were also shown. In *Cyrtanthium falcatum* *Mayi* we have a good new form of a very hardy type that should possess much value. Silver Flora medal.

Messrs. J. Cheal and Sons, Crawley, displayed alpine in boxes with choice shrubs. The hardy things included *Primroses*, *Anemones*, *Aubrietias*, *Saxifrages* and others.

Miss F. W. Currey, The Warren Gardens, Lismore, Ireland, had a rich and beautiful display of *Narcissi*, in which *Apricot*, *King Alfred*, *Lucifer*, *Ariadne*, *Atalanta*, *Lady Margaret Boscawen*, *White Slave*, *Chancellor*, *Firebrand* and others were distinct and good. Silver-gilt Flora medal.

Messrs. R. H. Bath, The Floral Farms, Wisbech, had a display of early-flowering Tulips and Daffodils. In the Tulips, *Hector* (bronzé and white) and *Joost van Vondel* (pure white) were very fine. *Ophir* *O'Or* (a rich yellow) was also excellent. In the Daffodils, *White Queen* and *Duke of Bedford* were conspicuous. A charming lot of *Chionodoxa* was also noted in the group.

Mr. C. F. Waters, Balcombe, Sussex, showed the *American Carnation* very finely in company with a few *Malmans* and the new and showy *Marmion*. Bronze Flora medal.

Messrs. William Cutbush and Sons, Highgate, had a rocky and alpine exhibit, in which many choice spring flowers were seen to advantage. In this way *Puschkiukas*, *Primulas*, *Aubrietias*, *Phlox canadense*, *Daphne Cneorum*, *Cypripedium acaule*, *C. pubescens*, *Trilliums* and *Mertensia virginica*, with blue flowers, were all good; while flowering shrubs, such as *Rhododendrons*, *Viburnum*, *Pyrus*, &c., were in good bloom. The same firm also set up a table of Tree Carnations in excellent condition, *Robert Craig*, Mrs. Lawson, The President and *White Perfection* being superbly shown. Messrs. Cutbush also arranged a table of such flowering shrubs as *Azaleas*, *Ericas*, *Boronias*, *Lilacs*, *Roses*, &c. *Rhododendron Smithi aurea* was also noted in good bloom. Silver-gilt Flora medal.

Messrs. Hogg and Robertson, St. Mary Street, Dublin, had an arrangement of Tulips and Daffodils, the latter in choice and good sorts, such as *Lady Boscawen*, *Incognita*, *Countess Cadogan* and *Santa Maria*. Silver Flora medal.

Rose White Dorothy Perkins came again from Messrs. E. R. Cant and Sons, The Old Rose Gardens, Colchester. This new-comer is likely to be much in demand in the near future.

The yellow trumpet Daffodil *King Alfred* was superbly shown by Messrs. Carter and Co., Holborn. A bank of flowers staged in solitary examples, with foliage in mass representing a perfectly-natural bed of these things. The flowers and the colour were superb. There must have been several hundreds of flowers in the group.

Messrs. Paul and Son, The Old Nurseries, Cheshunt, brought a most interesting lot of plants, flowering shrubs, &c. *Ribes speciosum*, *Lonicera Maackii*, with white flowers, *Deutzia discolor grandiflora*, *Lilacs*, *Polyantha Roses*, *Vitis henryana*, *Viburnum tomentosum* *Mariesii* and *Berberis wallichiana hyperoleuca*, with yellow flowers, were among the things noted. Silver Banksian medal.

A small exhibit of *Rhododendrons* came from Mr. W. G. Vivien, Clyde Park, Blackply, E.S.O., South Wales.

Mr. Robert Sydenham, Birmingham, exhibited *Lily of the Valley* in moss fibre, also an assortment of Daffodils in the cut state. A most interesting exhibit.

Mr. F. Herbert Chapman, Rye, Sussex, had a few choice Daffodils, of which *King Alfred*, *Duke of Bedford*, *M. J. Berkeley*, *Horace*, *White Queen*, *Will Scarlett* and a pot of triandrus pulchellus were noticeable.

The Guildford Hardy Plant Nursery brought a small exhibit of alpine and early flowers in variety, including *Primulas*, *Fritillaries*, *Saxifrages*, *Doronicum Columne*, *Drabas*, *Aubrietia* *Dr. Mules* and *Viola munbyana*.

Mr. H. C. Pulham, Elsenham, Essex, had a small rocky exhibit arranged with early flowers and shrubs, *Primulas*, *Anemone vernalis* and *Hepaticas*.

The table of *Roses* from Mr. George Mount, Canterbury, was a great success and one of the features of a fine show. Mrs. J. Laing, Richmond, Joseph Lowe, Mme. Permet Ducher, Mme. Abel Chatenay, Mme. C. Ramey, Anna Olivier, La France, Prince de Bulgarie, Mrs. W. J. Grant, *Perle des Jardins* and *Caroline Testout* were among the best in a really superb lot. Gold medal.

Mr. J. Crook, Camberley, Surrey, showed a fine strain of *Polyanthus* in many shades of colour. Hardy spring flowers from Messrs. Jackman and Sons, Woking, were very pleasing, *Primulas*, *Mertensia virginica*, *Lilacs* and others being very good.

A grand display of *Hippeastrums* came from Mr. Alfred de Rothschild, Ifalton, Bucks, an entire table near the entrance being filled with excellent material. The crimson shades predominated, and the flowers of these were of fine proportions, the plants being well grown and flowered. Silver-gilt Flora medal.

Miss Alice M. Smith, Barnham, Bognor, Sussex, had an exhibit of early flowers, including *Primroses*, *Daisies*, *Anemones*, *Hepaticas* and other plants. The giant white *Daisy* is of large size and said to be excellent for bedding. Messrs. Barr and Sons, Covent Garden, in addition to a small display of *Narcissi*, in which many choice sorts, such

as *Bedouin*, *King Alfred*, *Fireflake* and *Peter Barr* were seen, had quite a display of *Darwin Tulips*, *Lenten Roses* and early spring flowers generally, which were much admired. Silver Flora medal.

The Misses Hopkins, Shepperton-on-Thames, had a pretty exhibit of *Primroses*, *Anemones*, *Anemones*, *Trilliums* and other plants.

Messrs. Pope and Son, King's Norton, Birmingham, had a choice lot of Daffodils, among which King's Norton was the giant of yellow kinds.

The Pelargoniums from Messrs. Cannell and Sons were particularly fine and in great variety, the bunches being also fine. Silver Flora medal.

The *Narcissus* from Mr. C. Dawson, Rosemoran, Gulval, Penzance, were very charming, and there were many new sorts displayed. *Buttercup*, the result of *Emperor* × *odorus* variety, is a fine self yellow, *Hypatica*, *Bedouin*, *Geoff*, *Pearl*, *Diver* (a white flower), *Gilion* (a rich cupped sort), *Bernardin* (a glorious flower with pale orange crown) were among a choice lot. Gold medal.

Messrs. G. A. Clark, Limited, Dover, displayed to advantage a variety of hardy spring flowers, *Primroses* being very fine.

Choice flowering shrubs, such as *Hydrangea*, *Streptosolen*, *Boronias*, *Crowea angustifolia*, *Rhododendron veitchianum*, *Erica propendens* and other plants were well shown by Messrs. James Veitch and Sons, Limited, Chelsea. *Xanthoceras sorbifolia* and a grand specimen of *Medinilla magnifica* were also shown by Messrs. Veitch. Silver-gilt Banksian medal.

Messrs. K. W. Wallace and Co., Colchester, displayed a fine variety of hardy plants, including *Anemones*, *Fritillarias*, *Hepaticas*, *Irises*, *Tulips* and *Primulas*. Bronze Banksian medal.

Messrs. Hugh Low and Co., Enfield, had a rich and varied display of *Carnations*, *Acacias*, *Polyantha Roses*, *Heaths* and other plants, not least being that fine trailing plant *Lotus peltorhynchus*, whose scarlet blooms are very striking. The *Carnations* were a grand lot. Silver-gilt Banksian medal.

Messrs. Cartwright and Goodwin, Blakebrook, Kidderminster, had a beautiful display of choice Daffodils, such as *Rising Sun* (yellow Ajax), *Scarlet Eye*, *Marigold* and *Gloria Mundi* being very fine; *Aureole* (an early yellow incomparable with a much laced corona), *Yellowhammer*, *Alice Knight* and *Duke of Bedford*. Silver-gilt Banksian medal.

Messrs. Peed and Sons, West Norwood, S.E., had a large assortment of alpine and rock plants, with *Pansies* and *Daffodils*.

Carnations and *Lilies* from Mr. W. H. Page, Hampton, made a superb show, the former being of the finest possible description. Over a setting of *Maidenhair Ferns* the flowers in their many and brilliant shades were seen to perfection. Silver-gilt Banksian medal.

Rhododendron Aucklandi *hybrida* and *fosteriana* were in fine form from Sir E. Loder, Bart., Horsham (gardener, Mr. Cook), the plants being a mass of blossoms. Silver Banksian medal.

Messrs. R. and G. Cathbert, Southgate, had a small display of Tulips.

Mr. A. F. Dutton showed *Carnations* in his usually fine form. Bronze Flora medal.

The collection of hardy plants from Mr. G. Reulle, Keston, Kent, was most interesting, and contained a great variety of choice alpine and hardy shrubs in flower. Bronze Flora medal.

Messrs. Bull and Sons, Chelsea, exhibited stove plants and Daffodils in variety.

The Misses Kipping, Hutton, Essex, had a nice arrangement of hardy plants.

Calcarias of a good strain were well shown by Mr. H. D. Broughton, Birch Hurst, Andover.

Messrs. W. Paul and Son, Waltham Cross, showed some very fine *Roses*, including *Laurant Carle*, a satin rose flower of great charm; *Mrs. Aaron Ward*, a chaste flower of white and apricot; *Renée Wilmar Urban*, soft flesh pink; and *Frau Ernst Borsig*, rose peach. Silver Flora medal.

Messrs. Carter and Co., Holborn, had a fine bank of *Cinerarias* in variety, obviously of choice strains.

Messrs. James Veitch and Sons, Limited, Chelsea, had a sumptuous group of well-flowered shrubs, in which were *Hydrangea Hortensis*, blue; *H. H. Thomas*, Hogg, white; *H. H. rosea*, blue, &c. *Rhododendron Handsworth Early Red* and *Clematis montana rubens* were also noted in fine condition.

Mr. L. R. Russell, Richmond, staged a fine bank of such forced shrubs as *Lilacs*, *Azaleas* and *Prunus*, together with *Clematis* and other plants in variety; a really fine display. Silver Flora medal.

Very pleasing were the *Acers*, *Grasses* and *Ivies* from Messrs. Thomas Cripps and Son, Tunbridge Wells, and in addition to the natural grace and beauty of the plants the group was well arranged. Bronze Flora medal.

Mr. Charles Turner, Slough, staged a pretty group of *Caladiums* in many choice and beautiful varieties, the colours being in some instances very fine. Bronze Flora medal.

Messrs. Carter Page and Co., London Wall, had a choice lot of *Violas* in great variety and of much beauty.

From Lissadell, Sir Josslyn Gore Booth, Bart., brought a fine collection of cut *Narcissi*, in which *Incognita*, *Firebrand*, *Mrs. R. Sydenham*, *Ariadne*, *Cresset* and others were seen. Silver-gilt Banksian medal.

Mr. Maurice Pritchard, Christchurch, Hants, brought many fine alpine in bright effective masses, the *Aubrietias* and *Primroses* being particularly good. Silver Banksian medal.

Messrs. T. S. Ware, Limited, Feltham, also displayed hardy and alpine plants in infinite variety, together with species of *Primulas* and many other plants of interest. Bronze Flora medal.



GLOXINIAS.

THE GARDEN.

No. 1902.—Vol. LXXII.

MAY 2, 1908.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

THE GHENT EXHIBITION.

THE centenary exhibition of the Royal Agricultural and Botanical Society of Belgium now being held in the Casino, Ghent, was opened by His Majesty King Leopold on Saturday, the 25th ult. As one would naturally expect, the exhibition is an exceedingly good one, the best growers of horticultural produce in Belgium, France, and some from Britain contesting the various classes in a friendly international spirit. Such international exhibitions as this, we think, must do a great deal towards the promotion of good feelings between the people of the various countries concerned, as well as providing opportunities for the advancement of horticultural knowledge. In one respect only was the exhibition disappointing, and this was the lack of really good novelties. Orchids certainly provided plenty of new varieties, but apart from these there were very few striking specimens. Messrs. Sander and Son had the best novelties, other than Orchids, in the show, their various foliage plants, enumerated on another page, being of considerable interest. Messrs. Ker and Son, the well-known Hippeastrum raisers of Liverpool, scored numerous successes with these handsome plants, some very good forms being among their group. Mr. C. Engelmann of Saffron Walden had a beautiful new Carnation of the perpetual-flowering race, the colour and scent of which reminded us very much of the Old Crimson Clove. A decided break in the colours of the Cinerarias was furnished by three plants of the large-flowered section exhibited by Messrs. Vilmorin and Co. of Paris. In colour the flowers of these plants are a glowing scarlet, and the only name given them at present is Scarlet Hybrid. Fruits were naturally not forthcoming at such an early season, although forced Strawberries might, of course, have been shown. A few groups of Oranges in pots were the sole representatives of fruit in the exhibition. Generally speaking the arrangement was good, but not better than we see at home, although a better effect was obtained owing to the abundance of space at disposal. Floral arrangements for table and room decorations were carried out on a more elaborate and extensive scale than we see in this country,

but in this case also plenty of space proves a valuable asset. Fine as were the numerous exhibits of Orchids it is a pleasure to record that none were quite equal, both from an artistic and interesting standpoint, to the magnificent bank staged by Major Holford, Westonbirt, Tetbury, Gloucester. After the show had been open a short time it was impossible to get near this group owing to the dense throng of admiring visitors.

Perhaps the most interesting feature of the whole exhibition was, as nearly as possible, a replica of the first exhibition held in "Frascati" 100 years ago. The room was portrayed as faithfully as possible, even to a painted canvas representing the view as seen from the window of the inn at that time. Similar kinds and species of plants were shown within to those displayed at the first exhibition, and nothing could portray more lucidly the enormous advances that have been made in horticulture during the past century. Will similar advances be made during the next? is a question we may well ask ourselves. Although some kinds of plants seem to have reached their zenith others appear to be but still in their infancy so far as development is concerned, and time alone can prove what they are capable of producing.

THE MEANING OF TULIP TERMS.

THE Tulip is, I think, the oldest flower to which the term "florist" has been and still is applied. Immediately it was introduced into Western and Central Europe it seems to have "caught on" and absolutely fascinated everyone by its gorgeous and brilliant colouring. Indeed, in the first treatise on Tulips ever written the author tells us that it is "le chef d'œuvre de Dieu," and that it was the chief ornament of Paradise. This was, roughly speaking, just 100 years after its first appearance from Constantinople and the East. It shows the hold it took upon the flower-loving public of those days and the estimation in which it was held. What, then, more natural than that this flower, which has always been extremely varied in its markings and colouring, should create a need of technical words to convey these differences to the initiated! It is terrible to see (say, in the Florilegium of Sweetius) the many-worded names that are applied to his pictures of Tulips, but which are only, as it were, samples of the labels that we should have to put to all to-day if we did not make

use of such terms as "breeder," "feathered," "flamed," "bizarre" and so on.

A few forewords of history. Clusius, who wrote a short time after Tulips were known in Holland, divides them into three divisions, *Tulipa præcox*, *dubia* and *serotina*, according to their time of blooming. This division was followed by Gerarde (1597), Parkinson (1629) and Rea (1665), only *dubia* was changed into *media*. It is interesting to note that in the full lists of flowers which are given by the two last authors there are a great many under the heads of *præcox* and *media*, and very few under *serotina*. To-day the late-flowering section outnumbers the others; in fact, the division *media* has entirely fallen out of use, and early and late are the only divisions recognised. New seedlings have been raised in European gardens ever since the Tulip was introduced. It was soon noticed that the markings of the flowers varied very much. As time went on it was found that there were certain broad distinctions which constantly kept occurring, and so it became possible, as it was, of course, highly convenient, to group flowers of the same type together.

Again, as the cultivation of the Tulip spread over different countries, each one framed its own technicalities. France had its *agathes*, *paltots*, *morillons*, *marquetines* and *fantasques*; Holland its *bybløemens*, *verports* and *rigauts*; and England its *widows*, *edgers* and *paragons*. These all designated some particular form of marking or variation of size or shape; but it is impossible to determine the precise meaning which the old florists attached to them. Some have been obsolete for 150 years. There are few that are still used in modern gardening works and bulb lists; but these relics of the past that still remain have thus an added interest to their more obvious utilitarian one, in that they tell of a history which among flowers is in many ways unique. To come, however, to "practical politics" and leave what is only of academical interest, I propose to give a list of all the more common terms, such as *breeder*, *broken*, *roses* and *bizarres*, which are now in use, with a brief explanation of their meaning, adding as occasion requires an historical note.

JOSEPH JACOB.

(To be continued.)

PRIZES FOR READERS. MAY.

THE BEST FLOWERS AND SHRUBS FOR TOWN GARDENS.

A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF-A-GUINEA
are offered for the best essays on the above
subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Saturday, May 30. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be

written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

May 12.—Royal Horticultural Society. Exhibition of Flowers, Plants, &c. Lecture at 3 p.m. by Mr. Osgood H. Mackenzie on "Gardening in the West Highlands." Vincent Square, S.W.

Notes from Baden-Baden.—It seems to me that the Taurian variety of *Scilla bifolia* is scarcely cultivated in England, yet it is a very distinct early spring bulb. It differs from the type by its more compact and dwarfer growth and considerably greater number of individual flowers, which are of a brighter colour. It is excellent for edging, refusing to bear seed; it is slow to increase, and this may explain its scarcity. A clump of *Pulsatilla patens* var. *ochroleuca* made a show for itself, thirty-two of its lilac and sulphur yellow-coloured, downy-clothed flowers being all open at once. Among the many thousands of *Chionodoxa Lucilie* which came under my notice I have selected four varieties, prominent among which is *Leichtlin's* variety. Its flowers are double the size of the typical plant, and the colour is a peculiar blue, somewhat suffused with a reddish tone; this is certainly a plant for the future.—MAX LEICHTLIN, *Baden-Baden*.

Studies of Kew Gardens at the Grafton Galleries.—An exhibition of pictures by Mr. H. A. Olivier has recently been held in the Grafton Galleries, which, although primarily intended to show his portraits of Indian princes painted for the Waly College, Indore, before they are sent out, also included an interesting series of studies at the Royal Gardens, Kew, and some other gardens. The studies at Kew were originally started with a view to reproduction in a book to be brought out later, a colour book about Kew, by Mr. W. J. Bean, assistant curator. Some of the flower studies were particularly good. *Fritillaries* (No. 8), the flowers themselves were charmingly rendered, although rather spoilt by an uncomfortable blue-grey background, and in No. 13, "*Cypripedium*," the colour is very delicate. The study of "*George Nabonnand*" *Roses* at *Gravetye* (No. 16) is particularly fine, and hanging near it was a delightful view of "*The Lake*" at the same place. In Nos. 15 and 17, *Azaleas*, east and west side, particularly in the "*East Side*," the colouring of the flowers is gorgeous, although, perhaps, the blue-greenness of the background is rather unnecessarily insisted on. No. 14, "*The Lake, Kew Gardens, looking West*," the misty effect with the light breaking through, is very happy. To anyone really interested in flowers No. 47, "*The Iris Garden*," will appeal strongly, but the beds of *Iris*, although charming in themselves, hardly make a picturesque scene. One of the best things among the garden scenes is No. 106, "*Caroline Testout*," a large bed of the *Rose* brilliantly rendered against their background of the quaint formal garden, while hanging near was a sketch of *Persian Peach*, whose vivid rose against a bright blue sky forms another brilliant little study.

Spring flowers at Dropmore, Maidenhead.—The beautiful gardens at Dropmore are in their spring dress. We have seldom seen anything prettier than the masses of *Arabis* and *Aubrietia*, a perfect sea of blossom. Extensive alterations are being carried out and many improvements made under the superintendence of the head gardener, Mr. Page.

The Blairgowrie fruit trade.—An important scheme for the purpose of controlling

the prices of *Raspberries* was explained to a large gathering of Blairgowrie fruit growers the other evening by Mr. J. T. Connell. The meeting was presided over by Provost Smith. Mr. Connell gave a clear explanation of his plan, which is that of so regulating the supplies to the different markets that a glut would be avoided and the prices thus maintained. He has successfully worked it with the *Strawberries* of the Clyde, and was so confident of equal success with *Raspberries* that he was prepared to take the crop, subject to inspection, at a minimum guaranteed price. Several questions were asked, and the replies of Mr. Connell seemed to be satisfactory to those present, although the actual carrying out of the scheme was not absolutely decided upon.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Yorkshire Gardeners' and the Royal Gardeners' Orphan Fund.

This fund, and the special appeal which is being made at the present time on its behalf in connexion with the coming-of-age festival on May 12, should, I think, be of especial interest to Yorkshire horticulturists, seeing that the inception of the fund was mainly due to a Yorkshire gardener, Mr. Clayton, late of Grimston Park; but probably many, like myself, have never hitherto given the matter very serious thought, or it may be that we are sometimes apt to think that such institutions having their headquarters so far away as London have not much claim upon us here in the North. A glance, however, through the annual report certainly shows that this is not the case. There are in Yorkshire five children in receipt of the benefits of the fund, viz., £13 per annum each, or £65 in all; but the whole of the subscriptions from Yorkshire are very much below this amount, and the proportion of it which comes from Yorkshire gardeners is very small indeed. One town in the Midlands (not a large one) sends half as much as the whole of Yorkshire. An appeal made during the past week to three small gatherings of gardeners in this locality had an immediate result of nearly 50s. being subscribed to the popular 1s. collection, and several volunteered to take collecting sheets for their respective districts, so that I hope this amount will be considerably increased before May 12. May I suggest to gardeners in other parts of the county that if the matter has not already been taken in hand, some such plan should be adopted? Those living in a district where no collection is being made, who would like to contribute and so swell the amount from Yorkshire, are asked to send their subscriptions to any of the following: Mr. Norman, The Elms, Weetwood, Leeds; Mr. Coates, Spring Bank, Headingley, Leeds; Mr. Wellwood, Wyther House, Kirkstall, Leeds; Mr. Waltham, Sandy Wood, Horsforth, near Leeds; or to our correspondent, Mr. George Carver, Chapel-Allerton, Leeds.—T.

Peach buds dropping.—Your correspondent "R. K." asks the reason for *Peach buds* dropping. Having had a long experience in growing in houses, with and without heat, in different parts of this country, I suggest to "R. K." that if he will keep the temperature of his houses 5° to 10° less than the temperature usually employed in this country when forcing them, until in flower, he may prevent failure, as they are very sensitive at this time of artificial heat. Dryness at the root is another cause, especially so if the soil is of a light and porous nature, as this will require considerably more water than a heavy soil. When watering let it be given until it stands on the surface of the soil. This I have always done in the resting season. This may not seem good practice; but at this period they are forming their buds. Again, when

he begins to force them, also when in flower and the early part of the stoning season, water should be freely given and the temperature should be rising. This should prevent failure if the soil and drainage is what it should be for Peach growing.—G. MACLEAN, *Chilwell, Notts.*

Primula kewensis.—To those in search of a really good thing for spring flowering let me call attention to the above plant. Happily it can now be obtained from seed. At one time it was doubtful whether or not it would seed freely, and at that time plants only could be bought. Now, however, a packet of seed will produce a large number of plants, which will quickly grow into flowering plants and make a fine display in the conservatory or cool greenhouse. It does exceedingly well in a cold frame, for it is nearly hardy, plants having survived from 10° to 12° of frost here. This is one of the most useful and floriferous plants of recent introduction. As a matter of fact, it will flower several times in one year, and by sowing at various times plants can easily be had in flower the whole year round. The colour is most pleasing, a really good yellow. The plants may also be increased by division; but I think much better plants can be raised from seed, which is produced freely if the flowers are fertilised by hand. This I find necessary. I know of few other plants which will give such a pleasing display of colour as the above *Primula* and *P. obconica*. The newer strains of the latter are most beautiful. What a pity it is that it proves such a nuisance to some people, which it certainly does. A few dozen plants raised from seed sown last March (1907) have been in flower since October, and look as if they intended going on till October next. I am enclosing herewith a few flowers for your inspection from these plants, and which I think you will say is a fine strain.—T., *Cirencester.*

Cystopteris fragilis.—

In the enforced leisure of recovering from influenza I have been turning over back numbers of THE GARDEN, a most useful and fascinating occupation, and I noticed a remark by Sir W. T. Thiselton-Dyer on *Cystopteris fragilis* (February 10, 1906). Speaking of watering, he says: "That some measure of success was attained is shown by the fact that *Cystopteris fragilis* has become a positive weed." I should like to point out that this Fern flourishes exceedingly in broad hot sunshine as well as in moist shade. Some years ago in my walks between Wirksworth, Cromford and Middleton

I noticed on the distant mine-heaps in the bare fields a vegetation that struck me as peculiar. On going to examine it I found the rubbish-heaps thickly packed with *Cystopteris fragilis*. Anyone who knows the neighbourhood will be aware that the site, high, dry and sunny, was hardly the place to look for *Cystopteris*. Later experiment has confirmed the observation. I have grown many Ferns in baskets in the greenhouse exposed to the fullest sun, *Adiantum cuneatum* among the number, with marked success. Many Ferns which were ordinarily shy in sending up their lovely Prince of Wales's feathers of fertile fronds responded at once to this more sunny treatment. Amateurs could at least try it.—J. G. R. POWELL, *The Willows, Ledbury.*

TREES AND SHRUBS.

A NOTE ON BAMBOOS.

(*PHYLLOSTACHYS FASTUOSA.*)

LOVERS of hardy Bamboos ought not to neglect to obtain this handsome species, for it is one of the most conspicuous and easily grown of the many sorts available. Readily attaining a height of 18 feet or 20 feet, the canes are strong and upright, while the fact that the side branches are compact gives the whole plant a somewhat columnar appearance, which at once stamps it as distinct from any other *Phyllostachys*, or, in fact, any other hardy Bamboo.



AN EASILY-GROWN HARDY BAMBOO (*PHYLLOSTACHYS FASTUOSA*) IN THE ROYAL GARDENS, KEW.

In general habit its nearest ally is found in *Arundinaria Simonii*, but the leaves are glossier than in that plant; the leaf sheaths are not retained to any great length of time, as is the case with *Arundinaria* and the foliage is not so easily damaged by cold winds. With regard to its hardiness it may be stated that the leaves keep their colour in spring much longer than is the case with many sorts. Like other Bamboos, it has a penchant for throwing up strong shoots late in autumn, and these are injured by cold weather; however, those that are damaged to any serious extent can be easily spared at pruning time.

With all its associates it rejoices in rich soil and a good supply of water during summer. When first planted the ground should be well

worked, and, if poor, enriching material in the form of half-rotted leaves, well-decayed manure and good soil added. May is the best time to plant, as growth at that period commences at once. Should the weather prove dry, attention to watering must be given at least once a week. A mulch of well-decayed manure and leaves will be found beneficial, and, in fact, this attention annually will well repay the trouble. From the compact nature of the shoots as they spring from the stool it is a difficult Bamboo to propagate by division of the clumps; it is, however, in the habit of producing long rhizomes when planted in loose ground, and these may be severed, cut up into lengths, potted up and placed in a warm greenhouse for a few weeks when nice young plants are formed. Its noble appearance and distinct character among other Bamboos is noticeable in the accompanying illustration.

W. DALLMORE.

THE SHRUBBY SPIRÆAS.

THE genus *Spiræa* plays an important part in garden decoration, members of it being suitable for practically any position. By the water-side or on the rockery the herbaceous species and varieties give a welcome display of flowers during the summer and early autumn, while in the shrubbery and other parts the various woody members of the genus may be found more or less in bloom from March to October. The latter number some 130 species, varieties and hybrids, but many of them are only of botanical interest, while others are so much alike that it is only necessary to grow one of the type. The following notes are merely intended for the mention of the best of the shrubby *Spiræas*, and are not at all exhaustive, but those given should be included in every garden. They can be grown in almost any kind of soil, but a light and comparatively dry loam suits them best.

If they have too much moisture at the root, they are apt to make a gross growth with but few flowers, while a drier situation causes the shoots to be short and firm and the flowers larger and more freely produced. Full exposure to the sun is necessary, as, though they may live in the shade, yet they will neither grow nor flower at all well. Propagation is effected by means of cuttings, which can be either of half-ripened wood in August or of fully-ripened wood cut into 6-inch lengths and planted nearly their full length in the ground outdoors in October.

Botanically, the genus is divided into eight sections, which division is useful for the present purpose, as the members of each section possess the same character of growth, flower about the same time, and require the same pruning and general treatment. Among the plants mentioned below will be found some that are suitable for all sorts of gardens and positions.

SECTION I.—BOTRYOSPIRA.

S. laevigata is the only member of this section, and is a native of Siberia. It has a certain beauty of its own, but is of no great garden value. The foliage is pinnate and glaucous, and the flowers of a creamy white.

Bagshot, Surrey.

J. CLARK.

(To be continued.)

THE ROSE GARDEN.

THE ROSE ANALYSIS, 1900—1907.

(Continued from page 189.)

TEAS AND NOISETTES.

THIS refined and beautiful section is more conservative than that with which we have just been dealing; nevertheless, there is evidence of gradual but decided changes taking place in it, as will be seen from the particulars given below.

“White Maman Cochet deservedly heads the list, as it has done ever since it came into general cultivation in 1903, for there is no other Tea which possesses so many good qualities. At the last two exhibitions, however, Mrs. Edward Mawley has been rather more frequently staged. In fact, the last two years it was oftener to be seen in the prize stands than any other Rose in the show.

“Only one Tea was staged at the last exhibition exceptionally well, and that was Medea, which has only once before been as frequently shown. On the other hand, The Bride, Catherine Mermet, Mme. Hoste, Ernest Metz, Marie van Houtte, Caroline Kuster and Niphotos have never before been as poorly represented. Indeed, the only varieties which were set up in twenty or more prize stands were White Maman Cochet, Mrs. Edward Mawley, Maman Cochet, Mme. Jules Gravereaux, Comtesse de Nadaillac, Souvenir de Pierre Notting, Medea, Muriel Grahame and Souvenir de S. A. Prince. The foregoing particulars clearly show the declining positions of most of the smaller Teas, and the great popularity with exhibitors of those with large flowers like the first four varieties on the list.

“There are only three Roses in the table which are six or fewer years old, and which are therefore entitled to be regarded as among the ‘newer’ Roses. Mme. Jules Gravereaux (flesh, shaded peach), which was introduced in 1901, has risen since last year from No. 14 to No. 4. Souvenir de Pierre Notting (pale apricot yellow, shaded orange), a 1902 variety, has also much improved its position by rising from No. 14 to No. 7. There are no representatives for the years 1903 and 1904, but for 1905 we have Mme. Constant Soupert (yellow, shaded peach), which on its first appearance just manages to secure a place at the bottom of the list.”

TEAS AND NOISETTES.

Position in Present Analysis.	Average No. of Times Shown.	Times Shown in 1907 in Proportion to the Average.	Name.	Date of Introduction.	Raiser's or Introducer's Name.	Colour.
1	67.2	62	White Maman Cochet	1897	Cook	White, tinged lemon
2	59.7	68	Mrs. Edward Mawley	1899	A. Dickson and Sons	Pink, tinted carmine
3	50.1	54	Maman Cochet	1893	Cochet	Deep flesh, suffused light rose
4	34.5	47	Mme. Jules Gravereaux	1901	Soupert et Notting	Flesh, shaded peach
5	29.2	16	The Bride	1885	May	White, tinged lemon
6	28.7	32	Comtesse de Nadaillac	1871	Guillot	Peach, shaded apricot
7	28.5	35	Souvenir de Pierre Notting	1902	Soupert et Notting	Apricot yellow, shaded orange
8	27.7	33	Medea	1891	W. Paul and Son	Lemon yellow
9	27.2	14	Catherine Mermet	1869	Guillot	Light rosy flesh
10	25.0	20	Muriel Grahame	1896	A. Dickson and Sons	Pale cream, flushed rose
11	24.5	19	Bridesmaid	1893	May	Bright pink
12	24.2	26	Souvenir de S. A. Prince	1889	Prince	Pure white
13	23.6	18	Mme. Cusin	1881	Guillot	Violet rose
14	22.5	17	Innocente Pirola	1878	Mme. Ducher	Creamy white
15	22.2	15	Souvenir d'Elise Vardon	1854	Marest	Cream, tinted rose
16	20.6	10	Mme. Hoste	1887	Guillot	Pale lemon yellow
17	20.0	17	Souvenir d'un Ami	1846	Belot-Defougère	Pale rose
18	14.9	16	Cleopatra	1889	Beunett	Creamy flesh, shaded rose
19	14.6	17	Maréchal Niel (N.)	1864	Pradel	Deep bright golden yellow
20	13.2	9	Mme. de Watteville	1883	Guillot	Cream, bordered rose
21	12.1	14	Golden Gate	1892	Dingee and Conard	Creamy white, tinted rose
22	11.4	6	Ernest Metz	1888	Guillot	Salmon, tinted rose
23	8.7	3	Marie Van Houtte	1871	Ducher	Lemon yellow, edged rose
24	8.1	6	Princess of Wales	1882	Bennett	Rosy yellow
25	7.6	3	Anna Olivier	1872	Ducher	Pale buff, flushed
26	7.4	1	Caroline Kuster (N.)	1872	Pernet	Lemon yellow
27	7.0	4	Niphotos	1844	Bongere	White
28	6.9	1	Ethel Brownlow	1887	A. Dickson and Sons	Rosy flesh, shaded yellow
29	6.5	2	Honourable Edith Gifford	1882	Guillot	White, centre flesh
30	5.2	3	Rubens	1860	Robert	White, shaded creamy rose
31	5.0	5	Mme. Constant Soupert	1905	Soupert et Notting	Deep yellow, shaded peach

A new variety, whose position is dependent on its record for the 1907 show only.

Mr. Mawley states that this table will be found more conservative than the Hybrid Perpetuals and Hybrid Teas; the changes are less and not quite so startling. Mme. Jules Gravereaux, as befitting a Nickerson Rose, makes the greatest improvement, rising from the fourteenth to the fourth place, the only other alteration of any note being the advance of Souv. de Pierre Notting, which in the 1906 table tied with Mme. Jules Gravereaux at fourteenth, and now rises to seventh. Next year this will probably be found in the first half-dozen, displacing in all probability The Bride. How the Catherine Mermet family are descending the scale! It is not so very long ago since they were at the top, and if their positions were taken on this year's table only, none of them would figure in the first twelve.

Mme. Constant Soupert figures on the list for the first time at No. 31. Room will have to be found for this new-comer, and in the first half-dozen, too, as it was very promising last season and some very fine flowers were exhibited throughout the country. Mrs. Myles Kennedy is another Tea that will find its way into the next analysis, and will promptly proceed, like all Messrs. Alex. Dickson and Sons' productions, to take a higher place. I hear of nothing very startling in the way of new Teas from Continental sources; the great difficulty is to get the necessary size to bring them up to exhibition standard. Hugo Roller (William Paul and Sons), Harry Kirk (Alex. Dickson and Sons) and Mme. Edmond Sablayrolles (Bonnaire) are all beautiful Roses, but not, I think, likely to find a permanent place in this analysis, for this reason—they are very distinct in colour and will find a home in our gardens.

I have been asked to name the six best Teas for an ordinary exhibitor to cultivate. I do not think there is much doubt as to which they are in order of merit. I should place them as follows: White Maman Cochet, Mrs. Edward Mawley, Maman Cochet, Mme. Jules Gravereaux, Souvenir de Pierre Notting and Mme. Constant Soupert; and if the list was extended to twelve, would add Medea, Mrs. Myles Kennedy, Souv. de S. A. Prince, Mme. Cusin (for colour) Muriel Grahame and Comtesse de Nadaillac. The last two will be found the most difficult to grow; the others are fairly easy as Teas go.

These two tables form only a portion of Mr. Mawley's exhaustive analysis; for the remainder, dealing with decorative Roses as exhibited,

autumn-flowering Roses (both exhibition and decorative) and an audit of the new Hybrid Perpetuals, Hybrid Teas and Teas, I would refer your readers to the original article in the *Journal of Horticulture*. I believe also the whole analysis will be found in the National Rose Society's Rose Annual for 1908.

HERBERT E. MOLYNEUX.

ROSE MRS. AARON WARD.

THIS grand Hybrid Tea novelty is a welcome addition to the yellow or apricot-shaded Roses. It is a fine-shaped bud and half-open flower, but expands into a rather wide blossom in the way of Mme. Charles de Luze. The great feature of the Rose is its colour. This is mainly the rich yellow or apricot which we obtain in Lady Roberts, but about one-third of the petals are of a flesh white tint. Perhaps with age of plant the yellow colour may become more pronounced; in any case it is a fine Rose, useful alike to the exhibitor and to those who grow for garden decoration. It seems to me to belong to that section of the Hybrid Teas represented by Joseph Hill, and certainly both Roses will prove to be among the finest M. Pernet Ducher has given us. Joseph Hill possesses such distinct qualities, both in foliage and wood, that it looks as though it was the commencement of quite a new departure in these beautiful Hybrid Teas.

GUNNERSBURY HOUSE GARDENS IN SPRING.

ANY period of the year the above gardens are so interesting that a note on a few of the principal features at the present time will, I feel sure, be of interest to readers of THE GARDEN. The first thing to strike the visitor is the new work connected with the Peach wall. Here the old trees have been lifted, given a new border and replanted, the varieties being mostly midseason and late. Some new trees have also been introduced where necessary. Mr. Hudson thinks very highly of Late Devonian Peach, and has some splendid trees of this variety, also Sea Eagle, the Nectarine Peach and other late sorts. These are on a west wall, and opposite Apricots are given some parts of the wall, these having a glass coping. They are of recent introduction, and are at present on trial, as these trees are not a success in some gardens. Another idea, and one I think that will be found advantageous, is that Morello Cherries are being given more freedom, and rather less pruned than formerly. Last season I saw some splendid results from trees grown thus; the young wood is retained and the trees are only thinned out at the pruning.

Those who are interested in hardy fruit culture would do well to see the orchard here. The trees have been planted some ten years or so and are mostly bush, but they have been trained so exactly by depressing the branches, the main lower ones having been tied down to stakes, that every portion of the trees are exposed to the light and sun. Some of the strong growing sorts, such as Newton Wonder, are much more fruitful in a young state grown thus, and in addition the trees are very handsome.

The large amount of ground devoted to Strawberry culture is remarkable, and there is a great number of the Alpine varieties here, a feature that amateurs could well follow who like late fruits, as the culture is so simple. Mr. Hudson relies on one and two year old plants, and different treatment has been followed to what I have noted previously. The old plants that fruited last year have been hard trimmed or cut, and I think it may be a good plan in light soils, but in heavy land I should prefer to leave the runner. On the other hand, the plants can be kept cleaner, fed better, and will doubtless give the finer fruit.

The Large Red Alpine is much grown, but Mr. Hudson has some late Continental varieties on trial which promise well. The Gumnerybury Alpine is a splendid late fruit, the berries being long and of fine quality. For use from July to November the above fruits are invaluable, and for a supply at the ordinary season (June and July) Laxton's Fillbasket is a favourite, as, in addition to its fine cropping qualities, it is of excellent flavour.

The autumn Raspberries are also a feature in these gardens, and they are at this season quite bare, that is, the canes are cut down to the ground level. Then one comes across a hedge of cordon Gooseberries, a novel and most profitable mode of culture. Figs are grown in great quantities, and there are many pot trees, the earliest being St. John, the fruits of which are now being gathered. Trees to provide for a late summer supply are just given glass protection, the Brown Turkey, Nubian and Negro Largo being favourites for this purpose. Pot fruit trees are a splendid feature, and the earliest trees are now a mass of fruit, which requires severe thinning; this applies to Peaches, Nectarines and Plums. The trees seen have borne splendid crops for the past ten years. Later houses have just passed the flowering stage, and the Cherries in 9-inch and 10-inch pots are splendid examples of pot culture. The best early varieties are grown, and the Guigne de Annonay, a fine black fruit, is the earliest, this being followed by Rivers's Early Black, Belle de Orleans and such sorts as Governor Wood, Bigarreau Napoleon and de Schrecken for later use. A large number of pot trees of Peaches, Nectarines and Figs are in a cool house for late supplies, and I omitted to note that Peach Duchess of York is a favourite for early dishes, as are Cardinal and Rivers's Early Nectarines. Pot Vines are a great feature, and these are well furnished with bunches, the varieties being mostly Black Hamburg and Royal Muscadine.

Two houses are full of early Strawberries in pots, and the fruit in the early house is nearly full-sized, there being a splendid crop. Royal Sovereign is used in both houses, but the newer Laxton's Progress is being given a trial, and it promises grandly. A quantity of plants are in frames for a later supply. Space does not permit to dwell at length upon the many phases of fruit culture here; but I must add that the grand old Lord Napier Nectarine, that has borne such fine crops for thirty years, has this season lost a considerable part of its wood on one side of the tree, and this will naturally reduce the crop, otherwise there is a good set. Vines in various stages are looking well in the permanent houses, and in these structures are many other things of interest, such as large stocks of *Salvias*, *Heliotropes*, and other flowering plants that are being grown on.

The splendid trained trees of scented Geraniums are just beginning to grow freely, having been kept cool all the winter. Here, doubtless, are the finest examples of these plants in the kingdom. Mr. Hudson had a fine batch of *Amaryllis* (*Hippeastrums*) in bloom; these were unnamed seedlings, but they were excellent both in size, shape and colour. The Orchids were in splendid condition, some very nice *Dendrobiums* being in bloom. The late-flowering *Cattleyas* promise well, having fine growths. The Water Lilies under glass are just moving and are showing very strong growths; these in the summer are well worth a visit. G. WYTHES.

THE GREENHOUSE.

THE SUNDEWS (DROSERA).

OUR native Sundew (*Drosera rotundifolia*) must be familiar to many readers of THE GARDEN, forming as it does colonies of little dense rosettes of roundish leaves. It likes damp and boggy places where, nesting among the sphagnum which often covers large stretches of such ground, it is so pretty as to at once attract the notice of even the most casual observer. A notable feature is the stout hairs with which each leaf is studded, every hair being terminated by a tiny drop of glutinous substance, to which small flies and other little insects quickly adhere and ultimately perish. Considerable controversy has, at one time or other, been aroused on the question whether insectivorous plants, to which the *Droseras* belong, derive any nourishment from the insects

stalks, so that the entire plant reaches a height of 6 inches to 8 inches. It is also a native of Australia.

D. capensis.—One of the rosette-growing species with oblong-shaped leaves. As implied by the specific name, it is a native of South Africa.

D. spathulata.—An old and fairly well known species from Australia, bearing a considerable amount of resemblance to the one herewith figured. To the above must be added the nearly allied

Drosophyllum lusitanicum, a native of Spain and Portugal. This forms a somewhat woody stem, a few inches high, at the top of which the long slender leaves are disposed. It inhabits sandy shores and dryish rocks inland. I have made no mention of the flowers, but in most of the *Droseras* these are pretty and borne on slender stems.

CULTURE.

Except the limited number that occur in dry situations, the cultural requirements of the



ONE OF THE EXOTIC SUNDEWS (*DROSERA BURKEANA*).

they have caught. It is, I believe, still regarded as doubtful if such is the case.

When exposed to full sunshine, the leaves of the British Sundew become heavily tinged with red, under which conditions they are more attractive than those which grow in shaded spots. Sundews grow in various parts of the world, and a few exotic species are in cultivation, but outside botanic gardens they are rarely met with. The accompanying illustration of a species from Natal, *Drosera burkeana*, shows well the general appearance of many of the Sundews, including the glutinous hairs above referred to.

The Kew Hand List, besides this just-named species, contains the following:

Drosera auriculata, a curious climbing species from the dry districts of Australia. It forms a small tuber, and is thus able to pass safely through periods of drought, under the influence of which it would otherwise perish.

D. binata, known also by the name of *D. dichotoma*.—This has curiously forked cylindrical-shaped leaves; they are borne on rather long

Sundews may be best understood by observing our own British species growing in a state of nature. In passing it may be noted that *D. rotundifolia* is not the only species native of this country, there being really three, but this is by far the best known. As they are but shallow rooting subjects, the Sundews thrive best in pans rather than pots. A mixture of peat, sphagnum moss and a little sand suits them well, with the addition of a surfacing of live sphagnum. A portion of the greenhouse where they are not shaded from the sun is best for them. They all need a liberal supply of water, especially during the summer months.

Most of the species can be readily increased by cuttings of the stout fleshy roots, cut up into pieces about an inch long and laid in pans in a mixture of finely-chopped sphagnum and silver sand, placing them afterwards in a warm house. Three species, viz., *D. binata*, *D. rotundifolia* and *D. spathulata*, have been successfully grown by me in the sunny window of a dwelling-house. They were in a small Wardian

case on which plenty of air was given. The object of this amount of protection was to keep them from the dust, which in such a position would, from the glutinous character of the leaves, soon disfigure them. H. P.

ROYAL OR FLOWERING FERNS.

THE Royal Fern (*Osmunda regalis*) is a true cosmopolite, for besides the British Isles it occurs in a state of nature over the greater part of Europe and Asia, extending eastward to China and Japan. It is also found in the Azores, Barbary and South Africa, while allied forms are plentiful throughout the Western Continent. The term Flowering Fern is often applied to this *Osmunda*, as the spore-bearing portions of the fronds, which occupy the upper part, usually towards the centre of the plant, are of a dense spike-like character, and at a little distance present the appearance of undeveloped flower spikes.

As might be supposed from a plant of such wide geographical distribution, the Royal Fern varies greatly in size and other particulars, for it has been recorded as reaching a height of 10 feet to 11 feet in different parts of these islands, but in a general way its fronds are from 2 feet to 4 feet long. In bleak, comparatively dry spots they are often a good deal less. The Royal Fern is essentially a water lover, an ideal situation for it being what is regarded in the popular mind as a Fern glen, that is to say, a somewhat low-lying position with a stream of water running through the lowermost part. Planted so that its crown is clear of the water, and yet sufficiently near that the roots have free access thereto, this *Osmunda* will grow luxuriantly, and form an object of great beauty. It is questionable whether it is the more beautiful in spring, just as the young delicate green fronds are first expanded, or later on when they are fully developed and the fructification on the upper part stands forth in such a decided manner. In many gardens there is a shaded pool or boggy spot, and in selecting plants for such a position the claims of the Royal Fern must on no account be overlooked. Under more artificial treatment, too, it succeeds well, as it may be grown very satisfactorily in pots, provided they are effectually drained and the roots given ample supplies of water. Stood partially submerged in a tank they form a striking summer feature, for, like most of our native Ferns, this *Osmunda* is deciduous.

The question of soil is by no means a very important matter, as the Royal Fern will grow in a loamy or peaty compost, while it luxuriates in the silt consisting principally of decayed vegetable matter and sand often brought down by running streams and deposited on their banks. Of the different forms in cultivation, the common Royal Fern (*Osmunda regalis*) is too well known to need any further description, and the most marked of its varieties are

O. regalis cristata.—Altogether of more dense growth, while the points of the fronds are more or less crested.

O. r. gracilis.—This variety is characterised by a looser and more slender habit of growth, the fronds being usually much less in number.

O. r. japonica.—A small growing form with spreading fronds, the barren and fertile ones being often quite distinct from each other.

This is more often treated as a greenhouse than a hardy Fern.

O. r. j. corymbifera.—Quite a dwarf-growing form and a delightful pot plant. The fronds are numerous and are only slightly ascending, while the weight of the crests cause the tips to droop over in a very graceful manner. This pretty Fern was sent home by Maries when travelling in Japan for Messrs. Veitch over twenty-five years ago, but even now it is far from common.

O. r. palustris.—As a pot plant this is far and away the most popular of all the *Osmundas*, being one of the Ferns grown in quantity by those who supply Covent Garden Market with decorative plants. It is of rather upright growth, with smooth red stems. On first unfolding the young fronds are of a bright crimson tint, but after a time they gradually change to the normal rather pale green tint. A very notable and interesting feature of this variety is the fact that, unlike all the others, the fronds of this variety are evergreen in character. It is a native of Brazil.



ONE OF THE EARLY TULIPS (*TULIPA SAXATILIS*).

Besides those above enumerated as varieties of *O. regalis* (though they are occasionally referred to as distinct species) there are two North American sorts, at least they are widely distributed on that Continent, but also occur elsewhere. The first (*O. cinnamomea*) is found in the West Indies, Brazil and Japan, as well as North America. This has the spike-like fertile fronds arranged quite separately in a dense tuft forming the centre of the specimen, and these impart to a fully-developed plant a very singular appearance. The second species (*O. claytoniana*) has, like the preceding, the fertile fronds gathered together in the centre, but in their case the spike-like portion is limited to the middle of the frond, the upper part widening out and bearing only barren leaflets. From this interrupted style of growth it is often known as *O. interrupta*. In addition to its being a native of North America this species is also found on the Himalayas. The cultural requirements of these two last are about the same as *O. regalis* and its varieties. H. P.

THE FLOWER GARDEN.

TULIPA SAXATILIS.

THIS beautiful Tulip, which is a native of Crete, has been in cultivation for nearly a hundred years, but is seldom met with in good condition or flowering freely. It is quite easily grown in a hot, sunny border, and one of its most essential needs is a thorough ripening of the bulbs after it has made its full growth. It is quite hardy in this country, but it should be planted rather deeply, and as it often comes into flower about the beginning of March it should be planted in a sheltered place, where it will not suffer from wind or rain. Its early-flowering qualities recommend it for use in the cold house, and a pan in full bloom, such as that shown in the illustration, is very attractive. The bulbs, which may be procured very cheaply, should be potted up in the autumn in a mixture of loam and sand. The pans should be plunged in ashes in a cold frame for the winter till they start growing, when they may be moved into the cold house. Its foliage of bright green shining leaves is distinct from all other species, while the flowers are of good size and bright mauve-purple in colour, with a yellow base. A coloured plate of this charming Tulip appeared in THE GARDEN for August 5, 1899. Although so early in flower it is closely followed by the lovely Turkestan Tulip (*T. kaufmanniana*), which makes a suitable companion for it, either in pans in the cold house or planted in some sheltered nook in the rock garden or sunny border. Other early-flowering Tulips include the rosy purple *T. pulchella* from Asia Minor and the mauve-coloured *T. Lownei* from Palestine. Both these are small-growing species well adapted for pot plants. The above-named Tulips are most charming subjects for a cool greenhouse in spring and should be cultivated far more extensively than they are at present. Given perfectly cool treatment they are but little trouble, and amateurs need have no hesitation in trying them. W. I.

THE STRIPED SQUILL.

PUSCHKINIA LIBANOTICA COMPACTA is a charming subject for decorating the April garden, yet, although the bulbs are cheap, it is seldom seen. The little flowers (white, shaded and striped with blue) only rise to a height of about 6 inches, but when seen growing in a broad mass produce a beautiful effect. This Squill is quite easy to grow in a warm, well-drained situation. On sunny rockeries it flowers freely year after year. Many amateurs seem to think that all spring-flowering bulbs need is a moist, half-shaded position, but I have the bulbs under notice, together with *Chionodoxa gigantea*, doing exceedingly well on a bank which almost dries up during the summer months. E. TESCHEMACHER.

SAXIFRAGA GRISEBACHII.

SINCE the introduction of this attractive species some few years ago it has rapidly grown in favour, as it is undoubtedly the most handsome of all the red-flowered Saxifragas. In cultivation



A DWARF ROYAL OR FLOWERING FERN (*OSMUNDA REGALIS PALUSTRIS*).
(See page 214.)

it has proved quite hardy when given a well-drained crevice or ledge in the rock garden, and will go on making fresh rosettes and increase in size. The plants delight in very gritty soil, with a plentiful admixture of limestone chippings, and enjoy a sunny situation. Here they will flower freely, often commencing in January in favourable seasons and lasting in good condition till well into April. In habit this Macedonian Saxifrage is distinct from all other members of this extensive genus, its nearest ally being the Pyrenean *S. media*, which has similar rosettes of leaves, but has racemes instead of spikes of flowers. Its singular appearance makes this plant most attractive, with its nodding spikes of closely-set flowers adorned with yellow stamens. The stout stems, as well as the bract-like leaves which clothe them, are of a bright rosy pink, the latter being tipped with green, while the flowers are blood red in colour. With age the colour of the stem fades and the bracts become more leaf-like, while the stem lengthens out, eventually reaching a height of 6 inches to 9 inches, or more in strong specimens.

Its adaptability for pot culture may be noted in the accompanying illustration, which shows a pan of plants three years old from seed. These have been grown on in cold frames, unprotected save in the winter months. Seeds germinate freely and are best sown in spring. As soon as they are large enough to handle the seedlings should be pricked off into small pots, two or three together, using a mixture of very gritty soil and limestone, with ample drainage in the pots. Care should be taken that the young seedlings are not choked with Liverwort in their young stage, and they should have the protection of a light against heavy rain. The imbricated silvery rosettes of leaves are very ornamental and vary a good deal in size. On account of its early-flowering habit this is a valuable plant for the cold house, where it is seen to much more advantage than when growing outside, although it stands the weather, and even frost, well when planted in a suitable situation.

W. I.

KITCHEN GARDEN.

BEEF CARTER'S CRIMSON BALL.

THE Beetroot is always welcome as early as possible, both for salads and for use as a separate dish, and those who can find room for a small quantity of the early section would do well to grow Carter's Crimson Ball, which is remarkable for its earliness and its excellent flavour. Round Beets are of great value at this season, as if sown at the end of April in the South, or the early part of May in the North, the roots can be lifted early in the summer when there is a great demand for salads, and the newly-grown or fresh, highly-coloured slices are much liked. These new types of Beetroot are much superior in every way to the old

flat roots, which were pale, stringy and flavourless; indeed, I do not think them worth growing. Crimson Ball is quite the reverse; it has a splendid colour and texture, and grows so rapidly that the roots are far superior to other forms for first supplies. I have, to secure early roots,

sown in boxes in frames and planted out on a warm border between rows of other early vegetables, such as Peas or Dwarf Beans, but even when sown in the ordinary way the growth is rapid, and the seedlings, in good land on a warm border, soon turn in fit for use.

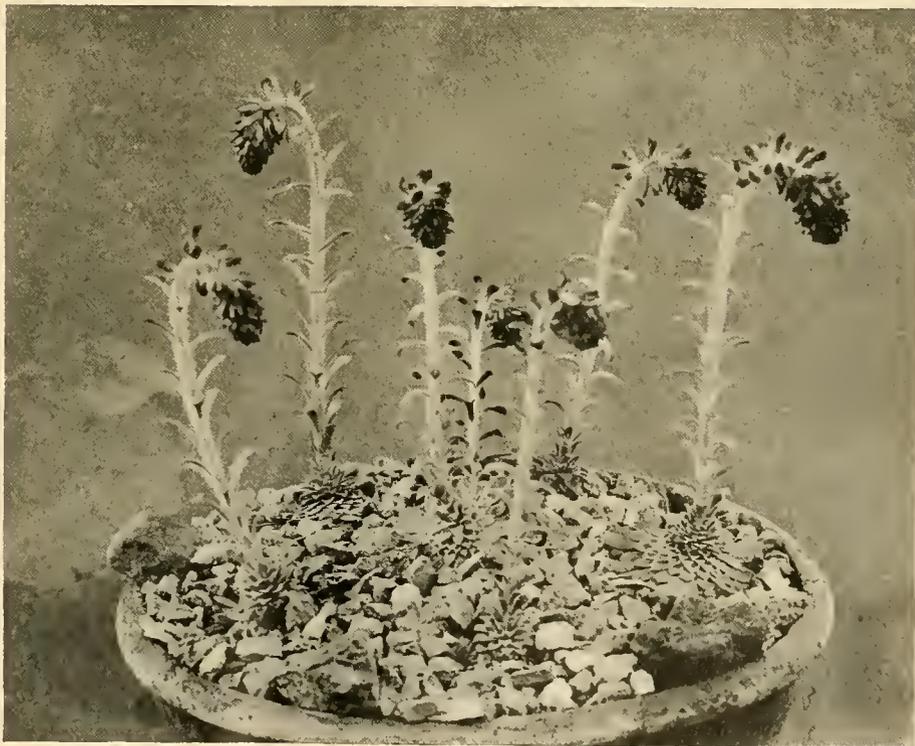
VEGETABLE MARROW TENDER AND TRUE.

AMATEURS frequently grow the Vegetable Marrow to advantage, and if a large space is to be covered the trailing varieties, such as the Long White or Green, are very good. But others have to make the most of their space, and here the above-named variety will be found most valuable. It belongs to the bush class, and has great merit, both as regards the solid depth of flesh and its delicate flavour. The fruits are roundish, with a pretty mottled green skin. It has early fruiting and free setting properties. The bush Marrows are not grown nearly as much as they deserve; they thrive well in ordinary garden soil if given a little food when in full bearing, and the plant, after a hot summer's day, delights in copious overhead waterings. The fruits of this variety are best when cut quite young, not larger than a cricket ball, and cooked whole. Treated in this way they are delicious.

A VALUABLE EARLY FRENCH BEAN.

I AM aware we have no lack of good varieties of the French Bean, but there are none that crop in such a short time as Sutton's Forcing. It is far away the best winter Bean that I have grown, and it is so dwarf that unless the rows, when grown in beds, are quite close together, space is lost. The pods are borne quite close to the soil, and in the winter months the plants do not show any signs of running, but make a remarkably close growth. For pot work in the early part of the year it is most valuable; seed sown in December gave a good crop six weeks later, and this at a season of the year when these plants are not always a success. At that date, or for winter and early spring supplies, I advise 5-inch or 6-inch pots.

G. W.

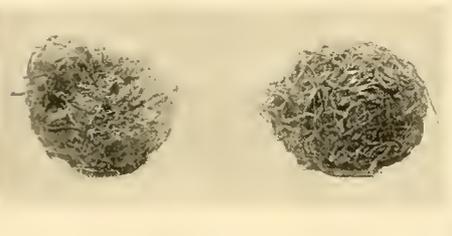


GRISEBACH'S ROCKFOIL (*SAXIFRAGA GRISEBACHII*).

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

FLOWER GARDEN. — Pansies and Violas should be planted without delay for flowering in the near future; these plants prefer good soil and an open position where the plants can be sheltered from the midday sun. Sweet Peas that were raised in pots and boxes under glass, and subsequently hardened off in



1.—TUBEROUS BEGONIAS IN A DORMANT STATE. THAT ON THE LEFT IS PLACED THE RIGHT WAY UP, AND THE OTHER THE WRONG WAY.

the cold frame, may be planted now. Should the seedling plants not be hardened off sufficiently, let them remain in the frame a few days longer. Complete the sowing of hardy annuals without delay: I always sow the seeds thinly and evenly in well-prepared friable soil, the resulting seedlings invariably flowering in late July in ordinary circumstances. Within the next week or ten days sow the half-hardy annuals outdoors. I make a sowing where the plants are to flower, and find this answers very well indeed.

The Vegetable Garden.—I am staking some of my earlier Peas. Insert the stakes before the Peas get too tall. Scarlet Runners should be sown at this period if the resulting crop is wanted by the end of July or early August. Sow the seeds 6 inches to 8 inches apart in the row and cover them with about 2 inches of soil. Salads, in the form of Mustard and Cress and Radishes, if sown now will very soon provide supplies of these subjects; the two former should be ready in about two weeks, and the latter in from five to six weeks. Spinach is an indispensable vegetable, and for this reason I make a sowing every week or two. Sow the seeds 1 inch deep in rows, the latter being about 1 foot asunder. Spinach takes about eleven weeks to develop from the time of sowing. Beds of the earliest Onions should be dusted with soot to keep off the Onion fly. Beet may be safely sown at this time. Good deep soil that has not been recently manured is best for this crop. Sow the seeds 2 inches deep in drills 1 foot to 15 inches asunder.

Orchids.—To promote the well-being of my Orchids, I make a rule to damp down the house freely from this time forth through the summer when the weather is seasonable. Complete the repotting of *Odontoglossums*. These Orchids do better in small pots. A suitable compost for repotting is made up of two-thirds peat, one-third of charcoal, sphagnum moss and sand. Half fill the pots with crocks.

The Greenhouse.—Greater care in ventilating the greenhouse and conservatory is now very necessary, the temperature rising so rapidly when the sun is not obscured. Open the ventilators so that cold draughts may be avoided. Camellias and Azaleas that have gone out of flower I am now repotting. The former subject does well in a mixture of peat and sand, but

better in a compost of light turfy loam and a fifth part each of decayed leaf-mould and coarse silver sand. Any of my Azaleas (*A. indica*) that need repotting are given a compost of five parts peat and one part silver sand. I have tried using good fibrous loam and peat in equal proportions, adding thereto a fifth part of silver sand, and find this also answers well.

Hardy Fruit.—Peaches on walls should be disbudded, doing this in somewhat experimental fashion, especially in cold situations. A dusting of Tobacco powder among the leaves will prevent green-fly or black-fly effecting a settlement. Continue to afford these trees shelter in cold weather, especially at night. In preparation for early Strawberry supplies I am cleaning the ground between the plants and placing clean straw or litter thereon. By these means the ground is kept moist and cool and clean fruit ensured later on. Keep a sharp look-out for the Gooseberry caterpillar. Should this pest be in evidence, hand-picking may be adopted by those who have the time; the bushes should also have a dusting of lime.

Chrysanthemums.—Early-flowering Chrysanthemums may be planted outdoors in warm, sheltered situations at the present time. Where the flowering quarters are open and exposed, it would be better to wait another fortnight. In the meantime fork over the quarters and have the ground ready for planting. Pot on the later sorts that are to bloom in large pots. My best plants are now in 6-inch pots. Pretty decorative plants are doing well in 5-inch pots. D. B. C.

THE TUBEROUS-ROOTED BEGONIA AND ITS CULTURE.

To the inexperienced grower the tuberous-rooted Begonia appears to be a somewhat difficult subject to deal with, but this is quite a mistaken notion. Given proper soil and suitable conditions in which to grow this plant, it is quite easy to manage. As a plant for greenhouse or conservatory embellishment the tuberous Begonia is one of the best, and apart from their use as plants for culture under glass, they have acquired a greater value of late years for beds and borders outdoors. Beds exclusively devoted to the tuberous-rooted Begonias make a most glorious display, and if sheltered quarters can be provided where also they may be shielded from the sun during the hottest period of the day in summer, they fully repay the grower for giving them this consideration.

Raising Begonias from Seed.—Seed from a reliable source should be sown in the earliest



3.—A TUBEROUS BEGONIA POTTED UP INTO A 5-INCH POT.

days of spring; in fact, January or February is not too early. The whole process of raising these plants from seeds was described on page 27 of the issue for January 18, so that it is unnecessary to go into details here. The small plant on the right, in Fig. 2, represents a seedling after the first pricking out. These seedlings should be transplanted in other boxes about 2 inches apart, and after getting established should be placed in rather cooler quarters.

Starting the Tubers.—Tubers as represented in Fig. 1 are just as they are received from the nurseryman. The first tuber reveals the concave formation when placed in its proper position for starting into growth. The tubers should be arranged in this manner, close to each other, in shallow boxes and in Cocoanut fibre or any light sandy soil. If placed in a gentle bottom-heat and kept just moist the tubers will very soon give evidence of new life by fresh growths in the concave portion of the tuber. Roots will be freely emitted from the tubers too. Observe the position of the second tuber in Fig. 1. The concave position is reversed and the convex is shown instead. Do not arrange the tubers in this fashion.

Potting Up Tubers after Growth has Developed. As soon as the tubers are making free growth and give evidence of vigorous root formation, pot



2.—THE PLANT ON THE LEFT IS A TUBEROUS BEGONIA THAT IS READY FOR POTTING UP; THAT ON THE RIGHT IS A SEEDLING AT THE RIGHT STAGE FOR INSERTION IN A BOX.

them up without delay. The illustration on the left of Fig. 2 shows a tuber well rooted and making free growth. This may be transferred either into a pot 3 inches in diameter or one measuring 5 inches across. The soil for this repotting should comprise loam two parts, well-decayed manure one part and leaf-mould and sand one part. Mix thoroughly and pot moderately firm. Give enough water to keep the soil just moist for the first week or so. The plants must now have plenty of light, and for this reason should be arranged on shelves near to the glass, taking care, however, to shade them from bright sunshine. As they become established the glass structure must be ventilated, as the plants, especially those intended for bedding purposes, must be gradually inured to harder conditions. Fig. 3 represents a more vigorous plant placed in a 5-inch pot, where it will soon become established and form a fine, sturdy specimen.

Subsequent Treatment of Pot Plants.—Plants intended for pot culture may be finally moved into pots either 6 inches or 8 inches in diameter, employing soil similar to that prescribed above.



1.—OLD CLUMP OF MINT LIFTED READY FOR DIVISION.

No heat is required after the end of May or mid-June in a normal season.

LIFTING AND PROPAGATING MINT.

MINT is one of the most popular herbs of the garden, and has been in use since before the Christian era. There are two types that are usually grown, one, the Peppermint, used for making the well-known cordial Peppermint, and the Spearmint, that is used in a green state—forced or otherwise—for culinary purposes. It is with the latter that we are especially interested in this note. The Mint delights in soil that is rich and moist; hungry, dry and poor soil should, therefore, either be enriched with a heavy dressing of good lasting manure or such quarters be avoided altogether. If given good quarters the Spearmint (*Mentha viridis*) will succeed in almost any aspect, although when planted in a sunny position the best results are invariably obtained.

Propagation of Mint.—The propagation of Mint is generally done either by cuttings or by division of the old roots. It is easily accomplished if done in the spring. Either March or April is a good time, as the growths are young and tender and root very readily. Cuttings will root quite freely if dibbled into moist sandy soil and a hand-light placed over them. By keeping them close for a few days and shading the cuttings during the same period the process of root formation will be speedily accomplished. The easier method of increasing the Mint, however, is by division of the roots during the period above named. Fig. 1 shows a clump lifted from an old bed of Mint. Here it will be noticed that the growths have numerous vigorous-looking roots, and in several instances fresh young shoots have recently evolved. The fresh green shoots may be detached and made into cuttings some 3 inches in length, and if these same cuttings can be removed close to the stem of the underground shoots when they are of the desired length so much the better. The old clump should then be broken up into numerous pieces of various length. Any piece of the old plant, so long as it has roots adhering, will very soon root into the soil of the fresh quarters. Fig. 2 is a good representation of a few growths broken out from the clump in Fig. 1. Observe how vigorous these underground growths are in appearance, and also note the young shoots that are already developing along the stems. The rooted cuttings above referred to should be planted out 3 inches apart in rows, and the rows should be 1 foot asunder. The divided portions of the old plant should be planted in trenches

some 2 inches to 3 inches deep, arranging the pieces about 9 inches asunder. The rows should be made 1 foot apart. Mint may be lifted at any time between October and April, and if placed in a cold frame or cool greenhouse will provide ample supplies before the beds outdoors develop their growth. Lift the plants at intervals.

A GOOD HOT WEATHER SPINACH.

No doubt many beginners in gardening have been much annoyed with the ordinary summer Spinach which has such a tendency to run to seed before the leaves are barely large enough to cook, and to all such the plant known as New Zealand Spinach can be thoroughly recommended. It is an annual that grows wild in New Zealand and Australia, its botanic name being *Tetragonia expansa*. It is an easy subject to grow, and although the flavour is not so good as that of Spinach proper it makes an excellent substitute. Rich, well-dug ground should be provided for it, raking the surface down well before sowing.

The seeds may be safely sown in the open ground early in May in rows at least 3 feet apart, thinning the seedlings when they appear to 1½ feet from plant to plant. Keep all weeds down, and as the summer advances the plants will grow and touch each other, thus almost entirely covering the ground. Water well during very dry weather. As soon as the plants are large enough, picking may commence, taking the tender young tops off for cooking. This induces the plants to branch afresh, and a crop is thus ensured until frost kills the plants. It is a most vigorous growing subject, hence it must be given plenty of room in which to develop.

WORK AMONG THE STRAWBERRIES.

THE trusses of flowers are now showing in the centres of these plants, and this is a sure indication that some amount of attention is required if the fruits are to be ripened in the best possible condition. The soil between the rows should be lightly stirred with a Dutch hoe, so as to uproot any weeds that may be present, and if they are at all large they should be entirely removed. Any old, partly dead leaves ought also to be removed, as they are of no use to the plant, are unsightly, and provide excellent harbourage for animal pests of various kinds. Then give the soil, especially close round the plants, a good dusting with lime and soot, taking care to keep it out of the centres of the plants, and finish off with a good mulching of some strawy material.

At this season long stable manure is excellent, as the plants will derive some nourishment from it, and by the time the fruits are ripening it will have been washed quite clean by rains and thus provide a good protection against splashing by heavy rains. Many amateurs make the mistake of using lawn cuttings as a carpet for the swelling and ripening fruits to rest upon, with the result that many decay, especially if the season is a wet one. Hay or dried grass in any form is almost as bad and should be avoided. Failing the long strawy manure advised, the next best thing is good, clean, sweet straw. Tan from a tanyard also answers very well, but it should be well sweetened before being used.

Nets should be overhauled and any holes that are present repaired, so that when the fruit is swelling they will be ready for placing in position. Netting is quite useless if any holes are left as birds are sure to find them.



2.—SPECIMEN UNDERGROUND PORTIONS OF MINT: NOTE THE ROOTS AND VIGOROUS YOUNG SHOOTS.

THE TOWN GARDEN.

THE UBIQUITOUS SLUG.—The town gardener who poses as a philosopher makes pretence of deriving pleasure from the presence of slugs in his garden, not because they ruin scores of his choicest plants, but because he can have the supreme joy of killing them. Some cynic or another has said that every Englishman wakes up daily thirsting for blood, and if he be a gardener and cannot find anything bigger upon which to exercise his prowess, he can always find a slug or two in a town garden, and in dealing out sudden death he glories. Most of us would, however, be just as happy without the slugs, and an excellent way to get rid of them is to use Vaporite, but it will be essential to follow this up by scrupulously clean gardening, for although slugs are not particular, they certainly prefer the untidy to the tidy garden. Do not have any rubbish about, keep the plants trim and smart, use Vaporite, go out each evening with a lamp bent on slaughter, and the enemy will have to give way before such a determined onslaught.

MULCHING AND FEEDING CLIMBERS.—It is a regrettable fact that the majority of climbers seen in town gardens do not look as healthy and flourishing as they ought to do, and I do not think that the reason of this is usually far to seek. People who cannot resist damping the surface soil of their flower beds and borders every evening appear to think that when once a climber has been planted against a wall or an arch it does not demand any more attention, and it is left to its own resources. This is all wrong, more particularly in the case of those plants that are trained against walls.

It must be borne in mind that the position of the roots is such that they never get as much benefit from the rain that falls as the plants in the open garden, and, further, that the bricks of the wall suck vast quantities of moisture out of the ground. I would urge those who have climbers—and they are indispensable to the complete charm of the garden—to remove about 3 inches of the surface soil from over the roots and put in its place some rich compost, well firmed down; this done, soak the ground thoroughly with water, giving 5 gallons or 6 gallons to the square yard. To finish off the work in the best possible manner procure some good manure and spread it lightly on to a depth of 3 inches; this will convey food to the roots at the same time as it conserves the moisture in the soil. Should the owner of the garden have fastidious objections to the appearance of manure on the soil, he can easily cover it up with a thin sprinkling of fine soil, but it is just as well if it is left exposed.

THE GREENHOUSE.—This is a delightful adjunct to the town garden, and whenever space can possibly be found for one it should be erected as a permanent structure or a tenant's fixture, according to circumstances. During the summer it is apt to be somewhat neglected for the brighter pleasures of the garden, but its occupants must not be entirely forgotten, for they have probably already done us good service, and with reasonable attention will do so again. Time must at least be found for keeping the whole of the interior surfaces—pots, plants, benches, glass and floor—perfectly clean, and provision should be made for protecting the plants from the fiercest rays of the sun. For this latter purpose roller blinds, which can be raised or lowered at will, are indisputably the best, but where they are not at command a permanent shading, such as Summer Cloud or other similar compound can be painted on to the glass. The grower should also be especially careful that those plants which require water never suffer from the lack of it, but are examined daily so that their wants may be supplied. When plants are neglected and become debilitated they fall an easy prey to insect and fungoid attacks. **HORACE J. WRIGHT.**

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FLOWER GARDEN AND LAWNS.

LAWNS should be frequently rolled and mown in order to keep them smart. Keep the beds and borders containing flowers neat and clean and the verges of grass well clipped. Bedding Calceolarias may be put into their summer quarters where they will get established before the hot weather comes on, and, therefore, give much better results. Beds containing bulbs of Hyacinths, Tulips and similar plants must be kept smart now.

PITS AND FRAMES.

These will now demand a lot of attention as they contain many subjects that are being hardened off, such as Verbenas, Fuchsias, Dahlias, Pentstemons and Petunias. These should be kept well watered and free from green fly. Gradually draw the lights entirely off them in fine and warm weather.

Primulas and *Cinerarias* may now be sown, the former in heat and the latter raised as cool and hardy as possible.

PLANTS UNDER GLASS.

Keep the paths in the stove frequently damped during sunny weather. Early potted plants that make rapid growth will now require shifting again. Take care that no plant becomes dusty or it may spread spider and thrips. If a plant does become so dry that the soil throws off water without being saturated, it should be immersed in a pail or tank for ten minutes.

Gardenias that have finished flowering may be cut back into the hard wood. Take care of the young batch recently propagated and pot on as the pots become full of roots. Greenhouse plants should have more air now, and potting and tying should be the order of the day.

KITCHEN GARDEN.

Celery Plants.—Continue to prick out these into a frame containing about 2 inches or 3 inches of good soil and manure. If treated thus they can be cut out in squares when ready and taken to the trenches with a good ball of roots.

Brussels Sprouts.—The first sowing will now require hardening off, and when sturdy enough may be planted out in good soil 2 feet 6 inches apart each way. A good plan is to put them out 3 feet 6 inches between the rows and crop with a short-haulmed early Potato, the latter coming off early and thus giving the sprouts ample room for development.

Maize or Sweet Corn.—The earliest batch should be hardened and planted out as soon as the weather becomes favourable for so doing. Sow late Peas, such as British Queen, Carter's Michaelmas and Ne Plus Ultra, about three times during this month.

HARDY FRUIT GARDEN.

Autumn-fruiting Raspberries of the Belle de Fontenay type, if not already done, should be cut down to within 3 inches of the stool. Take away the protecting material from Peaches, Apricots, Cherries and Plums as soon as the weather admits of so doing. Examine the trees daily for pests, and take strong measures if any aphides are seen. Spray with Extract of Quassia on a fine day about 3 p.m. or else early in the morning; this will prevent an immediate attack. I have found with Peaches, Nectarines and Cherries that the best way of dealing with a bad attack of aphides is to syringe with warm water, to 4 gallons of which a quarter of a pint of petroleum emulsion has been added, repeating this for a day or two.

FRUITS UNDER GLASS.

Late Vines coming into flower should have a night temperature of not less than 60°. Close

the house moderately early and shut up with a good sun temperature ranging from 75° to 90°. The latest Vines of such varieties as Lady Downe's Seedling should have the points pinched two leaves beyond the bunch, and let the laterals be brought down to the wires carefully, as they snap very easily.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

STEPHANOTIS FLORIBUNDA should now be induced to grow freely by being placed in a brisk and moist atmosphere for a few weeks until the growths have attained a length of 10 inches or 12 inches, after which the plants may be gradually inured to a lower temperature. The ordinary plant stove is sometimes too warm and too moist for *Stephanotis*, and the result is that the plants under these conditions do not flower. Avoid training the shoots too closely together, as this only tends to provide one of the best harbours for mealy bug that can possibly be had.

Orchids.—*Dendrobium dalhousianum* is a large, handsome plant when well grown. The roots are strong and persistent, liking a very rough, open compost and large, roomy pots. Peat and sphagnum in equal proportions, with abundance of rough lumps of charcoal and crocks, suit it well. The pots must be more than half filled with drainage, protecting this with a layer of rough moss before putting the plants in position. Pot firmly, and keep the leads back as far as possible, so that they do not reach the rims for a couple of seasons at least, and finish the compost with a slight rise to the centre.

FRUIT UNDER GLASS.

Melons.—Where there is a constant demand for these it will be necessary to make sowings about every three weeks, a few seeds only being sown at a time. Melons succeed very well through the summer in frames on hot-beds where a bottom-heat of about 80° can be maintained, but both watering and syringing must be done with care and judgment if satisfactory results are to be obtained.

KITCHEN GARDEN.

Runner Beans.—These may now be sown outdoors with every prospect of success. The Scarlet Runner adapts itself to many methods of treatment, and a judicious use of the plant may serve to hide many a rough corner in the garden or to form a pretty and effective dividing line between the kitchen and flower department where these two sections of the garden adjoin. In whatever position it may be put well-mannered soil is an absolute necessity if the same plants are to keep on bearing throughout the season.

HARDY FRUIT.

Strawberries in the Open.—The plants look well at present; the flowers are showing strongly and the young foliage is vigorous and healthy. Mulching should now be pushed forward as speedily as possible. Before attending to the mulching do not under any circumstance omit to apply a liberal dressing of lime or of lime and soot.

FLOWER GARDEN.

Wallflowers.—If for no other reason but its sweetness, the Wallflower should find a place, particularly in mixed borders. The single varieties are as easily raised from seed as a bed of Cabbage. They may be sown either in rows or in beds on light garden soil. For summer and autumn flowering the best time to sow is the beginning of May. When about 2 inches high prick them out into nursery beds in rows about 6 inches apart, where they may remain till the borders are dug in spring, when they should be lifted with balls and planted where they are to bloom.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Growing water plants in tubs (*Cynthia*).—If you mix half a peck of charcoal with the soil used for each tub this will tend to keep the water fresh. Of course evaporation will be fairly rapid and so fresh supplies of water will be needed at comparatively frequent intervals. If you use the charcoal as advised you will not have much trouble with the water.

Perennials for cut flowers (*B. W. Atkinson*).—You are somewhat late to be planting with a view to getting a good flowering of many plants this year, but you may get some flowers if you plant good-sized examples of the best things. For instance, it is late or unseasonable now to be thinking of planting Spanish Irises, Flag Irises, single and double Pyrethrums, Trollius and many more, yet these are among the most beautiful and desirable of hardy plants in the cut state. You may, however, plant *Aster amellus* in many forms, *A. acris*, *A. lævigata*, *Helenium*, *Achillea*, perennial Peas, *Coreopsis grandiflora*, *Gaillardia*, any of the perennial Sunflowers, *Heliopsis lavis*, *Campanulas* of sorts, *Gypsophila paniculata*, *Phloxes*, *Leucanthemums*, *Erigeron speciosus*, *Anchusa italica*, *Galegas* and many more. By planting the Flag Irises, single and double Pyrethrums and Delphiniums now good plants and a more representative flowering would result another year. To the foregoing many bulbous-rooted plants should be added, but these could not be planted before the autumn ensuing.

Alternantheras going off (*W. S. C.*).—You say nothing as to the conditions of the treatment given to your *Alternantheras*, but after carefully examining those sent we can discover no special reason for their going off in the way they have done. There is little doubt in our mind that the trouble has arisen from what the gardener terms damping off, set up by overcrowding or by too close an atmosphere. Remember that all fungoid troubles of this class are best combated with a free circulation of air. Out-of-character specimens are somewhat difficult to name definitely, but apparently yours are *nana anrea*, yellow; *versicolor*, pink; and *paronychioides*, crimson.

Narcissus coming a bad colour (*Ignoramus*). It is just possible that the season of 1907 was largely responsible for the deficient colouring of the blooms to which you refer. The germ of the flowering, as you probably are aware, is laid nearly a year in advance, and any material check at the moment of the forming of the embryo bud during the summer of 1907 would only be revealed by the flowering in the spring of this year. The fact that the other sorts mentioned are of normal colour only strengthens the view that some local influence at the period of maturing last year is the principal cause of the failing. We are assuming that the bulbs have been well grown and are in other respects quite up to their usual standard.

Tulips not flowering (*A. D., Perranwell*).—The two bulbs sent are quite sound and healthy, with good roots, and to all appearance should have flowered well. The foliage on the one bulb has obviously been badly eaten by slugs, and as these pests seem to have a great partiality for Tulip bulbs and leaves, they are probably the cause of the trouble. The "small worms," which are a kind of millepede, are not present in sufficient numbers to do much harm, and we do not think the non-flowering can be attributed to them. They certainly would not be in the bulbs when they were bought, but would much more likely be caused by the manure used, as they live on decayed vegetable matter. Try to give a good dressing of lime in the summer or autumn when the bulbs are lifted;

it will tend to keep them down, and do not use the same sort of manure again. We should say that if some of the bulbs were very small when planted, naturally they would not flower much; or it may be, looking to the past summer, that the unfavourable climatic influences affected their ripening. Either of these causes would affect the bloom, but there is nothing about the bulbs sent to suggest them in this case.

THE GREENHOUSE.

Hyacinth bulbs gone wrong (*Oropesa*).—Complaints as to the unsatisfactory behaviour of Hyacinths and other bulbs are very common this year, the general opinion being that it is to a great extent owing to the cold wet weather we experienced last summer, when the bulbs should have been ripening for another season. At the same time, of the bulbs sent by you the two in fibre had not a healthy root, and consequently failure was certain. They appear to have been kept in fibre sufficiently moist to cause the roots to start, and it then apparently got so dry that they perished. When bulbs are potted in good potting soil it is far easier to keep the roots in a regular state of moisture than when they are in Cocoanut refuse, which dries very quickly and is difficult to keep in an even state of moisture. You did right in separating the offsets, as they have, of course, a tendency to weaken the bulb. The general treatment as detailed by you leaves nothing to be desired; but, of course, if the bulb does not contain a good spike of blooms in embryo, no treatment will develop one. Still, if you use potting soil instead of fibre, you may reasonably expect better results.

Plant to cover damp wall of greenhouse (*I. R.*).—You cannot do better than plant *Ficus radicans*, a self-climbing green-leaved plant that will grow rapidly in a temperature ranging from 50° to 60°. A variegated form of it is also obtainable.

Bottom temperature for Carnation cuttings (*Novice*).—The bottom temperature mentioned in the article to which you refer is obtained from hot-water pipes. The beds of sand are formed on benches fixed over the pipes 1 foot or 1½ inches away, so that the temperature of the soil is easily maintained 5° higher than that of the atmosphere. Please do not apologise for writing for information; we are always most pleased to assist our readers.

Keeping Tree Carnations (*M. A. M.*).—Tree Carnations may be kept year after year if they are carefully attended to. If they are treated for winter blooming they should, after the flowering period is over, be shortened back in order to obtain good free growth, and if the roots are in a healthy state they need not be re-potted. In this case a liberal top-dressing is very helpful. It is certainly not necessary to throw the old plants away every two years, particularly when a supply of cut flowers is a consideration.

KITCHEN GARDEN.

Winter and spring Broccoli unsatisfactory (*A. B. C.*).—The Cauliflowers would, undoubtedly, do well in deeply-trenched ground in the summer time. There is plenty of heat, of course, to mature the plants; but the loose, trenched soil is quite unsuitable for Broccoli, especially when the plants are grown in such an exposed position. They would succeed much better if grown in quite firm ground. For instance, if a plot of ground were cleared of Pea haulm at the end of the summer, it would be wrong treatment to deeply trench such ground and then plant Broccoli. The plants would grow luxuriantly, but they would suffer during a severe winter. The stems immediately below the leaves are not solidified, and when exposed to frosts they are injured and often killed. The proper treatment would be to simply level the ridges where the Peas grew and to put out strong plants in the firm, undug soil. The plants may not attain to a very large size, but they would bear fine, compact heads or flowers.

Asparagus Kale (*Sandy Soil*).—A medium rich loam suits this Kale best, but it can be successfully grown in a sandy soil; in fact, all the Kales will thrive in light and rather poor ground if it is well manured and the plants carefully grown while they are quite small. If once the seedlings become stunted through being left too long in their seed-beds they will never be satisfactory. Deeply trench the soil and put in plenty of rotted manure quite a month before the plants are put there. The seeds

of Asparagus Kale should be sown early in April and the resultant seedlings transplanted 4 inches apart in a nursery bed prior to being planted in their summer quarters.

Melons and Cucumbers failing (*E. T.*).—I have carefully examined your Melon plant and cannot find any trace of eelworms in it, though I have examined sections of the entire stem under the microscope, nor can I detect any insect pests in the soil, so that I am sorry that I cannot give you any clue to the reason of the failure of your plants.—G. S. S.

Edibility of Gourds (*W. J. W.*).—Of the twelve named varieties of Gourds in your list we can commend two only as truly edible, those being the Yellow Mammoth or Pumpkin and the Egg-shaped Ohio Squash, assuming yours are to be the same as we grew twenty years ago. This latter variety, with its marrow yellow flesh, always seemed to us the best of all the Gourds or Marrows. All the rest belong to the ornamental section, and are grown for such purpose only. We saw one of the white egg-shaped varieties fruiting remarkably at Long Ditton last summer, and realised that if edible it would make a valuable garden variety. When cooked, however, it proved horribly bitter, and that seems to be the general character of the flesh of the ornamental varieties. Mr. J. W. Odell gave a very interesting lecture on Gourds to the Fellows of the Royal Horticultural Society in 1905, and he particularises many sorts by no means commonly grown for ornamentation, but his list of varieties suitable for eating is a very small one. Possibly many existing ones could be largely improved in productiveness were judicious cross-breeding undertaken.

MISCELLANEOUS.

Laying out a tennis court (*T. R. W.*).—For a single tennis court the base or end lines should be 27 feet, and for a double court 36 feet. The side lines in each case are 78 feet long. The serving lines will be 18 feet from the base lines in each case, and the net is stretched exactly across the centre.

Information about newly-planted Rambler Roses (*E. J. Davis*).—As your Roses have evidently been pruned once there is not any need to cut the shoots back more, providing the wood is firm and the buds are good. If the wood appears soft at the top you must cut down to that which is plump and sound.

First-class gardening dictionary (*G. M. Widd*).—"Nicholson's Dictionary of Practical Gardening" is the most up-to-date and comprehensive gardening dictionary that we know. It is published by L. Upcott Gill, Strand, London, W.C., in four volumes, price £4 4s.

Grubs from herbaceous border (*G. W.*).—The grubs you forwarded are those of a fly belonging to the family Bibionidae, and probably to the genus *Biblio*. The flies no doubt lay their eggs at the roots of plants from which the grubs are hatched. I expect you would find that *Vaporite*, sown broadcast round the plant at the rate of 2oz. per square yard and worked in to a depth of about 6 inches, would kill the grubs. No liquid insecticide is of any use. The flies are those rather thin-bodied creatures which are black or reddish in colour, and which fly slowly from one plant to another, and are sometimes present in large numbers for a few days about the end of April or in May.—G. S. S.

Using sulphate of ammonia (*A Beginner*).—Sulphate of ammonia is a highly stimulating manure that acts very quickly and needs to be used very carefully. It is best applied as a top-dressing in quite small quantities, say, 2lb. per square rod, giving two dressings at intervals of three or four weeks, taking advantage of a wet day so that it is quickly washed into the ground. For pot plants a teaspoonful in from 2 gallons to 3 gallons of water will be enough, at least at first; but you may find it an advantage to increase the strength a little later on. It must not be used very frequently for flowering or fruiting plants; but for crops where leaves are desired, such as Cabbages, Lettuces, Ferns and Palms, it is most helpful.

Preserving Ferns in a book (*Cally*).—This is very simple and can be done by anyone. Cut the fronds at any time of the year, but do not cut them when they are wet. Then carefully spread them out between sheets of newspaper, place a board on top and weight this with bricks or anything that may be at hand. Place in a dry structure, such as a stove-hole or potting-shed. During the summer the fronds may remain between the papers until dry, but in the winter the papers should be changed twice the first week. When dry you can place the fronds in a book or paste them on sheets of stout paper. "Choice British Ferns," by Charles T. Drury, F.L.S., is a good book on hardy Ferns. It is published by L. Upcott Gill, 170, Strand, London, W.C.

Colt's-foot and Bindweed (*E. W.*).—There is nothing, we fear, short of digging out the roots that is likely to be of any practical use in the circumstances. We should not hesitate to dig it out, believing that the house would be secure enough on its own foundations to bear the effects of the soil disturbance necessary to do so. In applying salt, carbolic acid or aught else the ever-present difficulty is the depth to which the roots descend, and likewise their forked character. The roots of both plants are also very brittle, and even when forking it out you will need to exercise more than ordinary care. Pulling, as soon as a leaf is seen above the surface, is of some good at times, and you might for a time try this and the salting. Cutting down while the plants are in the greenish stage has a very weakening effect and is so simple as to be worth a trial.

SOCIETIES.

THE GREAT INTERNATIONAL EXHIBITION AT GHEENT.

The following is an abridged report of the chief classes at the centenary exhibition of the Royal Agricultural and Botanical Society of Belgium, opened at Ghent on the 25th ult. The show was generally considered to be the most extensive and comprehensive ever seen in Belgium.

ORCHIDS.

Major Holford, C.I.V., C.V.O., Westonbirt, Tetbury, Gloucestershire, erected one of the prettiest and most comprehensive groups of Orchids in the show. The centre was occupied by a magnificent plant of *Cymbidium eburneo-lowanum*, which carried about twenty large spikes of well-developed flowers. At the back of and flanking this plant on either side were superb specimens of *Odontoglossums*, while in the front were smaller choice plants of such subjects as *Cattleyas*, *Brasso-Cattleya*, *Cypripediums*, two very fine *Sophranites*, a large spike of *Cymbidium lowianum* Pitt's variety, *Miltonias*, an interesting specimen of *Bifrenaria Harrisoniae*, *Brasso-Cattleya* Mrs. J. Leeman, a fine plant of *Cattleya Mendelii* Westonbirt variety, with many other handsome sorts. The whole were splendidly grown, and the arrangement, with graceful *Palm*s, was such as to excite universal admiration. It was almost impossible to examine this fine display in detail owing to the numerous visitors that were constantly admiring it. The Orchid palace was the name generally applied to this masterpiece of British skill, and although it was not entered for competition the society awarded it an *œuvre d'art*.

The wonderful display of *Odontoglossum* hybrids that was staged by Mr. Ch. Vuylsteke, Loochristii, was probably the finest and most interesting ever seen at any exhibition. They were superb, and the immense range of variety was marvellous. Not only has this raiser advanced this popular race of Orchids in the markings, but the flowers shown also had distinct and unique ground colour, excellent form and were of splendid size and robust habit. What more can one desire? Perhaps the most remarkable of all were those in which yellow predominated. Of these the following were the most conspicuous: *O. loochristiense Jusundum*, white ground, mottled brownish crimson, with deep yellow edges; *O. wilckeanum Clio*; *O. wiganianum Lucretia*, deep yellow ground, spotted and mottled chocolate; *O. flavescens*; *O. lawrenceanum Triumphale*, deep yellow ground colour, which is almost obliterated, except at the tips, with rich dull crimson blotches; and *O. excellens Apollo*, bright canary yellow, with crimson markings. We might very well fill a column about the many good things to be seen in this exhibit, but lack of space forbids.

In a class for twelve *Odontoglossums*, Mr. Graise of Amiens staged some very choice forms in a glass case. *O. crispum Orange Queen* is a distinct plant with good-sized heavily spotted flowers and a decided orange tint in the mottling; the labellum has the characteristic yellow blotch in the centre. *O. ardentissimum La Gloire*, heavily mottled with magenta-purple; *O. a. President*, Cuilliere, lilac tinted; *O. a. Empereur des Indes*, broad white margins to the petals with centres of purplish crimson; *O. Arlequin*, a twisted petalled variety with brownish crimson spots and blotches; and two plants of *Odontodia devoniana* (O. Edwardi X *Cochloda noetzeliana*) were the finest of a very choice collection. One hundred franc médaille d'Or.

Mr. A. A. Peeters, Brussels, also had a very choice little collection of *Odontoglossums*, several very taking plants being among them. Continental raisers are evidently well to the front in taking advantage of the many possibilities to be derived from this genus.

The first prize for a specimen *Cymbidium* was won by M. J. de Hemptinne, with a grand plant of *C. lowianum*, which was carrying about twenty-five fully-developed spikes of good-sized flowers. The plant measured nearly 6 feet in diameter, and was a very good example of cultural skill.

GREENHOUSE FLOWERING PLANTS.

These were represented in moderate variety, although they do not seem to be quite so popular as they are at home. Messrs. Hugh Low and Co., Royal Nurseries, Enfield, Middlesex, staged a wonderful exhibit of winter or perpetual-flowering Carnations, which were arranged in magnificent style. The flowers were really grand examples of cultural skill, all being very large, of splendid substance and well-defined colours. *Lotus peloronycus* and moss formed a good groundwork. The flowers were arranged in vases of varying heights, two moss-covered pillars, adorned with white and red blooms respectively, occupying a central position. Several Orchids were placed at the end, a specially fine-flowered specimen of *Cattleya Mendelii* being noticed, the blooms of which were very large and of grand form and colouring. White Perfection, Britannia, Enchantress, Griffamme, Nell Gwynne, Winsor, Aristocrat, Mikado and a yellow seedling were some of the best Carnations. As this group was not staged for competition no award was made.

Mr. C. Engelmann, Saffron Walden, Essex, also exhibited a very fine group of these Carnations, the blooms being staged in vases so as to form a bank-like mass. The flowers were all of excellent quality and were most tastefully arranged with *Asparagus plumosus nanus*, thus providing a very pleasing foil of greenery. This group received an *œuvre d'art* and a 100 franc medal was awarded for *Queen Carola*, a magnificent new deep crimson variety not yet in commerce. It very much represents huge blooms of the Old Crimson Glove and has also the scent of that old favourite. It is a true perpetual-flowering variety and has splendid stout stems and non-splitting calyces. Other fine flowers in this group were

Rose Pink Enchantress, My Maryland, Beacon, White Enchantress, Lady Bountiful and Mrs. E. A. Patten.

Major Holford exhibited a very fine group of *Hippeastrums* in great variety, red, white and pink forms being represented in profusion. This group formed a semi-circular bank some 20 yards long, light *Palm*s being used as a neat and graceful background, with moss as a carpet. The flowers were magnificent, and it was pleasing to note that the anthers had been left on, thus allowing the flowers to be seen in a natural state.

Messrs. Ker and Sons of Liverpool were highly successful with a group of these plants entered in the class for the most beautiful group of seventy-five specimens. The first prize was awarded for the whole group, first for the best collection of forty plants, first for a collection of six novelties, first for a collection of six novelties (white-flowered varieties), and first for the best new variety or of recent introduction, this being *Rose Perfection*, a large, well-opened flower of a most charming rose colour. The varieties that won the first prize for the best six novelties were *Persephone*, white and red; *Fairy Queen*, white, lightly striped red; *Exquisite*, red, with white at the edges and tips; *Lord Kitchener*, deep crimson, no green in the throat; *Emperor of India*, glowing scarlet; and *Goliath*, red and white. The whole of the plants in this remarkable group were first-class, and we have never seen them better staged.

Messrs. Vilmorin-Andrieux and Co. of Paris in Class 13 had some very fine varieties of *Primula obconica*, *Anriculas* and quite a unique large-flowered hybrid *Cineraria*, the colour being dull scarlet. This was generally regarded as the best novelty among florists' flowers in the show. It was raised from seed in 1905, and will not be distributed until 1909. Certainly this variety stands quite alone so far as colour is concerned, and is possibly the forerunner of numerous varieties having red or scarlet in their colour composition. First prize.

Adjoining the above group was one by the same firm composed of other large-flowered *Cinerarias* in excellent colour shades, all the plants being very robust and floriferous. First prize.

A very interesting group was one staged by Messrs. B. Herreweghe and Sons, Brussels. This consisted of about fifty plants of *Chrysanthemum* Mme. Gustave Henry, these being only about 1 foot high, with a single stem, this being surmounted by a good-sized flower. Although interesting as showing what can be done, *Chrysanthemums* in April are not wanted by most people.

AZALEAS AND RHODODENDRONS.

The Azaleas at Ghent are the most conspicuous feature of the exhibition, the greater part of the large temporary building being occupied with splendid examples of these plants. In the centre of the building large beds of symmetrical and very floriferous plants were arranged, these being flanked on either side and at each end with other various-shaped groups, the whole presenting a most bizarre and gorgeous spectacle. The high state of perfection to which these plants are cultivated in Belgium is proverbial, and the world-wide fame was well upheld on this occasion. The following were some of the most notable groups in this section:

A large semi-circular group staged in the centre by Mr. A. D. D'Haene, Brussels, consisting of various-coloured forms of *A. indica*. These were magnificent plants, the colours ranging from pure white through whites and pinks, apricot, magenta, red, scarlet and crimson. This group was awarded a first prize.

The oblong group of *A. indica* variety staged by M. Anguste Haerens was exceedingly good. The plants were simply masses of grandly-coloured flowers, scarcely a leaf being visible. The arrangement was in the form of a bank, falling gently from a raised centre, thus showing the plants off to advantage.

A. D. D'Haene was awarded the first prize for a marvellous lot of *A. indica* forms grown in large tubs. These plants constituted the best exhibit of Azaleas we have ever seen. Many of them measured over 5 feet in diameter, and in shape resembled huge floral umbrellas. The colours were particularly well defined, and as examples of high-class culture these plants would be very hard to beat.

Mr. Ch. Vuylsteke's first prize group of twelve *A. indica* cultivated as pyramids was a most gorgeous one and created a great deal of interest. Every plant was trained in true pyramid fashion, and the flowers were produced in abundance on fine, healthy-looking plants.

In the class for twenty-five *A. indica*, cultivated as pyramids, the first prize was secured by Messrs. Sander and Son, St. Albans and Bruges, for a very fine lot indeed. All the plants were the picture of health, and for good shape and floriferousness would be very hard to beat. *Le Printemps* is a very fine glowing scarlet single; *President Oswald de Kerhove*, a double salmon pink with red markings at the bases of the petals; and *John T. D. Llewellyn*, double, flesh coloured, with red in the centre.

For twenty-five *A. indica* *Julius Roehrs*, a bright cerise-coloured double-flowered variety with waved or crimped petals, Messrs. Sander and Son were again the champions. This is a very handsome variety, the flowers being large and of good substance. For a collection of forty *A. indica* Messrs. Sander and Son secured second prize with a very beautiful lot of plants, these being mostly umbrella-shaped. We particularly noticed *Baronne de Vrière*, a large single white; *Professor Wolters*, single shell pink, with red in the centre and beautifully waved petals; and *Charmer*, a bright cerise single that is very floriferous.

Mr. Edward Pynaert-van-Geert, Ghent, secured the first prize for a sloping bank of seventy-five *Rhododendrons* in flower, not less than three varieties. All the plants here were good and flowering freely, but the colours of the blooms were not first-class. The same firm was also first for twenty-five specimen plants of *Rhododendrons*, which

were very tastefully arranged in a sloping bank. The colours here were much better, Lord John Bronghton, a very deep pink variety, being particularly good.

Messrs. Endtz, van Nes and Co., Boskoop, Holland, staged a charming little group of *A. mollis sinensis* Mrs. A. E. Endtz, a deep yellow-flowered variety that is well known in this country. The blooms in this instance were a richer golden yellow than usual.

FOLIAGE AND FLOWERING STOVE PLANTS.

Judging by the exhibition these plants are much more in demand on the Continent than they are in this country, many magnificent specimens of various kinds being most beautifully arranged on the ground floor of the casino. Viewed from the landing at the top of the stairs the spectacle was very fine and provided a good example of the usefulness of this class of plants for certain purposes. *Ferns*, *Caladiums*, *Crotons*, *Palms*, *Dracenas*, *Marantas*, *Dieffenbachias* and similar plants were used in profusion, masses of scarlet being provided by enormous plants of the curious-flowered *Anthuriums*.

The exhibit of foliage plants staged by Messrs. Sander and Son in the class for a collection of twelve specimens of recent introduction and not yet in commerce was very fine indeed, and the jury awarded it the first prize. Some of the most interesting plants were two of *Pereskia godseffiana* trailed round wire balloons, *Cocos nucifera aurea*, a form of this well-known *Palm* with golden-coloured petioles; *Croton Fred Sander*, a very compact plant with hastate leaves, which are bright canary yellow at the base and dark green at the apex; *Caladium Sander's Seedling*, a beautiful bright rose-coloured large-leaved specimen; a very fine specimen of *Bromelia tricolor*, a fine species with white, green and pink variegated foliage; *Philodendron Ilsemannii*, a *Caladium*-like plant with green and white variegated leaves; and *Pinanga Micholitzi*, a mottled green-foliaged *Palm* with a tinge of pink in the young leaves.

In this section the magnificent groups staged by Continental nurserymen were very fine, the large ground space allotted to each being tastefully filled with plants in the pink of condition. Messrs. L. Van Houtte, Ghent, received several prizes in various classes with superb plants of such things as *Caladiums*, *Crotons*, *Heliconias*, *Dieffenbachias* and *Dracenas*. M. Victor Henssel-de-Meester was another prize-winner in this section with splendid groups, consisting of *Caladiums*, *Nephtis picturata*, immense *Crotons* and *Maranta oppenheimiana*.

For a collection of twenty-five *Anthuriums* in flower the first prize went to Mr. Arthur De Smet, Ledeberg. These plants were very bright and artistic, many colours being among them. One huge specimen of *A. scherzerianum* was carrying twenty-nine fully-developed and good-sized flowers, with an abundance of healthy foliage. In a class for a collection of twenty *A. scherzerianum* varieties the same exhibitor was once more first, the many beautiful plants making a very fine group.

For a very bright and beautiful group of *Crotons* the *œuvre d'art* was awarded to Mr. L. Delarue-Gardon, Ledeberg. These plants were magnificent examples, the foliage being remarkably bright and clean.

A replica of the first exhibition held by the society a hundred years ago at "Frascati" was a most interesting feature of the show, and the small room of the inn was thronged with visitors all day long. The same kinds of plants as were shown then were on view, and included such old favourites as *Plumbago rosea*, *Justicia pulcherrima*, *Cineraria cruenta*, *Scilla maritima*, *Andromeda lucida*, *Erica herbacea* and the ever-popular *Heliotrope*.

FLORAL DECORATIONS.

For a natural effect of water and rock scenery the exhibit arranged in the temporary structure by Mr. De Smet would be very hard to beat. Painted scenery, representing rockwork and a pool of water, was fixed at the back, and in the front was a groundwork of moss with dried-up rivulets, rocks jutting out of these in a most natural manner, suitable dwarf-flowering shrubs being irregularly inserted so as to produce a unique effect.

The collection of various floral decorations from Lachaux, Paris, was a very fine example of floral art. The circular table was very pretty indeed, a tall vase filled with *Odontoglossums*, *Celogynes* and *Cattleyas*, with *Asparagus Sprengeri*, *A. plumosus* and *Smilax* for the greenery being used as a centrepiece. Under this long sprays of *Odontoglossum* and *Asparagus Sprengeri* were tastefully arranged on the cloth. Other vases and contrivances for holding flowers were filled with *Orchids*, *Carnations*, *Roses*, *Lilies* and other florists' flowers.

British horticulturists were well to the fore on the various sections of the jury, the following holding special posts: General secretary, Mr. R. W. Ker. Section 1, Mr. Harry J. Veitch, president; 2, Major Holford, president; 4, Mr. M. S. L. Low, secretary; 6, Mr. G. Gordon, president; 17, Mr. J. Weathers, president; 20, Mr. C. H. Curtis, secretary; 23, Mr. G. Paul, president.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

The quarterly meeting of this society was held at the Horticultural Hall, Vincent Square, Westminster, on Monday evening last, Mr. Charles H. Curtis in the chair. Five new members were elected, making a total of thirty for the quarter. Several cheques were passed, being payments to members over seventy years of age and others, including a payment of 2s. to a member who lapsed thirty years ago. Members over sixty years of age may now withdraw the interest on their deposit account, and several avail themselves of this privilege, as it enables them to pay their subscriptions more easily. The committee hope that many young gardeners will join the society during the year. Rules may be had from the secretary, Mr. W. Collins, 9, Martindale Road, Ballham, S.W.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden. W.C.

THE MEANING OF TULIP TERMS.

THE following list of technical terms used in connexion with Tulips is arranged in alphabetical order, and contains those most frequently met with at the present day. I have tried to make the explanations as simple as possible and not too long.

Base.—The base of a flower is its bottom; it varies very much in its colouring. In a florist's Tulip it must be either pure white or yellow, whereas in *T. gesneriana* it is of a deep rich blue, and in *T. Didieri*, black with a yellow edge.

Bizarre.—This French word means strange or unconventional. It is now used to denote those flowers that have a yellow base, and which, when they break, have a yellow ground with markings of some shade of red or purple. In the early days of Tulip growing these yellow ground flowers were thought very little of.

Breeder.—When a Tulip is raised from seed it first blooms as a self, or it may be with a border of a lighter shade than the rest of the flower. In this state, before it breaks, it is called a breeder or mother Tulip. After a certain time the flower breaks, that is, it becomes striped.

Broken.—After starting life as a self-coloured flower, a time comes when the colouring matter appears no longer as a solid mass, but broken up in stripes and blotches. This may take place in two or three years, or it may be delayed for a very long time. It is a debateable question if this breaking is the result of maturity or disease.

Byblæmen is a term applied to broken flowers with white bases and white grounds. Originally it included both purple and red striped flowers, but its use is now confined to the former, whereas the latter are called Roses.

Cottage or May-flowering.—Many of the most beautiful of the late-flowering section of garden Tulips were found in old cottage gardens, e.g., Mrs. Moon, Caledonia and Fairy Queen. Hence the name has been adopted for the whole late-flowering section.

Darwin.—A new and vigorous race of self or edged Tulips, which are distinguished not only by their tall habit and strong stems, but also by their well-formed, cup-shaped flowers. They were introduced into commerce in 1889 by Messrs. E. H. Krelage and Son of Haarlem. There are no bizarres in true Darwins. To class such a flower as Yellow Perfection as one is really a misnomer.

Dragon.—See "Parrot."
Duc Van Thol.—A small class of very early-flowering Tulips, which are descendants of *T. suaveolens*, a small red flower with a yellow edge. It now includes forms which are otherwise descended. The so-called scarlet Duc Van Thol is not really a Duc Van Thol at all.

Dutch is a term applied to the early-flowering section from their being raised and grown so largely in Holland.

English.—English Tulips are florist Tulips of especially good and correct marking. In late

years the best have been raised in England, hence the name.

Feathered.—When a Tulip breaks the markings vary a great deal. Two particular variations have been singled out by Tulip fanciers as "correct." One is when the colouring matter is confined to the edges of the petals, leaving the body pure; this is called feathered.

Flamed.—When in a broken Tulip the colouring matter runs up the middle of each petal and branches out towards the edges, the marking is said to be flamed. It is interesting to note that the same variety may exist at the same time as a breeder, and as either a flamed or feathered flower.

Flemish.—A robust race of broken Tulips, not so finely marked as the English.

Florist.—Broken Tulips which are distinguished by their pure base, fine form and even markings. It would take too much space to discuss these points fully.

Italian or Florentine is used in connexion with those Neo-Tulips which in the course of the last century have been discovered in Central and Northern Italy.

Late.—That section which usually flowers in May and early June. Speaking generally, they are much taller and finer than the early-flowering Tulips.

May-flowering is synonymous with Cottage or late flowering.

Mother is the same as "Breeder."

Neo-Tulips.—One of the points of greatest interest in connexion with Tulips is the finding of new species in Italy, and Savoy in France, within the last hundred years. It is a difficult matter to account for their appearance, seeing that they have always been found near inhabited places that have been frequently visited by botanists, e.g., Florence and Bologna in Italy and St. Jean de Maurienne in Savoy. These new Tulips are spoken of as Neo-Tulips. Three examples are *T. Didieri*, *T. mauriana* and *T. billietiana*.

Parisienne.—Hardy late Tulips grown in the neighbourhood of Paris and distinguished by their long, wiry stems and elegantly-shaped flowers.

Parrot.—Tulips with split and irregularly cut petals and curiously striped and blotched marking. They have been known since 1665, but until the inclusion of a purple and white coloured one by Messrs. Barr and Sons last autumn, called Sensation, all Parrot Tulips have been bizarres. Sensation is a sport which was found in Holland in a bed of a variety called Reine d'Espagne.

Rectified is the same as "Broken."
Rembrandt.—A new race of broken Tulips derived from the Darwins.

Roses.—This is the name given to broken Tulips with white bases and white grounds with red, or some shade of red, markings.

Savoy.—Those species of Neo-Tulips which have been found in Savoy are called Savoy Tulips.

Self.—Tulips which are entirely of one colour, excluding the base, are called selfs, e.g., Inglescombe Scarlet is a self although it has a black base.

Species.—Varieties which are of natural or wild origin, e.g., *T. fosteriana* and *T. sylvestris*.

It is used in contradistinction to garden forms, e.g., Inglescombe Park or Prince of Austria.
JOSEPH JACOB.

PRIZES FOR READERS. MAY.

THE BEST FLOWERS AND SHRUBS FOR TOWN GARDENS.

A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF-A-GUINEA
are offered for the best essays on the above
subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Saturday, May 30. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

NEW ORCHIDS.

ODONTOGLOSSUM CRISPUM QUEEN OF THE EARTH.

In this plant we have a handsome variety that is a long way removed from the type. The sepals and petals are rather broad, sharply pointed, and very much waved at the margins. The white ground is heavily and irregularly mottled with brownish crimson blotches of varying size. The labellum is rather large, somewhat pointed, and is of the same colour as the other segments, except for the usual yellow blotch on the centre. The plant shown was carrying one inflorescence composed of eight fully-opened flowers and one bud. Shown by de B. Crawshay, Esq., Rosefield, Sevenoaks. First-class certificate.

CIRRHOPELALUM ROXBURGHII.

This little plant is of botanical interest only, the tiny inflorescences of cream and purplish flowers being very inconspicuous. The leaves are ovate and of a dull reddish green hue. Exhibited by Sir Trevor Lawrence, Bart. Botanical certificate.

CIRRHOPELALUM WENDLANDIANUM.

The plant shown was a rather small one, and had a single inflorescence composed of six good-sized flowers. The colour of these is yellow at the base and dull red from thence up to the apex. The blooms are very long and taper off to a sharp bifurcating point. Shown by Sir Trevor Lawrence, Bart. Award of merit.

ODONTOGLOSSUM PLATYCHEILUM SUPERBUM.

Here we have a very nice variety of a comparatively little-known *Odontoglossum*. The flowers are conspicuous chiefly on account of the labellum, which is very large, broad, and of a deep lilac colour, this being freely dotted with rather small magenta spots. The flowers are borne mostly in pairs from the sheaths of the bright green erect leaves. Shown by Sir Trevor Lawrence, Bart. Award of merit.

ODONTOGLOSSUM NIVEUM.

This plant may well claim to be one of the, if not the, most graceful of all this family. The rather small flowers are freely produced in compound racemes, which are erectly borne on

medium-sized wiry stems. The flowers are rather small, segments narrow and pointed and twisted in a most pleasing manner. The white ground is freely besprinkled with clear, rich crimson spots, except at the apices, where the white remains pure. The plant shown was a very vigorous specimen, and had two large inflorescences. Exhibited by Messrs. Armstrong and Brown, Tunbridge Wells. Award of merit.

HIPPEASTRUM (AMARYLLIS) PURITY.

This handsome variety with its large snow-white blossoms marks the greatest advance in the white-flowered forms we have yet seen, as it surpasses *Snowdon*, another variety from the same raiser, both in its purity and its fixed character from year to year. The seed of the new comer was sown in 1904, and having now flowered for three successive years its albino character is regarded as quite fixed. According to Mr. Fielder, it is not unusual for these white-flowered varieties to develop a shade of pink in the second year, and for this reason *Purity* has been given a longer trial and has remained true. The plant, like other white-flowered varieties, possesses great vigour, and already several offsets have been produced. Shown before the Royal Horticultural Society by Mrs. Burns, North Mymms Park, Hatfield (gardener, Mr. C. R. Fielder), on the 28th ult. First-class certificate.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

May 12.—Royal Horticultural Society. Exhibition of Flowers, Plants, &c. Lecture at 3 p.m. by Mr. Osgood H. Mackenzie on "Gardening in the West Highlands." Vincent Square, S.W.

The recent weather.—We are afraid the recent weather will have played sad havoc with many crops and garden plants, Roses in particular. One well-known amateur rosarian confided to me that he had lost over 200 plants, but we hope such disasters are not numerous. Those who had not sown their seeds will rejoice now. Little progress was made, and in many instances resowing must be done. If the mild weather at the time of writing continues, the fruit crop should be good.

Royal Horticultural Society—At the fortnightly general meeting of the Royal Horticultural Society, held on the 28th ult., a lecture was given by Mr. E. White on the "Profession of Landscape Gardening." Mr. Harry J. Veitch was in the chair. In the course of his remarks the lecturer said how difficult it is to define the mission of a landscape gardener, whose conceptions are not confined to garden or park enclosures, but are stimulated by an appreciation of landscape scenery, and are anxious to bestow its beauties upon districts where they are non-existent; in fact, to make all Nature a garden. The present rate of disappearance of natural landscape by the rush for country dwellings is great, and to the landscape gardener devolves the work of preservation and use of natural features of beauty. He referred to the Town Planning Bill now before Parliament, and the greater demand for landscape gardeners indicated thereby. Landscape gardening embodied a wide range of subjects and a University training where possible was indispensable. In Germany the subject is an important one in all public and horticultural schools, chiefly that of Potsdam. In France the central institution is the Ecole Nationale d'Horticulture in Versailles. The subject is also taught in Austria. The United States affords the model precedent, for here the landscape gardening is considered very serious, and the subject is found in the curriculum of most of the leading universities, especially that of Harvard, whose course includes the

principles of landscape gardening, elementary botany, experimental physics, physiography, elementary geology, principles of design in architecture, sculpture, &c. The lack of similar facilities in England is a matter for comment, and should demand the attention of educational authorities here. Thirty-seven new Fellows were elected at the meeting, including Lady Grey, Captain Cuthbert, D.S.O., Captain A. H. Thornburn and Mrs. F. L. Joicey.

Cardiff and County Horticultural Society.—The annual exhibition of the above society will be held on Wednesday and Thursday, July 22 and 23 next. The schedule is a most comprehensive one and some valuable prize are offered in many of the classes. Thus in Class 1, for a group of plants, the first prize is £15; and in Class 2, for amateurs, for a group of plants, £5. In other classes, for Roses, amateurs and open, and also for Sweet Peas, valuable prizes of plate are to be competed for. Copies of the schedule and full particulars can be obtained from the secretary, Mr. A. Maurice Bailey, 24, Duke Street, Cardiff.

Journal of the Board of Agriculture.—The number of this journal for April, which commences the fifteenth volume, contains several new features of interest. The size has been increased from sixty-four to eighty pages, and the additional space has been and will in future be filled with a monthly article dealing with the course of trade in agricultural produce during the previous month. An attempt will also be made to print from time to time reports on the condition of crops abroad, especially on the Continent, and on the trade in those articles of agricultural produce which compete with home-grown produce. Two other series of articles have been commenced, the first on weeds, fungi and agricultural pests, to be illustrated each month with a coloured plate, the other, on the agriculture of small holdings, showing what methods have been adopted by those who have been successful, with suggestions for those who are about to take up new holdings. As it is intended that these articles shall be of service to all classes of agriculturists, the price of the "Journal" (4d. monthly) will not be raised.

Presentation to Mr. John Leslie, Pitculen, Perth.—Mr. John Leslie, who is one of the best known of Scottish exhibitors, especially with Grapes, at the leading shows, having been appointed gardener at Oxley Grange, Bushy, Watford, Herts, and therefore leaving his present appointment at Pitculen, Perth, shortly, his many friends decided to present him with a testimonial. The proposal met with much response, and a handsome sum of money was contributed for the purpose, among the subscribers being Lord Provost Gibson, Edinburgh, and Mr. R. Wallace, K.C., late M.P. for Perth, both of whom wrote expressing their great esteem for Mr. Leslie. The presentation was made recently, the meeting being presided over by Dr. Thomson, rector of Perth Academy, who expressed great regret at their loss of Mr. Leslie, and spoke highly of his work for the Natural Science Society. Afterwards Mr. James E. Fenwick made the presentation, which consisted of a photograph of a number of gardening friends and a purse of sovereigns. Mr. Fenwick referred to the high esteem in which Mr. Leslie was held, the regret felt at his departure and the hope that he might have every success in his new sphere of labour. Mr. Leslie made a feeling reply. Mr. Leslie's career during the twenty-four years which have passed since he went to Perth has been marked by many successes as an exhibitor. He is universally recognised as one of the leading growers of Grapes in Scotland, and his prizes at the great shows in Edinburgh and elsewhere have been very numerous. Last year his Grapes won five out of seven firsts at Edinburgh. As a judge he has always been of service, and his reputation as such is of the most honourable kind.

The Cyclamen-flowered Daffodil. The quaint little *Narcissus cyclamineus* is not too easy to establish, but when once it has made itself at home in a garden it thrives well and delights all with its singular flowers. To begin with, the flowers are large for the stature of the plant; then the outer segments are reflexed in such a way as practically to expose the whole trumpet, which is long and cylindrical, and quite as lengthy as that of many of the taller trumpet Daffodils. The flowers are of a bright yellow and are of great substance, lasting for about six weeks—a long time indeed for a Daffodil to keep in bloom in the open. It seems strange now that, although known to Parkinson, it was lost to this country and only reintroduced a few years ago. It is now happily established in a number of gardens, and I was much pleased to see it doing so well in the garden of General Stewart, Carruchan, on the Kirkcudbrightshire side of the Nith, where, the other day, there were fully fifty blooms in perfection in a clump at one time. The group was an attractive one, and, as *N. cyclamineus* seems to be increasing from self-sown seeds as well as from offsets, this note may be encouraging to some who wish to try this unique little flower of its class, but who fear to do so. At Carruchan the plants are in an ordinary border facing almost south-west, and in what was an ordinary soil inclined to heaviness and of a rather clayey texture, but which has been much improved by the addition of plenty of old decayed manure for several years since General Stewart entered upon possession of the place.—S. A.

THE ROSE GARDEN.

PLANTING TEA ROSES FROM POTS.

DURING the next three or four weeks plantations may be made of Tea and Hybrid Tea Roses that have been grown in pots. If the beds are well prepared and good hardy plants obtained, these specimens, though somewhat small, will make a splendid display during the early autumn. Beds that have contained early bulbs may be profitably planted with the beautiful decorative Roses that are now so plentiful; and what can be more lovely or more useful than these Roses? They are far more pleasing than many of the so-called bedding plants, and are quite as continuous in their blooming. Most growers now graft or bud the Tea and Hybrid Tea Roses on the seedling Briar, and it is found that such plants will grow most luxuriantly when the roots lay hold of the new soil.

Even if it be not possible to plant at once, I would recommend that the plants be obtained as early as possible, as then they could be sent without their pots if the ball of earth is carefully matted up.

In preparing the beds, remember that these Roses are very partial to good drainage and also to a somewhat gritty soil. Where leaf-soil abounds this should be liberally admixed with the loam, and if some bone-meal be added to the bottom soil and a little spent Mushroom-bed manure to the top the plants cannot fail to do well. In planting it is most essential that the ball of earth be wet throughout. If at all dry, let them be soaked for a few seconds in water. Plant very firmly and lightly mulch the surface with short decayed manure. Unless very dry weather follows, no further watering will be required. I prefer to raise the beds at least 6 inches above the ordinary level.

Varieties depend upon what one has already in the garden, but one cannot have too many of such beautiful Roses as Mme. Abel Chatenay, Lady Battersea, Mme. Ravary, Joseph Hill, Gustave Grunerwald, La Tosca, Pharisae, Anna Olivier, Mme. Leon Pain, Mme. A. Mari, and G. Nabonnand. P.

THE GREENHOUSE.

HOW TO GROW FINE COCKSCOMBS AND CELOSIAS.

AMATEURS who have plenty of heat may raise these plants in March, but where artificial heat is derived solely from hot-beds the end of April or early in May will be soon enough to sow the seeds. Both Cockscombs and Celosias are suitable plants for a cool greenhouse during the summer months. *Celosia cristata* is the florists' Cockscomb.

The amateur should adopt the following method of growing the plants. Make up a good



AN INTERESTING PLANT PARASITE: OROBANCHE ON A PELARGONIUM.

hot-bed composed of sweetened stable litter and tree leaves in equal quantities. Put a frame on the hot-bed and cover the latter with a layer of ashes or Cocoanut fibre to a depth of 6 inches, then fill a few seed-pans or boxes with some light, rich soil, and sow the seeds thinly, burying them a quarter of an inch deep with the same kind of soil. In the meantime fill more pans or boxes with sandy loam two parts, leaf-soil one part, and well-rotted manure one part. The latter should be passed through a half-inch mesh sieve, so that the particles will mix evenly with the other parts of the compost, and place the filled boxes on the hot-bed.

When the seedlings are about 1 inch high transplant them 3 inches apart in the prepared boxes,

still retaining them on the hot-bed. In due time pot each seedling separately in 3-inch pots filled with a similar compost. Allow the young plants to remain in these pots until the "combs" form, and pick out all specimens that show well-formed "combs," then replot the plants loosely in very rich soil and plunge the pots in the hot-bed.

From this time do not allow the plants to become potbound, but replot them, finally using 7-inch pots. When the latter are well filled with roots begin feeding with weak doses of clear soot water and then with diluted liquid manure and other artificials. When the "combs" are about three-parts developed the plants may be placed in the greenhouse. It may be of some interest to mention here that the Cockscomb is an instance where fasciation has become a more or less permanent feature. The plants to many people are more interesting than beautiful, but there is no gainsaying the fact that a few well-grown specimens give an air of distinction to a greenhouse during the late summer months, and for this reason, if for no other, a dozen or so should be grown.

Celosia pyramidalis should be grown in a similar soil, but the seedlings should be transplanted direct from the seed-pans to pot separately, and be kept growing freely all the time, frequent replotting before the plants get potbound being the best way to ensure the quick growth. The crimson-coloured varieties should be picked out, as these generally give the most satisfaction, though a variety of colours may be obtained from a single packet of seeds, mixed, and all may be grown where desired. These plants are often used for bedding and are very beautiful; but if the foliage be kept quite free from red spider they make charming greenhouse and conservatory plants and last in good condition for many weeks. A bed of damp shingles or ashes is better than a dry, wooden stage. Put some slates on the latter and cover them with shingle or ashes. AVON.

AN INTERESTING PLANT PARASITE.

MR. W. L. LAVENDER, gardener at Waltham Manor Gardens, Twyford, Berks., sends us a most interesting example of the Broom Rape or Orobanche growing on a Pelargonium, which we have had photographed and reproduced herewith. His letter reads as follows: "This curious parasite occurred on a plant of Zonal Pelargonium Albion. I first noticed the growth pushing up about the end of January last and at once thought that it resembled an Orobanche, so I told the man who watered the plant not to interfere with it. The Orobanche grew rather quickly and commenced to flower about the first week in March, continuing in flower for nearly a month, and probably would have flowered longer. The host plant was grown from a cutting struck in April last in sandy soil and potted finally into a 6-inch pot last July. The soil at each potting was a mixture of fibrous loam cut from the top spit of a meadow the previous winter and stacked. The leaf-soil was composed of Oak, Elm, Beech and a few Chestnut leaves, thoroughly rotted, and the manure was from the stables and had been previously used for a hot-bed. Some mortar rubble, soot and sand completed the compost. The cutting was struck in heat, grown on in a cold frame for the summer, and during August and part of September placed on ashes in the open, and then returned to a cold frame for a week or two. At the beginning of October the plant was taken to the position it flowered in, this being a shelf exposed to all the light, close to the roof glass in a house kept at about 55° and freely ventilated. It was watered with manure water made from cow manure, also with soot water, and was occasionally sprinkled with Clay's Fertilizer. The cutting was one I had given to me, so I do not know if any parasites had appeared where it came from."

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Free-flowering Daffodils.—In THE GARDEN of the 4th ult. a correspondent writes that he has had seventeen blooms from twelve bulbs of Mme. de Graaff. I have a large number of Daffodils, Tulips, &c., in moss fibre every year, between eighty and ninety pots, and I have never known them so free flowering as this year, with only one or two exceptions. I had three bulbs of Mme. de Graaff which threw seven blooms between them. One of Messrs. Barr's "extra" Narcissus Emperor threw six blooms; six bulbs of that lovely Barrii Mrs. C. Bowley have thrown twenty-one blooms; two very pretty seedlings from Mr. R. Sydenham of Birmingham, named Leonie and Saturn, threw, in nearly every case, two blooms to every bulb; and so the list goes on, one of the few failures being Golden Spur, which was very poor. Barrii conspicuus has also flowered far more freely than I have hitherto known it to do. Perhaps these details may interest other readers.—HELEN PITCAIRN.

Saxifraga longifolia and offsets. It would be interesting to know how many have observed offsets on the true *Saxifraga longifolia*, as the instances in which these have been observed must be rare indeed. During a somewhat long experience I have never seen an offset on any plants of the true form, and its bearing no offsets has been frequently mentioned. One of the latest instances is in Mr. Reginald Farrer's book, "My Rock Garden," in which he says: "After this (i.e., after flowering) the plant dies without offsets, but matures seed so abundantly that one has no difficulty in raising as large a stock as heart can desire. The true *Saxifraga longifolia* may always be known by this inability to throw any secondary growths, which, I believe, is invariable." There is, of course, a plant called *S. longifolia prolifera* which produces plenty of offsets, but no one would compare it or any other with the true *longifolia*, which admits of no rivals of its class. The broad-leaved *longifolia*s are either hybrids, which are very common, or are reversioners to some earlier form from which the real *longifolia* has evolved.—S. ARNOTT.

Dwarf Peas.—I note a writer refers to Gradus Pea as being dwarf. Is not that an incorrect description of it? as although commonly described in lists as of 3 feet in height, yet it usually reaches 4 feet, and grown under glass would naturally be higher. This excellent first early marrowfat so closely resembles Early Giant that many gardeners class them as identical. In any case the latter form rarely comes under 4 feet when well grown. Really these Peas, with many others, all remarkably fine croppers, belong to the medium growth section, perhaps the most reliable average section of Peas for general cultivation. Still, some gardeners, where they have ample room and deep retentive soils, stick to Duke of Albany, Alderman, Ne Plus Ultra and Quite Content, Peas which range from 6 feet to 7 feet in height. Really Dwarf Peas are found in Harbinger, William Hurst, English Wonder, Defiance, Chelsea Gem, Daisy, Omega and several others, none of which exceed 2 feet in height, and some are not more than 18 inches in height. These are universally classed as Dwarf Peas.—D.

Leaf-curl on Peaches in New Zealand.—I wrote you six or eight weeks ago re the dressing of Peach trees for leaf-curl with refuse of acetylene gas. I am pleased to say I have found what appears to be a complete cure for it. I was spraying some plants for green fly with Sunlight soap when I thought I would try it on the Peach trees. Its effect was marvellous; they were in a very bad state, with most of the foliage dying, and the fruit was about the size of Hazel Nuts. They commenced to send forth new shoots at once, and are now

maturing a splendid crop of fine fruit, with no sign of disease on the trees. Before saying anything further on the subject I would like to test the treatment a second time, and I cannot do that here for another season. It will be your spring when this appears, so readers in the United Kingdom can test it. I did not use a strong solution; four pennyworth of soap should make 6 gallons to 10 gallons of wash. I may state that a week or two before using the soap I washed the trees with a strong jet of fresh water, but I do not think that had much to do with the result.—J. G. PATERSON, *Fimarn, Canterbury, New Zealand.*

The Gooseberry mildew.—A serious case for the British taxpayer is raised when a deputation of Gooseberry and interested mycologists invites the British Government not only to at once order the destruction of any Gooseberry plantation, however large, in which any evidence of the mildew may be seen, but asks that with such order ample monetary compensation might be provided also. Are these Gooseberry growers willing to insure their plantations against attacks, or do they think the national purse is as deep as the ocean? They even object to the grower whose Gooseberry breadth may be affected from cutting out and burning the affected bushes, but insist on total destruction with consequent compensation. How many otherwise old and nearly exhausted plantations rapidly becoming worthless and perhaps also because of bad culture a ready prey to fungoid attacks it might not thus be profitable to destroy and get compensation. If compensation be paid for the Gooseberry mildew, why not for the Currant mite or for any of the many ills to which vegetable life is heir?—A. D.

Elementary school gardening.—That this form of gardening has become very popular as well as interesting to the public at large is evidenced by the special literature now devoted to it, and also, as shown in THE GARDEN, by the offer of prizes for the best essays on the subject. I would ask room to refer to a few of the points raised in Mr. Waldron's prize essay, recently published, because I think them open to criticism. It by no means follows that gardening is a subject specially fitted for village schools only. Children in villages are, by reason of their rural surroundings, brought naturally more in contact with Nature and with gardens than are children in towns, and as a result, when town children are afforded a chance to garden at school, they do so with an avidity and an enthusiasm that is delightful to see. If anything could, later in life, help to lead town men back to the land, it would be because of the earnest desire latent in them to put into practice that instruction at school which they have not forgotten and have warmly cherished. Mr. Waldron favours plots for two boys to work simultaneously. That is not by any means either good practice or common experience. Both teachers and boys prefer individual gardens. Not only does each boy take more pride in working his own plot, but he also seeks to emulate the best work done in any one plot. The pupil cannot shelter himself behind his fellow when he is responsible for the plot solely. It is advised that drills run north and south. That is based on the assumption that all school garden plots run east and west. Practically, they have to be fashioned in accordance with the shape of the land out of which created. It is a fallacy also to assume that it is best to have rows north and south. All the crops in the gardens are summer ones, and have to make their growth through hot, dry weather. When rows run north and south, the intermediate soil is fully exposed, the hottest rays of the sun scorching it. When rows run east and west, one crop shades the soil behind it, and thus it is less dried. Why do gardeners so prefer the shade of a north wall for summer crops but for that reason? Sowing two rows each on a plot of limited area of spring-sown Onions, Parsnips and Carrots, when one

row of each will suffice, thus shutting out Beet, Turnips and Dwarf Kidney Beans, is not good. Then Potatoes should have two rows, diverse varieties. Runner Beans may be in back corner clumps, leaving the space behind the row of Peas for Lettuce, Radish, Tomatoes or bush Marrows. Leeks, Celery, Brussels Sprouts, Broccoli, Cabbage, Kales and Cauliflowers, also, later, winter Onions, should all be sown in drills in a spare plot for transplanting when Potatoes, Peas and Kidney Beans have been removed. It is unwise to occupy the boys' plots with these things until later in the season. Mr. Waldron is not quite exact in classing Pentstemons, Snapdragons, Hollyhocks and Forget-me-nots as perennials; all have somewhat fugitive existence. I greatly prefer that at the first boys should be instructed in the proper measurements between the rows. But for some such instruction the first year the result would be distressing. In the second year they should have less restriction, but still have the most active oversight. Defects in these respects would be less attributed to the pupil than to the teacher. The proposal to give the boys prizes for good work in the shape of garden tools is altogether wrong. Seeing that in all schools proper tools are found, such prizes would have little value. Much better would be concise, clear, practical and well-illustrated books on gardening, as boys much appreciate these. Generally, in the county of Surrey, where local prizes are offered for boys, the judging is done by the county instructors on precisely the same basis as cottage gardens and allotments are judged. In some cases boys' garden produce is exhibited for prizes also. What would be far more satisfactory would be a county exhibition of school garden produce, each year each block of gardens competing, and not individual pupils. Without doubt, school teachers—where good gardeners, as many are—make the best teachers of gardening, as they have the art of teaching which the best of practical gardeners may not possess.—A. D.

A good wall plant.—I do not remember having seen *Xanthoceras sorbifolia* mentioned as a suitable plant for covering a wall, but for such purpose, however, it is highly satisfactory. As much cannot be said for it when planted out in exposed positions, for in such places it will grow often too fast to mature its growth sufficiently to produce flowers. There was a plant growing here for a great many years in such a place, but it never flowered. Some four years ago two plants were turned out of pots after being forced. One was planted against a wall with full south aspect, the other on a wall facing full west, and both have flowered very freely each year, with this difference only, that the one on the south wall is six or seven days earlier than the one on the west. Both plants grow very fast; the one on the west wall made growths 2 feet in length last year, and these were nailed to the wall and are now just opening their first flowers, nearly every growth being terminated by a truss of bloom. At the present season I do not think one could desire a finer flowering shrub for a warm wall, and when associated with *Pyrus japonica* must be most effective. I have no doubt that this fine plant would flower quite freely on a warmer soil than ours, and where a little protection was afforded by adjacent shrubs or trees. Evidently all that is required is thorough ripening of the wood. Coming into flower thus early it would be liable to injury by frost if exposed. One can also imagine a fine effect produced by this and various sorts of Magnolias. As to soil it is evident that it is not at all particular, any fairly good garden soil proving suitable, but thorough drainage is essential.—T. A., *Cirencester.*

Birds and buds.—This neighbourhood seems to suit the bullfinch admirably, judging by the quantities that visit these gardens from the adjoining woods. They appear to commence their work of destruction about the first week in December or as soon as the leaves are off the

trees, and they have not done with the buds until the latest Apples are well in bloom. Commencing with the Forsythia, then on to Malus, Pyrus, Plums, Lilac, Weigela, Thorns, Almonds, Crabs, &c., and, of course, the Pears, Gooseberries, Currants (Red and White), Peaches, Nectarines, Apples, &c., the bullfinch would appear to be a most methodical bird. Sometimes it is argued (and rightly) that the bullfinch is not responsible for all the damage done; but they must have the major part of the blame, as I have not noticed any other bird at the buds, except when sharp frost and snow prevent their usual food from being got at. Coming to the various ways of preventing the buds being taken, it is entirely out of question to net every exposed fruit tree, &c., in the garden, and as the weather destroys the effects of soot, lime and such things very quickly, the best method we find is the gun with small shot. Having kept an accurate account for the past four winters I find the bag is 110, 116, 128 and up to the 12th ult., 158. I am quite at a loss to understand the *crescendo* in numbers, as we quite expected to record a *diminuendo*. However, perhaps in some neighbouring gardens it is thought to be hopeless to cope with these pests, judging from the amount of wire netting one sees about. Despite the frequent use of the gun here we boasted some half-a-dozen nests last summer.—J. G., *Battledene, Newbury.*

NOTES FROM GLASNEVIN BOTANIC GARDENS.

A WONDERFUL PITCHER PLANT (NEPENTHES RAJAH).

THE collection of plants at the Glasnevin Botanic Gardens is known to include a great many rarities, and among them this *Nepenthes* holds a foremost place, Edinburgh being the only other collection in the British Isles which includes this plant. Borneo is its native country, where it was originally discovered by Sir Hugh Low, but the late Mr. F. W. Burbidge introduced it to cultivation in 1881, and it was then cultivated for a time by Messrs. Veitch and Sons. The Glasnevin plant is one of three seedlings from Messrs. Veitch's original importation; the other two seedlings died. Mr. F. W. Moore first gave these seedlings the usual hot and moist conditions required for *Nepenthes*, but seeing they did not grow satisfactorily, the last remaining plant was placed in a cool Orchid house, where it has remained ever since. Many species of *Masdevallias*, &c. are grown in this house, the temperature being kept at 50° to 55°, rising with sun-heat. After about twenty-six years' cultivation—the three essentials laid down for its cultivation—namely, moisture, shade and an intermediate temperature—still hold good. The original plant grew rather tall, so the head was taken off and an effort made to strike it, but this failed in consequence of forcing. Fortunately, the old stem gave a break at the base and continued the life of the plant; in time this plant also got rather tall and leggy and the process of topping was repeated, and the break from the base is the plant now at Glasnevin. This time, before the head was severed, it was partly cut through some time previously and carefully mossed round, and now is making a small plant.

In its native habitat it is described as a terrestrial shrub about 4 feet high, rusty pubescent in all young plants, the leaves are thick, leathery and oblong, measuring 5 feet to 6 feet in length, including the tendril and pitcher, the pitchers having a capacity of two quarts. The plant in cultivation here is 2 feet in height, the leaves, exclusive of tendrils, are 14 inches long by 6 inches wide, while the largest pitcher holds about three-quarters of a pint. The rims or collars of the pitchers are showy, being very broad and of a rich reddish brown. The plant

has recently made four good leaves, which give promise of fine pitchers for this season.

HIPPEASTRUM PROCERUM.

This *Hippeastrum* is a most distinct plant, differing greatly in colour and general habit from the majority of the other species of the genus. The bulb is large, in shape like an elongated flask, and covered with membranous scales. Arising from this sheath of scales are thick and sickle-shaped leaves, with a whitish, cartilaginous margin. The flower-scape bears several flowers, which have strong resemblance to those of the *Crinum*, but they are light bluish purple in colour; in diameter they measure 4 inches to 5 inches, with a length of 6 inches, the whole plant reaching about 2 feet 6 inches in height.

The bulbs will flower in a house from which frost is excluded, but as a rule it cannot be said to be a satisfactory plant under cultivation; it is found that strong imported bulbs give the best results. So far hybridists have not been successful in utilising its colour by crossing. Mr. Williams of Bahia was the first to introduce this plant from Brazil. In the year 1870 it was flowered by Dr. Rayner of Uxbridge, and is figured in the *Botanical Magazine* t. 5883 as *Amaryllis Rayneri*. C. F. B.

INSECT PESTS.

EARWIGS.

FEW insects are better known or less liable to be mistaken for another insect than earwigs; they are common everywhere, and are very troublesome and annoying in gardens, sometimes in dwelling-houses. That earwigs are not favourite insects there can be no doubt; but like many other creatures and things, they are not so black as they are painted, and in spite of the story that is so often repeated about their getting into persons' ears and brains which cause madness and death, they never do so. As a matter of fact they could not enter the brain, as the passage is blocked by the drum of the ear. It is curious, however, how universal this idea is, for in many European countries they are known by names which allude to this superstition. For instance, in France they are known by the name of *perce oreille* or ear piercer, in Germany as *ohrwurm* or earworm. Another superstition is that they do not fly. It is true that they are seldom indeed seen on the wing; but as they usually hide themselves during the day, only feeding and moving about at night, it is not to be wondered at that they are not seen in the act of flying. That they do fly is a well-proved fact, and their wings are such complex and wonderful pieces of mechanism that it is most unlikely that they would be provided with them if they were of no use.

Earwigs are a certain benefit, as they kill thrips and aphids. They are very cleanly insects in themselves, and always look bright. They have, moreover, a strong maternal instinct, which is not the case with most insects, who, having laid their eggs after the manner of their kind, appear to take no more thought about them, and leave them to take their chance in this inhospitable world. Not so with the earwig, who after depositing its eggs in a suitable place, sits on them as a bird would, and even broods over the young ones. Earwigs are very voracious, and chiefly feed on the flowers and leaves of various plants, the petals of Dahlias, Chrysanthemums and Carnations being their special favourites. They often attack fruit, especially Apricots, Peaches, Nectarines, Apples and Pears, and spoil Cauliflowers by creeping into them and rendering them dirty and unfit for use. They seem to have no objection to animal food, and, as already mentioned, sometimes feed on smaller insects. They have been known, when

other sustenance fails, to feed on one another. These insects hide during the day in all manner of different places; in fact, wherever there is a crack or crevice into which they can creep. They often hide in or among the petals of flowers, and have many natural enemies. Various birds, toads and some of the larger predaceous beetles are very fond of them, and many fall a prey to parasites. In the open air I cannot recommend any better method of destroying them than the old-fashioned one of trapping them, which may be done in various ways. Small garden pots filled with dry moss or crumpled paper placed inverted on the top of the stake or stick by which the plant is supported, pieces of Reed, Bamboos, the hollow stems of Sunflowers or Broad Beans, or, indeed, the stems of any plants which are hollow, cut into lengths of about 9 inches, placed among the stems or branches of the plants are very useful traps.

Pieces of crumpled-up paper or canvas laid among the shoots are also useful, and lengths of canvas or sacking folded loosely several times and laid on the ground near plants which are attacked by these insects may be used for the same purpose. Smearing the inside of any of these traps with a mixture of beer and treacle will render them more attractive. They should be examined every morning and the insects that they contain blown or shaken into a vessel of water into which sufficient paraffin oil has been poured to form a thickish film on the surface. This will soon kill them. Earwigs are able to move so rapidly that it is useless to try and spray them with any insecticide. Of course, by this means their food may be poisoned, but flowers and fruit cannot be treated in this manner. Though they often infest dwelling-houses, they do no harm as a rule, but they have been known to destroy insects which entomologists have inadvertently left within their reach on setting-boards; and a correspondent wrote recently saying that "they have invaded a country house to the destruction of all things therein." One can only imagine that this statement was intended to be taken with the proverbial "grain of salt," and that there were certain exceptions; but what articles were really destroyed unfortunately the "deponent sayeth not." It is difficult to suggest any method for destroying this insect in rooms, except by fumigation with hydrocyanic gas, which would be a very dangerous operation, as it would be so difficult in most rooms to open the windows from outside without inhaling some of the gas.

Earwigs are so well known that it is needless to give any description of them; but I may point out that the males may be known from the females by the shape of their pincers. Those of the male are curved, meeting only at their tips, while those of the female are nearly straight, only just the tips being curved. They are made great use of when the insect wishes to fold up its wings, which, as I have before mentioned, are very delicate and complex organs. The front pair are like those of the rove beetles (or *Brachelytra*), form short wing-cases for the other, which are many times larger, and, in order that they may be protected by these cases, they are folded in the most elaborate manner; they are kept expanded by a series of nervures, which radiate from a point like the framework of a fan. When the wing closes it does so just like a fan; the end half can then be folded back upon the other half, and with another fold, which it is impossible to explain in a few words and without a figure, the entire wing, with the exception of the hardened tip of the now tightly-folded organ, is covered by the wing-case. The young earwigs much resemble their parents in form, but they have no wings and are quite white. There are eight different kinds of earwigs native to this country; only two, however, are common. Besides our well-known species (*Forficula auricularia*) there is a much smaller species (*Labia minor*), which may often be seen flying about in the evening, but it is not recognised as a pest in any way.

G. S. SAUNDERS.

THE FLOWER GARDEN.

ANEMONE BLANDA.

THE accompanying illustration shows one end of a broad edging of this Anemone in an exposed portion of one of my beds for herbaceous plants. The clump shown is a very early pale blue form, which generally shares with the Winter Aconite the honour of being one of the first dicotyledons to show flower in the new year. The outsides of its sepals have a decidedly rosy tint, but when expanded in the sunshine they are a clear Nemophila blue, with a white eye to the flower. Adjoining it in this bed are patches of other forms of *A. blanda*. This pale blue one is always the first in flower, closely followed by the pure white. Then comes the deeper blue form known as Ingram's variety, and, latest of all, the beautiful *v. scythinica*, with deep blue outer but brilliantly white inner surface, which is perhaps most lovely when the blossoms are only half expanded and showing both the blue and white sides. I find these forms seed very freely, and a large number of the seedlings are of the *scythinica* coloration. I have a very deep blue form, quite purple in the bud, which only thrives here on the shady and northern slopes of the rock garden, and never makes a good tuft as do the forms above mentioned, a few flower-stems appearing each year 2 inches or 3 inches apart. A beautiful rose-pink form a generous friend gave me lately promises to be

one of the most charming of early spring flowers, that particular colour being rare in the two first months. The finest form of all, however, is the beautiful double one, of so deep a blue that it becomes purple in the centre of the flower. This is only to be seen in one garden—in the West of England—where it suddenly appeared one spring, a spontaneous tribute from the grateful garden to reward the many years of loving care bestowed on it by its learned master. Long may they both flourish there!

Waltham Cross.

E. A. BOWLES.

A QUICK-FLOWERING ANNUAL.

(*EUCHARIDIUM GRANDIFLORUM ALBUM*.)

THERE is little in the appearance of this plant or its flowers to suggest the Fuchsia of either our gardens or greenhouses, but this fact serves to show that it is unwise to trust to appearances, for the *Eucharidium* is certainly a member of the Fuchsia family, a family which, by the way, also includes the Evening Primroses. To some of the latter the *Eucharidium* bears a very fair likeness. It is a native of California, and may be treated as a hardy annual in this country. There is one point about *Eucharidiums* which is well worth remembering, and that is the short period that elapses between seed sowing and flowering in the warmer parts of the year. Sowing may be commenced as soon after the middle of March as the state of the soil and weather will permit, and successional sowings may be made until the end

of May. It is these later sowings which will be found so valuable in most gardens, as often only six weeks elapse between the date of sowing and the opening of the first flowers; eight weeks should see the plants in full bloom. This means that any blanks left in the borders by the departure of the early Tulips and Narcissi can be made good almost before they have time to assert their presence. And, moreover, the *Eucharidium* lasts long when it does begin to flower, in this respect being different from many of our most appreciated annuals. Of course, a sowing made at the end of May must not be expected to possess the longevity of one made in March, and neither of them compare with an autumn sowing for lasting effect. They should be kept in a mass to ensure the best display, and are best adapted for filling blanks in the borders, being scarcely suitable for sharing in the bedding display proper. There are now several species and varieties of the *Eucharidium* in cultivation, *E. Breweri* being the most showy, and that

illustrated the most chaste; the two look well in combination. The earliest sowings should be made on a sunny reserve border towards the end of March; the later ones are better made where the plants are to bloom, as establishing transplanted seedlings give trouble in a hot season.

PROPAGATING SWEET PEAS BY CUTTINGS.

AN American correspondent asks for information about propagating Sweet Peas by means of cuttings, adding that he "knows of several new things, some of my own, and find propagating by seed too slow!" Considering the freedom with which most varieties seed in ordinary seasons there should be little need to resort to propagation by means of cuttings, a system of propagation which, if carried out to any extent, will soon ruin the constitution of the plants with which it is practised. It is quite possible, and even probable, that some of the bad features, such as shy seeding, weak constitution and, consequently, liability to attacks by fungoid diseases that have recently shown themselves among Sweet Peas, have been brought about by propagation by this means, hence its adoption is not advisable.

However, cuttings will root with comparative freedom if the tops of young plants, or even the side shoots, are taken off, made into cuttings about 3 inches long, the lower leaves removed, and then inserted into pots of rather sandy soil, these being plunged to their rims in Cocoanut fibre refuse in a rather close greenhouse with a temperature of about 60° Fahr. Plants raised under glass are the best for taking the cuttings from, as the growths are softer and thus root more readily.

NEW PLANTS.

CYRTOMIUM FALCATUM MAYI.

THIS is a crested form of a well-known and useful Fern whose decorative value is considerable. The crested in the new comer is confined chiefly to the ends of the fronds, which are divided and subdivided and slightly broader than in the typical plant. Shown by Messrs. H. B. May and Sons, Edmonton. Award of merit.

NARCISSUS BUTTERCUP.

A sturdy and richly-coloured variety, the parents of which we believe to be *N. odoratus* variety and *N. Emperor*. The new comer is of self-yellow tone, hardly so rich in colour as the first-named parent, and lacking that shining or glistening yellow tone which marks its namesake the Buttercup. At the same time it is a beautiful and distinct novelty, and apart from its sturdy and well-balanced character there is richness of colouring and that fragrance which betells the influence of the Jonquil Daffodil. For these reasons we welcome the new comer, and it is possible that other novelties in the near future may have this quality of fragrance imparted to them. Exhibited by Mr. Charles Dawson, Gulval, Penzance, before the Royal Horticultural Society on the 14th ult. Award of merit.

TUNICA SAXIFRAGA FL.-PL.

We have received the following letter in reference to this plant from Mr. A. M. C. Van der Elst, the managing director of the Royal Tottenham Nurseries, Limited, Dedemsvaart, near Zwolle, Netherlands: "This plant has been introduced by us this year, and in general appearance may be described as a *Saxifraga* of the mossy section with double *Gypsophila*-like flowers. The flowers appear about May and there is a succession until October. Few plants can be used for so many purposes; it grows quite as well in the shade as in the hottest sun, and it is not particular with regard to soil. It is a gem for planting on graves, because it is compact in growth, evergreen and flowers in the shade. It is a flower to cut, and excellent in pots and the border. I consider it is even more valuable than the double *Gypsophila*."



ONE OF THE BEST ANNUAL FLOWERS: *EUCHARIDIUM GRANDIFLORUM ALBUM*.

THE KITCHEN GARDEN.

ONIONS FOR EXHIBITION.

OWING to the record prizes offered this year by Messrs. Rogers and Co. of Leamington, the Onion should receive a great stimulus, and providing we experience a favourable season, there is every prospect that a very large and keen competition will be the result next October.

Fortunately, Onion culture is not confined to any particular class of men, as anyone possessing a moderately-sized garden may produce bulbs equal to the professional with acres of land at his command. But to be successful it will, of course, have been necessary to have raised the plants under glass and the ground prepared during the past winter and made ready for receiving the plants from boxes or pots during the present month. These should have been well hardened off, and when this has been properly done no weather will injure them after this date. The Onion revels in a deeply-trenched and well-enriched soil, but is not at all particular as to kind providing plenty of food is given it.

The surface should be neatly raked down and made thoroughly firm, and the plants put out at a distance of from 15 inches to 18 inches apart all ways. If in boxes bit with a small hand fork or garden trowel with as good a ball as possible. Care should be taken to arrange the roots so that these are not doubled up. Make them very firm, and if the weather be dry give a thorough watering in, at the same time applying a good application of fresh soot. Everything should be done to encourage the young plants to begin active growth at once. Unless the weather be showery damp over the tops two or three times daily, and Dutch hoe the surface twice weekly. After the plants have once become established, providing the ground is properly drained, hardly too much water can be given to the roots, both clear and liquid manure properly diluted. Soot should be applied once a week, being both a good stimulant as well as proving a check to the Onion fly, although this seldom seriously affects these early-raised plants. The surface should be kept stirred with the hoe, but not sufficiently deep to injure the roots. Mildew must be constantly watched for, and on the first appearance means must be taken to check it. Any affected plants should be taken away and burnt, and dust over the growth with sulphur and fresh chalk lime. Patent vegetable manure should be given according to the directions during showery weathery. I have found Clay's Fertilizer both safe and beneficial. The Onion is a gross feeder, but even this can be overdone, and growers frequently when their plants are doing as well as possible are not satisfied, and often overdose them, the result being ill-finished and badly-shaped bulbs in consequence. Mere size has little to recommend it. Well-ripened, firm and finished specimens should be one's aim, and when this is accomplished there is no reason why these should not keep thoroughly sound and good till the following April.

I cannot too strongly impress on those who have charge of them that too much care can hardly be exercised when handling the bulbs, as the slightest bruise will impair their keeping. Early planting and harvesting should always be practised. The crop should never be left on the ground a day longer after the growth is practically completed, but taken up and finished off under glass if possible.

Elstree.

E. BECKETT.

CULTIVATION OF THE BEETROOT.

Now is the time to sow this, one of the most valuable and useful root crops of the garden. It is valuable because it is one of those roots which is available for use all the year round, and also because it gives a splendid return in value

and weight of crop for the labour expended in its growth. It is useful because of the many ways and forms in which it may be prepared for the table. Most of those ways are so well known that it may appear superfluous to mention them. Boiled and steeped in vinegar it becomes one of the most appetising and acceptable adjuncts it is possible to have to cold meat. As an ingredient in a good salad we know it is indispensable. Prepared as fritters it is excellent, and as a pickle it is liked by most people. There is no great skill required to grow the Beetroot successfully. Even a novice trying his hand at gardening for the first time may take the Beetroot in hand, feeling confident of success, provided he will follow certain lines of culture which I will endeavour to lay down and make clear.

SOIL.

A rich, light deep loam which has been deeply dug and generously manured the previous year for a crop of Peas or Cauliflowers is an ideal one in which to grow this root; but it will grow well in any ordinary soil which has been deeply cultivated and manured the previous year for any crop other than a root crop. It is not

young seedlings are apt to be injured by frost, and there is a danger also of the plants bolting into flower rather than to form good roots. The drills for the Turnip-rooted sorts should be 15 inches apart and the seeds should be buried 1½ inches deep. In the case of the long-rooted sorts the drills should be 2 feet apart and the seeds planted thinly 2 inches deep. In the case of the Turnip-rooted varieties, thin out the young plants as soon as they are large enough to handle to 6 inches apart, and in the others to 9 inches. Summer culture consists of the frequent hoeing of the ground between the plants in order to keep down weeds and to aerate the soil. The Beetroot is seldom or ever attacked by insect enemies or fungoid disease. As mentioned before, it is liable to injury from frost, consequently the roots should be dug up not later than the first week in November. In digging special care must be taken not to bruise or injure the roots, or the consequence will be that they will bleed when boiled and prove practically useless. In washing also before boiling equal care must be exercised not to break the skin. In lifting a four-tined fork only should be used, pressing it deeply into the soil some distance



A DRIFT OF ANEMONE BLANDA.

advisable to manure the land immediately before sowing Beetroots, as doing so has a tendency to cause the roots to fork out into different growths, which considerably reduces their value. It may happen with many that land in the condition above stated may not be available, in such a case, rather than plant in very poor soil, I would advise that a light dressing of well-decayed short manure be added to the soil at the time of digging.

VARIETIES.

For the first early crop I recommend the Globe or Turnip-rooted. It comes to maturity three weeks before the long ones, and this is an important consideration, as the flavour of a fresh Beetroot is infinitely better than that of an old one. This form of Beetroot is also valuable for growing on very light or stony land, where the deep-rooted ones do not succeed so well. Sutton's Globe and Carter's Crimson Ball are excellent varieties. Of the long varieties there are many good ones to choose from. The following three are among the best: Sutton's Blood Red, Carter's Perfection and Veitch's Dell's Crimson.

SOWING THE SEED.

The last week in April or the first week in May is the best time to sow. If sown earlier the

from the roots, and then prising the root up gently with the left hand and pulling it up with the right. In cutting off the leaves care must be taken not to cut them too close to the crown of the root or it will bleed; 1½ inches to 2 inches should be left. It is a good plan to place the Beet in small heaps together on the land for a week after they are taken up before storing, covering the heaps over with the tops cut off.

STORING.

There are many ways of storing Beetroot for winter, spring and early summer use. The best way I have found is to place them thickly in layers in fine soil in a cool storehouse or cellar, where they are safe from frost and at the same time perfectly cool. Another way is to clamp them out of doors, covering with straw and earth as is done with Mangold Wurtzel and Swede Turnips.

As a vegetable the silver-leaved Beetroot is valued by many. It should be grown in rich soil in drills 2 feet apart, and the young plants when large enough thinned out to 12 inches apart. It is the mid-rib of the leaf only which is used, which should be boiled and served like Asparagus, and the leaves pulled off as in Rhubarb not cut.

OWEN THOMAS,

TREES AND SHRUBS.

A BEAUTIFUL RHODODENDRON.

HERE is no more beautiful Rhododendron in the world than Pink Pearl, which, we think, may be considered quite hardy. It will be interesting, however, to see the effect the sharp frosts have had upon this and other of the more tender wild Rhododendrons and hybrids derived from them. The illustration shows a plant in Mr. H. M. Arderne's interesting

requiring the shoots to be well thinned out immediately after the blooms are past. By doing this air and light are admitted to the young growths, and finer and better flowers are produced.

S. arguta (*S. multiflora* × *S. Thunbergi*).—This is a hybrid of garden origin, and forms a dense bush 4 feet or so in height, with gracefully arching shoots laden from end to end in April with tiny clusters of pure white flowers. These last a long time in flower, and are very useful for cutting.

S. chamædrifolia is a widely-distributed species throughout Europe and part of Siberia, and is

in quite a young state. It is a native of Europe and one of the best of the genus for forcing.

S. prunifolia is a native of China and Japan and is of no garden value, but its double variety (*S. p. var. flore-pleno*) forms a plant 6 feet or so in height, with slender gracefully-arching shoots clothed from end to end with tiny double white flowers in April. Each individual bloom is perfect in shape, resembling a pure white rosette. The foliage turns to a brilliant crimson in autumn.

S. Thunbergi.—If only one *Spiræa* can be grown, this is the species to plant, as it is one of the most beautiful and useful of hardy shrubs.

It forms a plant 3 feet high and as much or more in diameter, with thin twiggy shoots covered in March and early April with tiny white flowers. Cold winds and frosts sometimes affect the flowers that are open, but the unopened buds expand fully and freely with more genial weather. The foliage turns to a lovely bronze crimson hue in autumn. Plants of this potted up in October can be forced into bloom early in the following spring and are valuable for house decoration or for cutting.

S. Van Houttei (*S. cartoniensis* × *S. trilobata*). This is a hybrid of garden origin, bearing white flowers opening in late April and May. The plant grows to a height of about 6 feet, with comparatively stout upright growths, which require to be kept well thinned to flower well. *S. Van Houttei* forces well, but requires to be brought on gently, too much heat causing the flowers to come "blind."

SECTION III.—NOTHOSPIRÆA.

S. bracteata is a native of Japan and bears white flowers in May and early June. It is a strong upright grower, attaining a height of 6 feet and upwards and requires plenty of room to develop. The other member of this section (*S. nudiflora* ×) is of little or no garden value.

SECTION IV.—SPIRÆRIA.

The members of this section mostly bloom during the summer months and the flowers are borne in corymbs, either terminal or clustered towards the ends of the branches. With the exception of *S. canescens*, which requires to be kept well thinned, the majority of this section are benefited by being cut back in early spring, as they bloom on the current season's growth. It is not absolutely necessary to cut them back, but the flowers are finer and better when a judicious amount of pruning is carried out.

S. betulifolia is a dwarf bushy species, rarely more than 2 feet high, with comparatively stout branches bearing terminal corymbs of pretty rosy pink flowers about the end of June. It is found irregularly throughout the Northern Hemisphere, and will thrive under almost any conditions of soil and climate.

Bagshot, Surrey.

J. CLARK,

(To be continued.)



RHODODENDRON PINK PEARL IN SOUTH AFRICA.

garden, The Hill, Claremont, near Cape Town. No finer specimen in the world is said to exist. It is 9 feet high, 8 feet through, and at the time the photograph was taken had 105 perfect clusters of flowers open. These clusters are very large, also the individual flower, and the colour is a delightful pink, as tender as the pink on the petal of a China Rose. The plant is growing near a Lily pond in black fibrous peat enriched with Oak leaf-mould and partially shaded. Mr. Arderne obtained the plant, then small, of course, in 1896, and it has succeeded wonderfully by the Lily pond.

THE SHRUBBY SPIRÆAS.

(Continued from page 211.)

SECTION II.—CHAMÆDRYON.

This is one of the most important sections, the members of it being mostly spring-flowering and

naturally a variable plant, some seven or eight varieties of it being known. The white flowers are produced in small clusters in early spring, but are not so showy as some of the other early-blooming *Spiræas*. It is a plant for odd corners, as it will grow and flower as well in partial shade or under rough conditions as it does when well treated.

S. hypericifolia.—This species is irregularly distributed throughout the northern hemisphere and forms a plant 4 feet to 6 feet high, with slender arching shoots clothed from end to end with small clusters of tiny white flowers in May. It is a handsome and graceful plant, but one which is not often seen.

S. media is more often met with under its old name of *S. confusa*, and forms a dense bush 6 feet or more high, with clusters of white flowers opening in late April and May. It is a handsome species and grows well and blooms freely

COLOURED PLATE.

PLATE 1347.

SOME BEAUTIFUL FUCHSIAS.

MOST amateurs are familiar with the ordinary Fuchsias and find little difficulty in growing them satisfactorily, for they succeed well under various conditions. After the introduction of the tuberous Begonias the Fuchsias were somewhat neglected, and though they are now coming into favour again they do not receive the attention that they deserve, especially in regard to hybridising and the raising of new varieties. I find we are indebted to the Continental raisers for most of the recent novelties, and in addition to the ordinary types some very distinct hybrids have been introduced from Germany. The coloured plate will give some idea of the beauty of these new varieties. They were introduced by Mr. H. J. Jones of Lewisham, who supplied the flowers from which the plate was prepared. Coralle, the variety shown in the centre, has soft green foliage somewhat after the fulgens type, with drooping terminal racemes of bright coral-like flowers with a shade of salmon. Andenken an H. Henkel, shown on the left, is a variety of freer growth, with leaves of a bronzy red tint; the flowers which are produced from the axils of the leaves and finish with a terminal cluster are of a peculiar shade of rosy pink shaded with orange. Gartenmeister Boustedt, on the right, is a very distinct hybrid with rather large foliage: the young tips have a bronzy tint and change to green. The flowers are produced in loose terminal panicles and are of a rosy red with a salmon shading.

In addition to the above there are several other distinct varieties. Of these Clio, dark bronzy red foliage and terminal clusters of salmon pink flowers, is very pretty; Trudchen Bondstedt has soft pale green foliage and clusters of pale salmon flowers; Thalia has rather large leaves of a deep bronzy red shade and terminal clusters of red shaded flowers. There are also several other distinct varieties. Many a fine variety from triphylla has a good compact habit, with terminal clusters of rather small deep crimson flowers.

All these hybrids have longer tubes, and the lobes, which are short, do not spread out, as in the ordinary Fuchsias, and most of them appear to be intermediate between *F. fulgens* and *F. corymbiflora*.

They are of easy culture, growing freely in an ordinary cool greenhouse. Pot the plants in a rich loamy compost and give more root room, that is, larger pots

than for the ordinary sorts; light and air are essential, but avoid draughts. Very little shade is needed. If watering is carefully attended to the plants may be fully exposed to the sun, except during hot summer days. Young plants should be propagated annually; the cuttings will root freely if taken from the young shoots early in the spring and treated the same as the ordinary sorts.

Few classes of plants afford greater scope for the amateur hybridist than the Fuchsias: the plants used for hybridising should have all the flowers removed, except those that are to be fertilised, and as soon as these flowers open take away the stamens. The pollen may be taken from other varieties by using a small camel's-hair brush. This should be applied as soon as the

pistil is moist at the point. The great mistake that many hybridists make is that they go too far, or rather save too much seed, and then

having a larger number of seedlings than they can accommodate some of the best may be lost. Take care that every seedling is grown on until it flowers. Seeds which ripen in the autumn should be kept until the spring before they are sown. It requires some care to extract them from the fleshy pulp. This can best be done by breaking the fruit open when they are quite ripe, and work the seeds out with the point of a knife or a small stick and carefully dry them. Being so small they perish if over dried. They should be kept in a tin box in a cool, dry place.

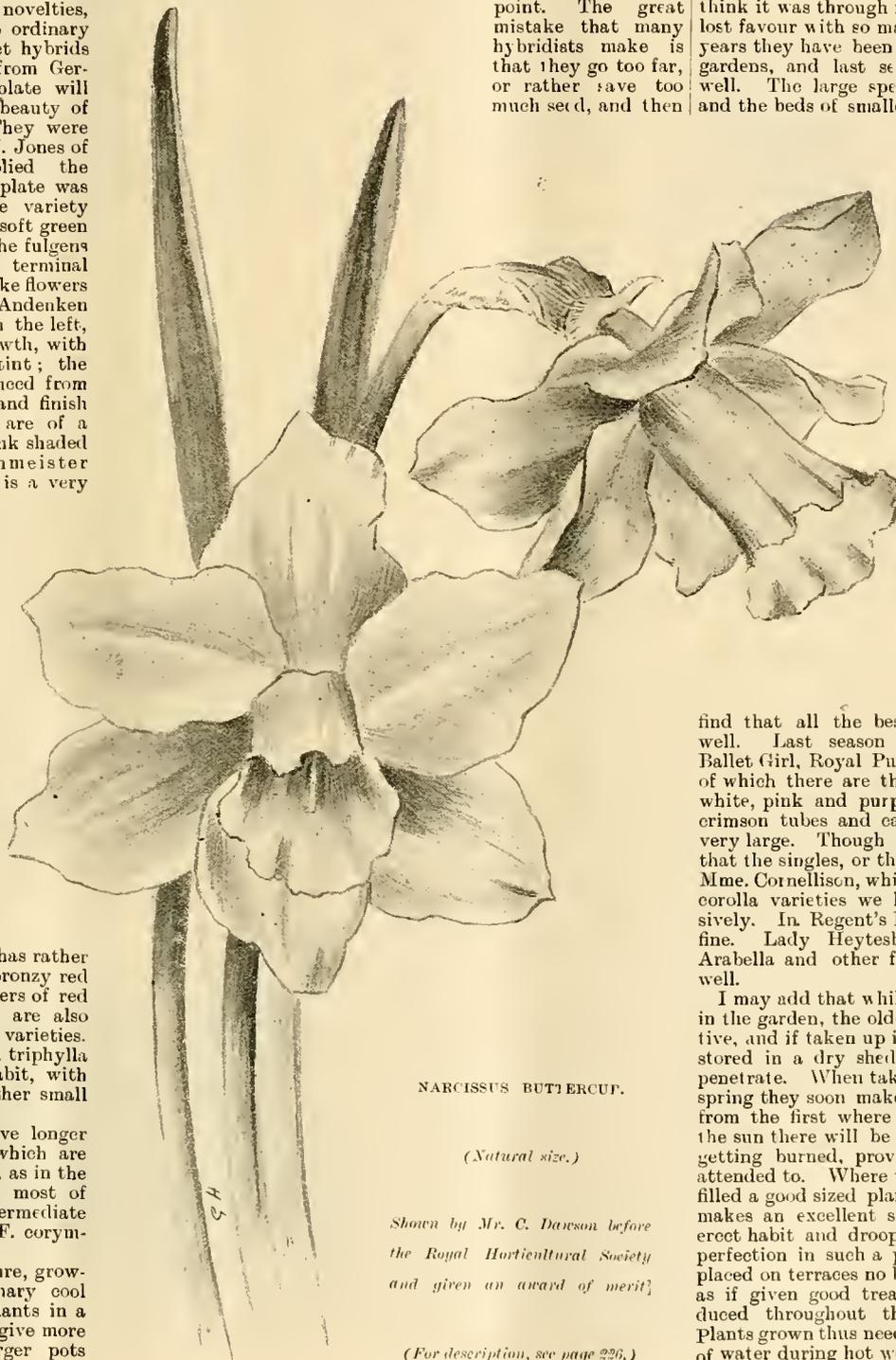
FUCHSIAS FOR BEDDING.

Formerly the ordinary garden varieties of Fuchsias were considered too tender to be grown anywhere except in a greenhouse where they could be kept close and shaded from the sun. I think it was through nursing them up that they lost favour with so many. During the last few years they have been extensively used in flower gardens, and last season they did remarkably well. The large specimens seen in the parks and the beds of smaller plants all flowered well.

In private gardens I saw early spring-struck plants which had made fine specimens by August. Standard plants are also extensively grown in some gardens. These standing above, in beds of dwarf-flowering plants, make a fine effect. They may not be suited for exposed positions, but where they are sheltered from strong winds they flower through the season. They do best in rather heavy loam. For vases and window-boxes there are few plants which flower so continuously. For this purpose those of rather slender drooping growth are the most suitable. For ordinary bedding I

find that all the best double varieties will do well. Last season I noted, among others, Ballet Girl, Royal Purple and the Phenomenals, of which there are three varieties, these having white, pink and purple corollas, while all have crimson tubes and calyces, and the flowers are very large. Though the doubles do well I find that the singles, or those more after the type of Mme. Cornellison, which is one of the oldest white corolla varieties we have, is still grown extensively. In Regent's Park last year it was very fine. Lady Heytesbury, Display, Charming, Arabella and other free-flowering sorts succeed well.

I may add that while young plants will do well in the garden, the older ones are the more effective, and if taken up in the autumn they may be stored in a dry shed where the frost does not penetrate. When taken out and started in the spring they soon make good plants. If started from the first where they are fully exposed to the sun there will be little danger of the foliage getting burned, provided watering is properly attended to. Where very large vases have to be filled a good sized plant of any compact variety makes an excellent subject for the centre, the erect habit and drooping flowers showing off to perfection in such a position. For tubs to be placed on terraces no better plant can be found, as if given good treatment flowers will be produced throughout the summer and autumn. Plants grown thus need liberal feeding and plenty of water during hot weather. A. H.



NARCISSUS BUTTERCUP.

(Natural size.)

Shown by Mr. C. Dawson before
the Royal Horticultural Society
and given an award of merit.

(For description, see page 226.)

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

WINDOW GARDENING.—Sponge the foliage plants about once a fortnight, using tepid milk and water. By these means dust and insects are removed. The last of the spring bulbs are finishing their display in the window-boxes. I therefore propose to immediately replace these with *P. largoniums*, *Lobelias*,



I.—TUBERS OF THE GLOXINIA BEFORE STARTING INTO GROWTH. THE ONE ON THE LEFT IS THE WRONG WAY UP, AND THE OTHER IS CORRECT.

Marguerites, *Calceolarias* and similar subjects, being guided in these operations by the climatic conditions prevailing at the time. Only window-boxes in warm aspects should be planted as above advised. The flowering plants inside the window should now be making a gay display. In this connexion I have *Genistas*, *Pelargoniums*, *Hydrangeas*, *Heaths* and *Spiræas*.

Roses.—At this period I am giving considerable attention to my *Roses*, carefully looking into the growths and foliage for maggots and caterpillars that invariably infest them at this season. Recently-planted *Roses* I am now mulching with well-decayed manure, placing a good layer on the surface soil round about the base of the plants.

The Flower Garden.—Early spring-flowering plants in the beds and hardy border, if they have ceased flowering, may be lifted and transferred to other quarters to make room for the summer things. *Primroses*, *Polyanthuses*, *Daisies*, *Arabis* and similar plants may be dealt with. *Lilies* in the hardy border will derive considerable benefit from a mulching with well-rotted manure. I am now proceeding to place a good layer of this manure round about the surface soil. Vacant beds and borders should be forked over in preparation for planting in the immediate future. See that these quarters are levelled and raked over, and everything prepared in readiness for planting. Although the more tender subjects, such as *Geraniums*, *Calceolarias*, *Petunias*, *Lobelias*, &c., are often planted thus early, I am not disposed to plant so soon as usual this season. I think it will be better to wait a little longer. In the meantime, by the help of the cold frame I am thoroughly hardening off the more tender subjects. I would rather wait another fortnight than run unnecessary risk.

The Greenhouse.—Those who have the opportunity may now make a sowing of *Primulas* and *Cinerarias*. The former succeed when sown in a compost of one part fibrous loam, two parts leaf-mould and half a part of silver sand, all passed

through a fine sieve and well mixed. Sow the seeds thinly and lightly, and cover them with the finer soil. *Cinerarias* should be treated similarly in finely-sifted soil made up of two parts yellow loam and one part leaf-mould and coarse silver sand. The seed-pans or boxes must be well drained. The resulting plants should make a beautiful display in the early spring of the succeeding year. To assist germination, cover the pans with a sheet of glass and shade from the sun. For most greenhouses the temperature at this season should not exceed 55°. When the thermometer denotes this figure I open the ventilators so that it shall not be exceeded, closing them again in the late afternoon, by which time the sun has lost much of its power. At this season *Fuchsias* are growing freely; their well-being may be promoted by a light spraying overhead with water in the early morning and late afternoon. Continue to pot on recently-rooted *Geraniums*, *Petunias*, *Heliotropes*, *Fuchsias*, tuberous-rooted *Begonias* and similar flowers as they fill the smaller pots with roots.

The Vegetable Garden.—For late autumn and winter use make a sowing of *Cabbage*, *Savoy*s, *Broccoli*, *Borecole* and *Brussels Sprouts*. The *Onion fly* is invariably troublesome in May, and, in order to anticipate its attacks, give the *Onion* bed a good sprinkling with soot over the surface soil; this is an excellent preventive. I am now making a sowing of *French* and *Runner Beans*, feeling quite safe in doing so. This should provide supplies at the end of July. D. B. C.

GLOXINIAS AND THEIR CULTIVATION.

MANY people labour under a misapprehension with regard to the cultivation of the *Gloxinias*. They imagine this subject is a plant of difficult culture; but given suitable soil and proper conditions there is no reason whatever why a "beginner" in gardening should not grow these plants satisfactorily. For many years *Gloxinias* were regarded as stove plants, but time has proved that they may be grown successfully in a warm greenhouse.

Raising Gloxinias from Seeds.—During March and April, and even in early May, the seeds of *Gloxinias* may be sown, although we prefer the earlier period. From an early spring sowing the resulting plants should come into flower within five or six months, providing they are grown on carefully and their progress made continuous. A suitable soil for seedling raising should comprise leaf-mould, peat and fibrous loam, each ingredient passed through a fine sieve, and, with the addition of a small quantity of silver sand or fine grit, should be well mixed. Use shallow boxes or seed-pans, taking care to crock these receptacles so that good drainage is ensured. This done, fill in the prepared compost to within 1 inch of the rim, following subsequently with a thin layer of sand, on which the seed should be sown thinly. Moisten the soil previous to seed-sowing by holding the receptacle in a vessel of tepid water so that this can percolate through the soil. Take care not to permit the water to overrun the rim of the seed-pan, or disaster may follow. Do not cover the seeds with soil, but lightly

press them into the loose surface soil with the bottom of a flower-pot or anything similar. Place the seed-pans in a propagating frame or over the hot-water pipes where the temperature can be maintained at from 65° to 75° until the seeds have germinated. When the seedlings are large enough to denote progress stand the pans on shelves in a warm corner of the greenhouse, shading from bright sunshine. When large enough to be lifted with the aid of a small notched stick transplant them to pans or boxes, observing a distance between each seedling of 1 inch or less. Transplant in rows. Then keep the seedlings rather close for a short time, subsequently transferring them to 3-inch pots and ultimately into those 5 inches in diameter. Equal parts of loam, leaf-mould and peat, with a small quantity of thoroughly decayed cow manure, charcoal and sand, will make an excellent compost for the final potting.

Starting the Tubers.—The tubers vary in size and character. The two represented in Fig. 1 show one arranged in proper fashion with the slightly hollowed out cavity uppermost, and the other with the concave side downwards and improperly arranged. Many growers place their tubers straight in their flowering pots, but this is a course that is not advised. Far better is it to place the tubers in shallow boxes filled with either *Cocoanut fibre* or leaf-mould. Fig. 2 is a good illustration of tubers started into growth. To promote growth on the tubers the boxes containing the latter should be placed in a temperature of about 65°. The crowns should be just covered with soil and this damped over with the aid of a fine-rosed can each morning. In a comparatively short time they will commence to break into growth and develop roots quite freely, and the tubers are then ready for potting up.

Potting up the Started Tubers.—Opinions differ regarding this operation. Some growers prefer to first pot up the plants into 3½-inch pots and finally to shift them into larger pots, say, those 6 inches in diameter and known to gardeners generally as "thirty-tvos." Other very successful growers prefer to pot up the started tubers straight away into either 5-inch or 6-inch pots. Either method may be successfully employed, and the latter method entails less labour. Fig. 3 represents a started tuber taken from the box of tubers seen in the illustration of Fig. 2. Take care not to damage the hair-like roots and do not attempt to free the tubers of the leaf-mould or *Cocoanut fibre* that adheres to the roots. For this potting use a soil made up of the following



2.—GLOXINIAS AT THE STAGE FOR POTTING UP.

ingredients: Really good fibrous loam one part, nice flaky leaf-mould two parts—use peat if the latter cannot be obtained, and half a part of coarse silver sand. This compost need not be sifted, but the heap should have a thoroughly good mixing before using. Crock carefully, covering the crocks with small quantity of the

feed and bring the crop to maturity. Not only should the rooting space be limited, but the soil must be made firm.

Twenty years ago many growers advocated starving the plants while they were young up to the stage when the first few trusses of flowers appeared; but it was a mistaken idea and quite the wrong mode to adopt. It is not wise to cause a check to growth at any time, and certainly it is not desirable to check the growth early in the season. Our summers are not too warm for the Tomato plant, and we are always anxious to get the plants forward early in the spring so that they will benefit to the full by the summer heat. A week gained in the early part of the summer is worth more than a fortnight at the end of it. So we must aim at growing healthy plants in a firm soil where the roots will be strictly under control. In this way the amateur will be able to stock his small house with profitable plants.

Use 10-inch pots for the plants to fruit in, but do not fill these pots at the time the plants are put in them. Leave ample space for a good top-dressing of soil later on, and so keep the plants progressing. When feeding is advisable, apply a teaspoonful of nitrate of potash or the same quantity of sulphate of ammonia to each pot. Nitrate of soda may also be used. Vary the food. Always water with clear water first, and occasionally give clear water only for the greater part of a week. Air and light are most essential. AVON.

WALLFLOWERS AND HOW TO GROW THEM.

The Wallflower is such a common and popular subject that directions how to grow the many beautiful varieties may seem almost out of place, even to the beginner in gardening, yet the poor attenuated specimens that one frequently encounters each spring indicate that their culture, simple though it is, is not properly understood. Wallflowers are splendid subjects for spring flowering, and they have the advantage over Tulips and most Narcissi of being delightfully scented. Another point in their favour is that they are in leaf all the winter while the ordinary bedding bulbs remain out of sight.

Although strictly perennials, Wallflowers are best treated as biennials, that is, the seed is sown one year, the plants flower the next, and are then thrown away. Where very early flowers are required, a few old plants should be retained, as they produce their blooms earlier in the spring than the younger specimens. There is some diversity of opinion as to the best time to sow the seeds; some growers declare that good results cannot be obtained unless the seeds are put in during the first or second week in May, and others prefer a month later. Excellent results have been and may be obtained from sowings made during the last two weeks in May and the first week in June, and for all ordinary purposes this is early enough.

The best soil in which to sow the seeds is a well-worked one that is not too rich; ground that has been cropped since the last manuring is excellent, and if some old mortar can be incorporated this will be much appreciated. It is advisable to make flat-bottomed drills 1 foot apart and 1½ inches deep, and should the weather be dry, water them well before sowing the seeds. Scatter these thinly in the rows, cover with soil, rake level and make moderately firm. If dry weather prevails after sowing it may be necessary to water the seed-bed thoroughly through a fine-sieved can at intervals as circumstances demand, the object being to effect germination as quickly as possible. When the young plants appear hoe between the rows so as to destroy seedling weeds. When the seedlings are from 2 inches to 3 inches high they must be transplanted, and as the weather is frequently very hot and dry at this season some care is needed. If possible select a dull, showery day for the purpose. Failing this,

give the young plants a thorough soaking with water one evening and transplant them the next.

The soil in which they are transplanted should be the same as advised for seed sowing, but it must be made firm so as to ensure a sturdy, hardy growth being formed. If planted in loose, rich soil thick, healthy-looking shoots and green foliage will be produced in abundance, but this will not stand the frosts and wet, cold winds of winter so well as the hard, sturdy shoots produced on comparatively poor ground. The best plan is to transplant the seedlings into rows 1 foot or 15 inches apart, allowing at least 6 inches from plant to plant. Give each one a good watering after the whole are planted and it may be found necessary, if the weather is very hot and bright, to afford some slight shade for a few days by placing leafy boughs among the plants. As soon as they are established any shading material must be removed and subsequent work will consist in frequently hoeing between the rows to keep down weeds.

By the end of the summer good bushy plants, each bearing several sturdy shoots, will be available, and after the summer bedding subjects have been removed the beds or open border spaces should be dug, incorporating some old mortar if possible, and the soil then trodden firmly for the reception of the plants. The distance to plant will vary somewhat according to circumstances. If it is intended to fill a bed or space with Wallflowers alone the plants may almost touch each other, but if Tulips are to be incorporated the plants must be set more thinly. Where the Tulips and Wallflowers are used together always plant the latter first, then the bulbs can be set in the open spaces between them. A day or two before lifting the Wallflowers for planting tread the soil firmly on each side of the row; this will enable them to be lifted with good balls of soil, a most important factor, as the plants then suffer but little by removal, and consequently stand the winter much better. October is the best month in which to do the planting, and if for any reason it cannot be done then, it is best left until the end of March. In the latter case it is even more important to lift with good balls of soil and disturb the roots as little as possible. If the above simple directions are consistently carried out, fine bushy plants laden with large racemes of fragrant flowers can be obtained by any amateur.



3.—ONE OF THE YOUNG PLANTS LIFTED FROM THE BOX READY FOR POTTING UP.

rougher portions of the compost. The tuber should be so arranged that the crown is just below the surface soil. When potting take care not to make the soil too firm. The plant represented in Fig. 4 has been potted up into a 5-inch pot, is now established and growing away freely and promises at an early date to come into flower.

Subsequent Treatment.—After potting the plants will not need much water for a time but when they begin to develop their large leaves and are making abundant growth the plants appreciate copious applications pretty frequently. The porous character of the soil ensures a somewhat free drainage, and on this account readers will understand the necessity for abundant supplies of water. Once or twice a week stimulants or liquid manures may be given with advantage. Let the doses err on the side of weakness, and, if possible, vary the character of the manure or stimulant that is applied from time to time. Never apply liquid manure, &c. when the roots are dry. First water dry plants with clean water, following later on with the manure water. After the plants go out of flower, gradually withhold water till the foliage dies down, then keep dry until starting the tubers again in the succeeding spring.

TOMATOES IN SMALL GREENHOUSES.

How to grow Tomatoes successfully in small glass structures is a problem that thousands of amateurs every year try to solve. The Tomato plant grows very luxuriantly indeed if it is planted in a border of loose soil. As a rule, there is not much difficulty in securing a good and healthy growth of stems, side shoots and leaves; but the difficulty is to obtain the coveted fruits in sufficient numbers to satisfy the ambition of the grower. The more luxuriantly the plants grow, the more space will be required in order to secure a full crop. Overcrowding is an evil; and this is sure to occur in a small house when the roots have unlimited run in a loose border soil. The remedy is to confine the roots of the plants in pots or boxes. The plants will not make long-jointed stems and big leaves, but short-jointed stems and medium-sized leaves. These conditions are favourable to a good crop of Tomatoes being produced. The fruits set freely in such circumstances, and when the grower has secured a good set he can easily



4.—A GLOXINIA POTTED INTO A 5-INCH POT AND WELL ESTABLISHED.

The following are all excellent varieties, and can be thoroughly recommended: Harbinger, early, brown; Belvoir Castle, bright yellow; Blood Red, reddish brown; Eastern Queen, chamois; Ruby Gem, ruby violet; and Vulcan, deep velvety reddish brown, very large spikes and one of the best for cutting.

THE TOWN GARDEN.

WORMS IN THE LAWN.—When worms become very numerous in a lawn or grass plot they are a constant source of worry to the owner because they create such an untidy appearance by the numbers of their casts; but they must not be at once written down as enemies of the gardener. Where their numbers are considerable it may be fairly safe to assume that the drainage of the ground is defective, and in this event the worms do a certain amount of good by opening up the soil and admitting fresh air. Then, again, one can get a little benefit from them by the distribution of the casts, which have a certain amount of fertilising value; this should be done with a besom or birch broom, the operator taking long, swinging strokes. As soon as this has been done the lawn should be thoroughly rolled. If, however, the worms become too numerous, it will be necessary to take steps to reduce them, and for this purpose there is nothing to equal clear lime water, with which the ground should be thoroughly soaked; no harm will be done to the grass, on the contrary, it will be improved by the sweetening of the soil.

HOW TO MAKE LIME WATER.—As lime water is very commonly recommended in gardening articles, it may be well to give brief directions as to its preparation. Take a lump of fresh lime and place it in a bucket with a little water and then fill up the receptacle; stir vigorously, allow the liquid to settle and await events. If it is seen that there is a distinct sediment on the bottom of the bucket it may be safely concluded that the water is fully charged with lime; it should be strained off for use. If, however, there is no sediment, more lime should be added, stirring must again be done, and this should be continued until the sediment is seen, as in its absence there will be a deficiency of lime. Amateurs need not fear that they will make the liquor too strong; this is impossible, as the water will only hold a certain quantity of lime in suspension. The application will bring the worms to the surface and they can be swept up.

PREPARING FOR BEDDING.—The time will soon be upon us when we shall have to put out the plants which are to adorn the garden during the summer months, and it is most desirable that all preparatory work be pushed on so as to leave the way clear for immediate planting when the correct moment arrives. All bulbs should be lifted as the foliage turns yellow, or if this is not proceeding quickly enough they may be lifted and laid in by the heels in some convenient position where they can be occasionally watered. This is far better practice than laying them out to dry on a path while the leafage is still green, as when they are treated in this manner they never produce such good blooms in the following season. The plants in frames intended for the beds and borders should be watered as necessary, and have as much fresh air as possible, so as to finish off the hardening against the time that they will be wanted.

DANGERS OF LOOSE, RICH SOIL.—As soon as the ground is clear the digging and manuring for the succeeding plants will be put in hand, and I would warn growers of the dangers and disadvantages of over-looseness and over-richness. These conditions encourage the production of large and numerous leaves, but they do not favour floriferousness, and it is for the latter that we cultivate the majority of our summer bedding plants. In many instances the bulbs will leave quite sufficient food in the soil for the succeeding plants, and where this is not the case, I prefer to use 2oz. or 3oz. of superphosphate of lime to the square yard rather than add dressings of fresh natural manure. If this is worked in in very small spits it will yield its food to the plants and not encourage grossness in the slightest degree. If manure is used it should be well down in the bed, and the soil should be thoroughly firmed before the planting is done. HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FRUIT HOUSES.

THINNING GRAPES.—Continue to thin Grapes in the second Muscat house. The latter Grape should be carefully thinned, so that each berry has sufficient space to develop, yet it must not have too much or the bunch will be loose. Tie up the best shoulder of the bunch and be careful not to prick the berries with the point of the scissors; Gros Maroc requires much care in thinning to have it in perfection, for the large berries lose half their charm if pressing each other out of shape. In thinning all late-keeping Grapes it is well to clear out nearly all the berries in the inside of the bunch. Keep the laterals pinched, going over them as often as necessary. It is a mistake to allow too much growth so that at a period wholesale stopping has to be done. Keep the floors damped down several times and last thing at night (10 p.m.), but be careful not to pour water on the pipes to cause steam. This is one of the primary causes of adventitious roots.

PLANTS UNDER GLASS.

Primulas may now be sown in quantity where these flowers are in request. Propagate by cuttings *Poinsettias* and *Euphorbias* and generally prepare for next winter. Pot off *Solanums*, *Cockscombs*, *Celosias* and *Caladiums*. *Caladium argyrifolium* is still a great favourite for decoration. Attend to the tying and training of *Clerodendrons*, *Allamandas* and *Stephanotis*, and see that the latter is free from mealy bug. A good plan is to syringe each week with Richards's NL All insecticide.

Begonias.—Pot on small *Begonias* of the Lorraine type and propagate for succession. These require a brisk heat to start them.

Chrysanthemums should be potted into the pots in which they are to flower. Do not allow them to become starved before this is done or the lower leaves will fall. To every barrowful of soil give a 6-inch potful of Bentley's Manure and thoroughly mix. Some growers put half-inch bones over the crock at the bottom of the pot, but I have never seen any material benefit from this. Overpotting is a mistake. Pot weakly-growing varieties firmly, as this is conducive to solid growth. Bush varieties should be stopped early so that they do not become leggy. These plants are general favourites for cut flowers, so also are the singles, which during the last few years have become great favourites.

FLOWER GARDEN.

Early Chrysanthemums.—Plant out on a well-dug border early *Chrysanthemums*. Prick out *Polyanthus* for autumn planting. Give plenty of room between the rows, so that the hoe can be freely used to keep down weeds. Pick off the seed-pods from early-flowering *Rhododendrons*. Plant out winter-flowering *Carnations* that are getting over. They will continue to flower all the summer and make good growths for propagating in August. Stir the soil among border *Carnations* and give a dressing of Wood's *Carnation Manure*. I have found this excellent for improving the colour of the blooms.

Roses on walls should be syringed with *Quassia* to keep down aphids, and should mildew put in an appearance dust at once with flowers of sulphur.

KITCHEN GARDEN.

Beetroot.—Sow main crops, choosing light, rich soil. Sow more Vegetable Marrows, *Salsafy* and *Scorzoneria*. Prick out *Lettuce*, *Cauliflower* and *Celery*, and all crops that have been raised in boxes should the weather continue cold.

Sow more Runner Beans in boxes for planting out as soon as the weather proves favourable.

W. A. Cook.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

ALLAMANDAS.—Young plants struck this season should be potted on as fast as they fill their pots with roots, and should be pinched two or three times during the season's growth. This applies to plants intended for ordinary culture; those for pillar or roof work must be run on to a single stem until the required height is reached. Plants intended to flower in August should now have the points of the young growths pinched out, and when the shoots have again broken into growth, manure water, weak at first, but increasing in strength as growth advances, may be given with advantage. I find nothing is better for producing healthy dark foliage than cow manure and soot water given in a clear state.

Orchids.—The month of May is a very trying one to those in charge of Orchid houses, the weather being usually capricious and necessitating frequent attention to the ventilators. Many of the plants are pushing into growth, and any check caused by cold draughts is very harmful. A little air at the top of the warm house suffices, even on the brightest days as yet, because usually there is a cold nip in the air though the sun is bright. The older foliage will stand a fair amount of sunlight, but where young shoots are forming they are very tender, and must be shaded early.

Cucumbers.—Where it is necessary to keep the early-raised plants through the season a considerable amount of care is required to maintain them in a fruitful condition. Not only must top growth be well looked after, but the roots must also have frequent attention in the way of top-dressing. If the cropping is regulated so that the plants are not distressed, they will go on bearing for a long time. The top-dressing should be rich, and applied often and in small quantities. Stimulants, of which ample supplies are required, should also be of a varied character, and be changed frequently, substituting artificial for liquid manure and *vice versa*.

HARDY FRUIT.

Disbudding.—Persevere with the disbudding of Peach and Nectarine trees, and keep a sharp look out for insects, dusting the same with Tobacco powder should any be found. As the weather is yet too cold to use insecticides, the use of Tobacco powder will in the meantime hold insects in check. Continue to protect trees at night, as this in a measure tends to avert blistering of the leaves, and do not hurry to uncover them on frosty mornings. Should any blistered leaves be found, the only remedy is to pick them off and burn them. Examine the borders, and if found to be in a thoroughly moist condition, apply a mulch of long manure.

FLOWER GARDEN.

Polyanthuses.—If not already done, seed of *Polyanthus* should be sown at once, and although a little shade is often advisable until the plants are above ground, I do not recommend a naturally shaded spot for sowing, as, given a dull, rainy time, growth is, under such conditions, not so sturdy and compact as one likes to see it. If the stock of *Polyanthuses* in flower is good, and there is no need to grow indifferent stuff in these days, an occasional inspection should be made to mark anything specially attractive, with the idea alike of saving seed and increasing the same by division if this be deemed advisable. Also it may be remembered that the habit of the plants is a subject for selection. A dwarf or tall strain, or a variety combining quality of

flower with distinct foliage, may be worth saving.

Hyacinthus and Tulips after Flowering.—These are often regarded as worthless if cleared off in time to make room for summer-bedding plants, but all they need to make them serve again is careful lifting and replanting. Put them somewhere in the open and water occasionally, so that the leaves may ripen off naturally. I find that bulbs so treated ripen up strongly and well and flower the next year.

KITCHEN GARDEN.

Beetroot.—A good sowing should now be made on a deeply-dug border that was well manured for a previous crop. Fresh manure has a tendency to cause the roots to fork and to make them coarse. For the main crop I find no variety superior to the Cheltenham Green Top; Dwarf Red and Blood Red are splendid varieties, being medium growers. For shallow land the Turnip-rooted Beets are valuable.

T. B. FIELD.

(Gardener to the Baroness Berners.)

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THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

TROPAEOLUM DARMSTADT.

Mr. Gumbleton sends from Belgrove, Queens-town, County Cork, flowers of a most interesting *Tropaeolum* called Darmstadt. It is quite double, and of an intense yellow, with scarlet feathering at the base of the petals. A more brilliantly coloured flower does not exist, even among such a family as the *Tropaeolums*. Mr. Gumbleton says it was raised by Herr Henkel of Darmstadt, and in his note describes it as most free blooming and suitable for covering a trellis out of doors in summer.

WHITE CYCLAMEN FROM EPSOM.

Mr. George Boyd, The Gardens, Danehurst, Epsom, sends us magnificent flowers of a white Cyclamen. We have rarely seen flowers better than these and congratulate our correspondent on his success. He writes: "I enclose you a few of our white Cyclamen for your table. I am told by my gardening friends that they are very good. What do you think of them? The strain is Sutton's Giant White, from which I have saved the finest bloom for seed for several years. I sow seed the last week in September each year, and grow the plants on in gentle heat through the winter till about May, when I put them in a cold greenhouse for the summer, shading them from strong sun. They make fine plants by the autumn in 4½-inch pots, and this is the size I flower them in. I have had as many as fifty blooms out at once on a single plant. I give them no manure or feeding at all after the final potting, and apply water very carefully through the winter. I sow the seed in a pan of sandy soil, prick out the seedlings into a seed-box, from these into 2½-inch pots, using loam, leaf-mould and sand only, then into 3-inch pots with a little light manure added to the soil, and finally into 4½-inch pots, using equal parts of yellow loam, well-decayed cow manure, leaf-mould, a pinch of soot and silver sand. The blooms I send are from last year's plants."

BOOKS.

THREE ROSE BOOKS.

It is not often that by one post three books upon Roses arrive, and perhaps many readers will declare that such occurrences are a mixed blessing. The three books, however, are of the greatest interest and importance to the earnest Rose grower. Two of them are publications issued by the National Rose Society, and the third is the ninth revised edition of "Roses in Pots," by the well-known rosarian, the late Mr. William Paul of Waltham Cross. The society's publications are of the simplest and most practical kind, and contain short, pithy articles from leading rosarians; one is the annual for the present year, containing a fund of information in a small space, and the other is "The Enemies of the Rose," which has been in preparation for some time past and appears at an opportune moment. This year the pests which inflict the Rose promise to be more troublesome than ever. At the time of writing a bitter north-east wind is blowing across the garden, and this means an onslaught from the green fly and other hosts, which must be destroyed if one is to enjoy the feast of Roses that is one's reward for months of labour and, in the case of the exhibitor, anxiety. The book is illustrated with coloured drawings and written by the well-known authorities Mr. George Massee of the Kew Herbarium and Mr. Theobald, M.A., vice-principal of the Agricultural College, Wye, Kent.

We are much interested in Mr. Massee's description of the greatest plague the Rose grower has to contend with, the Rose mildew, which is well described as the most destructive and prevalent of all the Rose diseases. "Like most other parasitic fungi, it is sporadic in its appearance; during certain seasons it assumes the proportions of an epidemic, whereas on other occasions it does but little injury, but it is never entirely absent." And Rose growers take note: "The waves of serious disease are mainly due to neglect in not fighting the pest when present in the smallest quantity, which means that it is struggling against difficulties and could much more easily be overcome."

Rosarians, we think, do not appreciate sufficiently watching for the "spring wave of disease," which "is usually of a mild character and apt to be overlooked, or, at all events, neglected. This neglect may lead to serious results, for the scattered patches of mildew furnish the spores that affect flower-buds, and at a later stage set up the second wave of disease, which is mostly confined to the new growth." So beware of the spring attack. Many other excellent hints are given in this, we think, the most useful of the handbooks published by the society.

Every book written by the late Mr. William Paul is full of practical and useful thoughts, and "Roses in Pots" will appeal to all who wish to grow the flower under glass. It is freely illustrated and the cultivation most clearly explained; the lists of varieties for various purposes are invaluable. The following information on climbers will show the character of the book (page 34): "What we have hitherto been accustomed to regard as climbers are from the classes Boursault, Sempervirens, Ayrshires, &c. Magnificent as such must be regarded when growing in the open ground, often to the height of 20 feet and covered with immense trusses of bloom, their semi-double and transient flowers render the greater part not altogether suitable for growing in pots. A growth not too vigorous and finely-shaped flowers should be the criteria with regard to Roses grown in pots as climbers. As a great height is not in this instance desirable, the various Hybrids, the Noisettes and Bourbons may be chosen and trained upwards to about 5 feet, which will probably be found as high as convenient or manageable; not that we

would, however, altogether exclude the Ayrshire and Sempervirens, for among them a few admirable Roses may be found.

"Now one great point to be held in view in regard to this system of culture is, to induce the plants to flower from the summit to the ground; for if a few flowers only are to be produced at the top of the plant, then the dwarfier it can be grown the better. This complete flowering, judicious pruning and training will accomplish."

Cassell's A B C of Gardening.*—When Mr. Walter P. Wright puts his pen to paper for the purpose of writing a book on gardening, he usually creates something that is, above everything else, thoroughly practical, and the volume now under review is most decidedly of that order. In reality it is a pocket illustrated encyclopedia of horticulture, written in plain, everyday English that the average man can easily understand, with illustrations that are included solely for teaching purposes, each one showing how some rather intricate gardening operation should be done. Condensation, or rather abbreviation, has been adopted throughout, yet all the genera that are of interest to gardeners are included, together with the principal species, whether they are hardy, half-hardy or tender, shrub, bulbous or herbaceous plant, colour of the flowers, method of propagation and the soil required to grow them in. Perhaps we cannot do better than quote one instance of the style adopted, as this will give readers a better idea of the book than any description can convey: "Antirrhinum (Snapdragon). Order Scrophularineae. Hardy perennial plants of considerable beauty, especially in the case of the garden forms that have been introduced during recent years. They are invaluable for the border and in distinct colours for beds. Propagation, by seeds out of doors in August, or by cuttings of growing shoots in October in a cold frame. Antirrhinums can also be grown as half-hardy annuals, sowing seeds in warm frames in spring, and planting out at the end of May; they bloom within six months of seed-sowing. Soil, any ordinary garden soil. The principal species is majus, 2 feet, pink; but for general use the garden forms are of far greater importance." It will be seen that the above information covers the chief points that a practical man would need to know about Antirrhinums. At the end of the volume, in the form of an appendix, lists of the best varieties of florists' flowers, with their colours, are given, such as "The Best Types of Aster," "Twenty-four Sweet Peas for Exhibition," "Eighteen Sweet Peas for Garden Decoration," "Twenty-four Exhibition Violas" and "Twenty-four Bedding Violas," so that one may see at a glance the best varieties to grow for various purposes. This volume should be a constant companion of the gardener, whether he be amateur or professional, its size allowing it to be carried in the coat pocket. As a cheap, reliable and thoroughly practical encyclopedia of horticulture, this book will meet a long-standing demand, and we venture to predict that it will be one of the most popular gardening works that Mr. Wright has ever produced.—H.

The London Catalogue of British Plants.†—To students of British botany the news that a new edition of this useful catalogue has been issued, in which the names have been brought quite up to date, will be welcome. As we advance in knowledge changes naturally have to be made, and although these may be somewhat disconcerting at first it is better to put up with a temporary inconvenience than to perpetuate what has been proved incorrect. The genus *Menchia* has been retained, and *Clinopodium*

* "Cassell's A B C of Gardening," An Illustrated Encyclopedia of Practical Horticulture. By Walter P. Wright. 3s. 6d. net. London: Cassell and Co., Limited.

† "The London Catalogue of British Plants." Tenth edition. Edited by Frederick J. Hanbury. Price 9d. Messrs. George Bell and Sons, 6, Portugal Street, London, W.C.

for *Calamintha vulgare*, L., has been restored, but *Calamintha* is retained for the other species. Alien plants have been reduced somewhat by expunging those hitherto included that are of very rare or doubtful occurrence. The present edition has been mainly prepared by Mr. W. A. Clarke and the Rev. E. S. Marshall.

MESSRS. E. WEBB AND SONS' PRIMULAS.

MESSRS. E. WEBB AND SONS, the well-known seedsmen of Wordsley, Stourbridge, make a great speciality of fine strains of the Chinese Primula, large quantities of plants being grown for seed

ANSWERS TO CORRESPONDENTS.

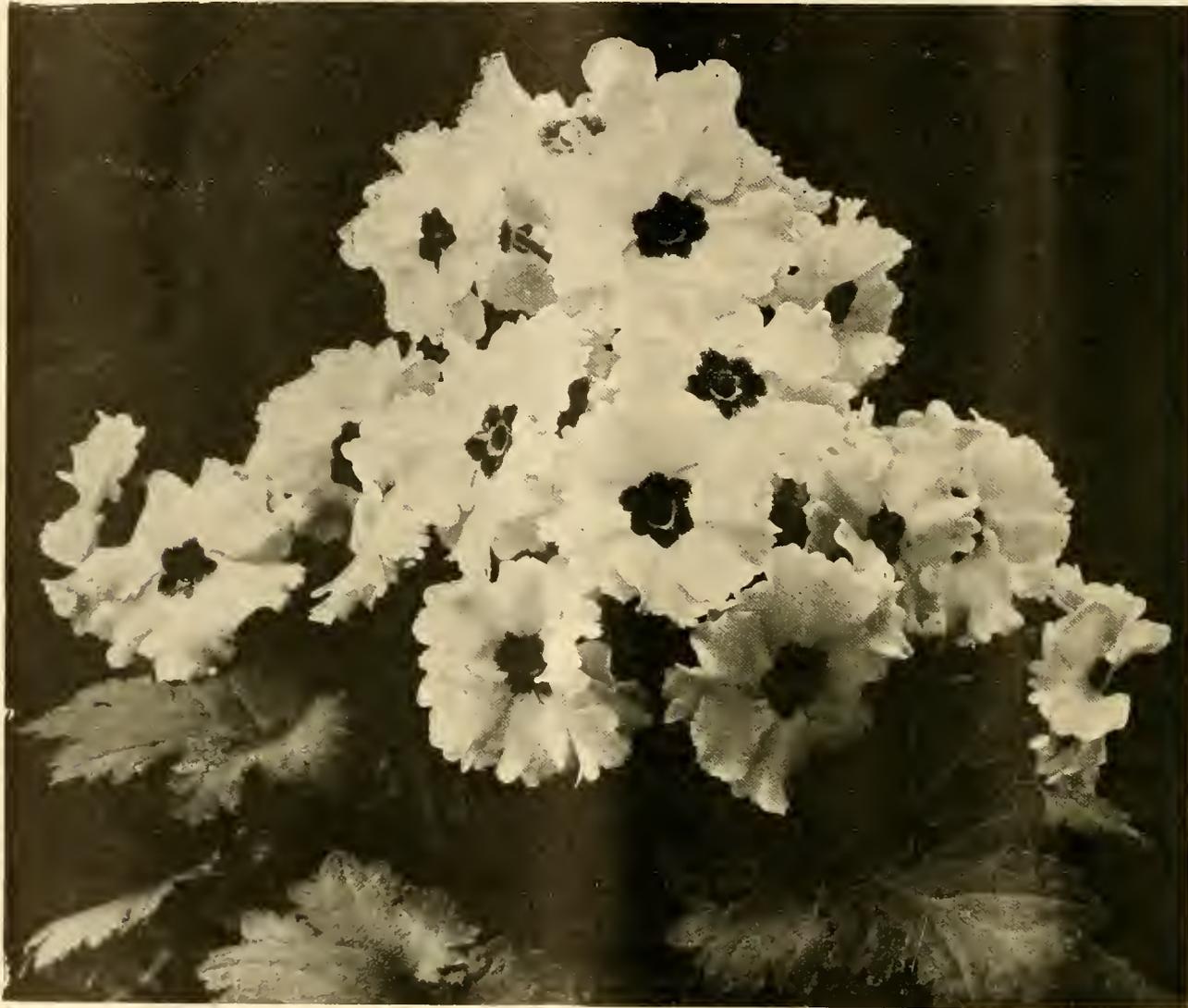
FLOWER GARDEN.

Hints for bedding (*Anxious*).—We could give you many additions to your list and not a few suggestions, but in view of what you say in your letter the exceptional situation would appear to require local knowledge. The four crescent-shaped beds would look well with Heliotrope and Ageratum alternately, the plants to be pegged down in each case. The centre

colours of things, whereas the edging to one bed is often seen to be in conflict with that of its neighbour.

Plants for old wall (*Mural*).—You do not say what exposure your wall has or its state as regards its condition of pointing, but on the presumption that an old one such as yours has the mortar loose and inclined to crumble, it would be easy to establish many flowers upon it. This is not, however, a good time to begin, and early autumn is better, employing seeds in preference to young plants, although with a good season many young plants might succeed. About the end of August or early in September insert three or four seeds in many of the little crannies

of the wall, putting a little soil in with them and covering with a thin piece of wall moss. If dry weather continues, try to keep the wall moist to induce germination; but if you cannot do so, those seeds which remain dormant will probably come in spring. Use fresh seeds if procurable. There are too many plants suitable to name in the limits of a reply, but any of the Alysiums, Antirrhinums, Arabises, Arenarias, Aubrietias, the smaller Campanulas, such as *garganica*, *portenschlagiana* and *pusilla*; *Centranthus ruber*, *Corydalis lutea*, *Dianthus cæsius* and other Pinks, *Erinus alpinus*, *Sedums*, *Sempervivum* and *Tunica saxifraga* are excellent for the purpose.



CHINESE PRIMULA WEBB'S NEW SNOW QUEEN AS GROWN IN MESSRS. WEBB'S NURSERIES AT WORDSLEY.

purposes annually in their nurseries at Wordsley. Our illustration is of a new one named Webb's New Snow Queen. It is a magnificent giant white of sturdy growth, the large flowers being produced very freely indeed. They are pure white, and of excellent substance, and are held well above a carpet of rich green foliage. This charming novelty is worth including in the best of collections. We had the pleasure some time ago of visiting Messrs. Webb's seed warehouses and nurseries, and were much impressed with the care taken to ensure the best seeds only being supplied to customers. Every precaution possible is taken that the plants for seed purposes shall be kept absolutely true to name.

star might be planted with single scarlet Begonias, having a groundwork of white Tufted Pansies, and both are continuous and free in flowering. The circular beds would be effective if planted wholly with pink-flowered Ivy Pelargonium pegged down at first and then allowed freedom, while the four pointed beds could be treated with mauve and yellow Tufted Pansies (Violas) in pairs respectively. The above arrangement will be a break away entirely from the system of lines and edgings of last year, and will be far more effective generally. The beds, which we imagine to be on the lawn and not marked out by gravel paths, are too small to admit of good treatment other than with massed

Border for a bed (*Thrifless*).—Yes, a border of Thrift would do quite well instead of the grass, and the brightest and best for your purpose would be *Armeria maritima lancheana*, sometimes sold simply as *A. lancheana*, which has bright red flowers. A lower border of rockwork would be more attractive and varied in interest. This you could plant with a varied selection of alpine, such as Mossy and Encrusted Saxifrages, with some of the London Pride section, such as *S. Geum*, *S. Andrewsii*, or *S. primuloides*, together with *Silene Schafta*, *Tunica Saxifraga*, *Gypsophila prostrata*, spring Phloxes of the *setacea* or *subulata* type, *Sedum spurium coccineum*, *oppositifolium*, *kamtschaticum* and

others of similar habit; and also with plants of the Thrift. If you wish something cheaper and more quickly grown, one of the *Cerastiums* would be excellent, and *Biebersteini* and *grandiflora* grow more quickly than *tomentosa*, the common one. These could be raised from seeds, but you would need to buy plants of most of the others. An alternative for this season would be a border of the annual *Saponaria oeymoides*, planting the perennials in late autumn for next year.

Diseased Tulip leaves (*A. Mackenzie*).—The leaves are attacked by a disease known in Holland as "The Fire." It is the result of damp cold nights, cold fog, or hail on the leaves—that is to say, these conditions are those which favour the growth of the fungus. The bulbs sent were quite healthy. If possible cut away the diseased parts of the leaves, but if they are too far gone nothing can be done. Our experience is that although the bulbs are weakened when the leaves thus prematurely decay, they are not permanently injured, and that if they are taken up and dried in the ordinary way they will grow the following year and produce fair results.

Plants for large jars (*Mabel G. D.*).—The following plants will be likely to succeed in your jars: Small-leaved Ivy, *Vinca minor*, common white *Arabis*, *Iberis sempervirens* and any *Andrietta*. All except the Ivy are good flowering plants, and all are, of course, evergreen. You might form an effective display throughout the summer by filling them with Ivy-leaved *Geraniums*; some of the branches could be staked to give height, and the remainder could be allowed to hang naturally round the sides of the jars. You would, of course, have to select varieties whose flowers would not clash with the colour of the jars. By allowing *Arabis*, *Andrietta*, *Vinca* or *Iberis* to grow freely they will soon drupe the jars effectively.

TREES AND SHRUBS.

Arundinaria Falconeri flowering (*A. E. S.*).—It is more than likely that all the plants of *Arundinaria Falconeri* now flowering will die. Some people state that the life of a plant can be saved by cutting it down as soon as it shows signs of blooming, and others declare that after a lapse of time old stools that have flowered will again produce normal leafy shoots. So far as our experience goes, neither of these ideas are to be relied on, and, if an odd example now and then does start again, it is too pitiable an object for two or three years during the transitory state to warrant its inclusion in the garden. It is a much better plan to collect seeds from flowering specimens and start again with young plants. The seeds germinate quickly, and after the young plants have attained the age of one year growth is rapid. Anyone commencing with seedlings may depend on them being safe from flowering for at least thirty years. Some nurserymen in the South of England have already raised a stock of plants, which have attained a saleable size, from seeds produced from plants which bloomed two or three years ago.

Making a Rhododendron bed (*W. H. T.*).—Your bed should be trenched to a depth of 1½ feet, the bottom of each trench being broken up as you go along. If your soil does not contain lime in any serious quantity, you may use from 1 foot to 15 inches of the upper portion or top spit to fill your bed with; on this spread about 6 inches of peat and fork it into the soil. You will find this much better than filling the bed entirely with peat. If your soil contains lime, remove the top 18 inches and import sandy loam from which lime is absent. The work may be done during April, but should not be delayed later. Any *R. catawbiense* varieties will be suitable; but you cannot go far wrong by selecting varieties which bloom during late May and June. The appended list is made up of good and vigorous sorts; but it would be as well to consult some local specialist about them, as some sorts do not thrive in every district: *Alexander Daneer*, rose; *Amphion*, pink; *Charles Bagley*, red; *everestianum*, rosy lilac; *Hermit*, scarlet; *James Nasmyth*, rosy lilac; *Lady Grey Egerton*, bluish; *Lord Palmerston*, rosy crimson; *The Queen*, white; *Mme. Carvalho*, white; *John Waterer*, crimson; *Michael Waterer*, crimson; *Sappho*, white, spotted red; and *fastuosum fl.-pl.*, lilac.

ROSE GARDEN.

Rose Fortune's Yellow with spotty foliage (*Ignoramus*).—This Rose is very apt to fail in the way you state, and often it is owing to trouble at the roots. It is a variety that should have ample drainage and be severely pruned after it has blossomed, so that with heat and moisture during the summer a healthy new

growth takes place. There can be no doubt but that this beautiful Rose succeeds best when upon its own roots, as sometimes the falling foliage is owing to the faulty union when the plant is a budded or grafted one. At the same time, it is possible that you have given it an overdose of the manure. It is a powerful manure and should only be given to vigorous, healthy plants. As you say it is the plant's first year we think you would have been better advised if you had not given the artificial manure. If stimulants were needed a little soot water would have been most helpful, supplemented with liquid cow manure. The *Dielytras* having blossomed should be placed in a cold pit or in a sheltered spot and planted out in the garden in May, or, if preferred, they can be plunged in ashes in their pots in a sunny spot later on, and so kept until next season, when they may be brought again into the greenhouse.

Tea Roses losing the foliage (*A. B.*).—You do not say whether your plants are pot-grown, but we assume this to be so. It was natural for them to shed the old foliage in the autumn, and you should have pruned the plants about Christmas or a little later, cutting back the shoots pretty hard. The new growths would then have been stronger, coming as they should do from the best eyes. As it is we expect they appear near the ends of the small, thin wood, and such shoots can never be any good and are very prone to drop their foliage. You have probably kept the plants too moist. They do not require much water until new growth is active. You should always tap the pots, and only give water when they sound clear and bell-like. The variety *Niphotes* requires more heat than you can give with an oil stove, but *Marie van Houtte* should have succeeded. Try the plan of less watering and more heat if you can give it. The next growth may be better; if not, do not waste any more time on sickly plants, but procure new ones and make another start.

THE GREENHOUSE.

Ivy-leaved Pelargoniums diseased (*Hampshire*).—Judging by the leaves sent, the Ivy-leaved *Pelargonium* appears to have been kept too warm and the plant too highly fed, or it has been given an excess of water at the roots. These causes combined would render the young leaves exceedingly soft in texture, and with the return of spring and increased heat in the sun the burnt-up appearance may be thus accounted for. This theory would explain the lower leaves being untouched, as naturally they are firmer in texture and better able to resist the brilliant sunshine. If the plant is not in good condition at the roots it should be at once repotted, taking away most of the old soil. Should this, however, not be necessary, the better way to combat this trouble will be to give the plant plenty of fresh air and discontinue the use of stimulants for a time, that is, if any have been used.

Propagating Calanthes (*E. C.*).—To propagate *Calanthes* take the top of the pseudo-bulb as a cutting. It should be taken off just below the natural joint, and the end portions must be dusted with charcoal dust and allowed to lie on the stage for two or three days before potting. This is a good time of the year to carry out this operation. The top of the pseudo-bulb that has been taken off must be potted the same as the bulb itself. Full directions for doing this were given in THE GARDEN for April 18.

MISCELLANEOUS.

Book on Vines (*H. Gardner*).—Barron's "Book of the Vine" will suit you. It may be obtained from any publisher, price 5s.

Peach foliage injured (*C. J. E.*).—Your tree is suffering from a very bad attack of Peach blister. If the tree is so badly affected all over as is the branch sent, we certainly recommend you to pull the tree up and burn it, especially as it was affected in this way last year. This disease has always a tendency to return, and it may affect the other trees in the same house. Clear out the soil in which it has been growing, and plant a healthy tree in new soil in early autumn. Dress your trees next winter with the new mixture "Medial," sent out by Messrs. George Bunyard and Co. They claim for it that it is an effective preventive of this disease.

Moss litter manure for hot-bed (*Peter*).—The absence of straw in moss litter manure not only militates against its fitness for a hot-bed, but straw is also needed to assist in the proper building up of a hot-bed. It is questionable whether the manure for the purpose

named would not be improved if short straw were thoroughly wetted, then mixed with the manure. The moss litter seems to lack capacity to generate heat through fermentation as straw does. If you do not add straw, then have the moss litter manure thrown into a heap, damping it in the turning if at all dry, and, so soon as it has generated warmth, turn it and again moisten it, letting it so lie for a week before building it up as a hot-bed. It may be needful to fix stakes in the ground from 18 inches to 24 inches in height, to enable the sides of the bed to remain firm and upright. Before putting seeds or plants into the bed, allow any strong steam generated to escape for two or three days at the back of the frame.

Name of fruit.—*Rev. J. J. B.*—The Apple you send is Newton Wonder.

Names of plants.—*Ben Rhjd.*—*Primula rosea*.—*J. Ferguson*.—*Eupatorium Purpureum*.—*W. A. B.*—*Gasteria verrucosa*.—*W. H. Cox*.—*I. Senecio Kempteri*; 2. *Hemerocallis* species, cannot name without flower.—*R. O.K.*—The Rose is *Anna Olivier*, one of the best Tea Roses.

SOCIETIES.

NORFOLK AND NORWICH SPRING FLOWER SHOW.

This exhibition was held in St. Andrew's Hall, Norwich, on the 25th ult. amid such weather as one would have expected at Christmas, snow and sharp frost being the chief topic of conversation. This naturally had a good deal to do with a falling off in the exhibits of *Narcissi* and hardy flowers. The indoor-grown subjects, however, were ably represented in all sections. Four circular groups of flowering and foliage plants were set up, and gave the centre of the hall a graceful appearance. The list of classes, with the first prize-winners in each case, were as follow: Circular group, Mr. W. Palmer, gardener to I. B. Coaks, Esq.; *Anemones*, R. Fellows, Esq.; *Carnations*, Mr. W. Allan, Gunton Park Gardens; twelve bunches exotic flowers, Mr. W. Chettleburgh, gardener to Colonel Rous, Weststead; six bunches, Mr. H. Rider Haggard; twelve bunches hardy flowers, Mr. Louis Smith, gardener to R. Fellows, Esq.; *Shotesham Hall*; six bunches, Mr. O. Corder; *Narcissi*, thirty-six varieties, three blooms of each, Mr. George Davison, gardener to Major Petre, Westwick Hall Gardens; twenty-four varieties, Mr. J. C. Blofeld; twelve varieties, all trumpets, Mr. G. Davison; twelve varieties, trumpets excluded, Mr. T. Chaplin; six trumpets, Mrs. Stedman; vase of *Narcissi*, Mr. G. Davison; *Pansies*, Mrs. M. R. Stedman; *Polyanthus*, Mr. T. Notley, gardener to the Mayor of Norwich; six bunches of flowering shrubs, Mr. G. Davison; *Tulips*, Mr. L. Smith, *Shotesham*, and also for exceptionally good *Violets* in six varieties; *Amaryllis*, Mr. T. Notley; *Arvicolas*, Mr. G. Davison; *Calceolarias*, Dr. Osborne. For *Cinerarias* in both sections, Mr. F. Williams, gardener to Louis Tillet, Esq., M.P., Catton, was first, staging the best plants ever seen at a Norwich show. In three classes for *Orchids* Mr. Rider Haggard was first, and was closely followed by Mr. L. Smith, *Shotesham Hall Gardens*. *Cyclamens*, Dr. Osborne; flowering table plants, Mr. W. Palmer; foliage table plants, Mr. W. Burtenshaw, gardener to H. Skelton, Esq.; *Lily of the Valley*, Mr. F. Williams; *Zonal Pelargoniums*, Dr. Osborne; *Primulas*, Mr. T. Notley; *Roses* in pots, Mr. F. Williams; *Azaleas*, Dr. Osborne; *Strawberries* in pots, Mr. F. Williams; *Asparagus*, Mr. T. Chaplin; *French Beans*, Mrs. Thomson; *Broccoli*, Mr. W. Chettleburgh; *Cucumbers*, Mr. W. Laws, gardener to E. G. White, Esq., Eaton; *Mushrooms*, Mr. T. Notley; *Potatoes*, Mr. W. Chettleburgh; *Peas*, Mrs. Lubbock; *Rhubarb*, Mr. A. Woodhouse, gardener to Sir H. H. Cozens Hardy; *Tomatoes*, Mr. W. Joice; collection of vegetables, Mrs. Lubbock; *Seakale*, Mr. N. Wright.

The trade contributed a pleasant display, which gave added interest to the exhibition. Deserving of special mention under this heading were Messrs. Daniels Brothers, Limited, Norwich, for a bold display of choice miscellaneous flowering and foliage plants, which bore evidence of grand cultural treatment. Hobbies, Limited, Dereham, most effectively staged various types of cluster *Roses*, also *Lilacs*, *Magnolias*, *Azaleas* and *Rhododendrons*. Mr. R. C. Notcutt of Woodbridge and Ipswich displayed some choice examples of forced flowering shrubs, using the varieties of *Genista* with telling effect. Mr. T. E. Dawes, Syderstone, made a fine display of his new Challenge *Rhubarb*, for which he was awarded a bronze medal and also a certificate of merit. The attendance was much below last year, and as a consequence the gate money was £10 less.

BIRMINGHAM DAFFODIL DISCUSSIONS.

By the above title I mean the interesting Daffodil conversation that always follows the ending of the toast list after Mr. R. Sydenham's dinner at Birmingham. A large number of prominent growers, hybridists, traders, exhibitors and enthusiasts are always present, and what they say and talk about cannot fail to interest a wide circle of friends in all parts. Mr. Davis of Christchurch, New Zealand, had undertaken the long journey at this particular time in order to be present, and so had Mr. van Waveren from Holland. The former told us there were a good many Daffodil shows at the Antipodes, e.g., at Christchurch, Dunedin and Melbourne, and that as a result of a big syndicate's purchase from Mr. Engleheart, they had flowers there that could rival ours. To make good his assertion he told us he proposed to send some over in ice for next year's show. I hope he will remember his promise, for such an exhibit would be most interesting. "Show Flowers: Their Cultivation and Development" was the nominal title of the discussion. It included such

questions as the frequency of lifting bulbs, protection from cold and wind, when to cut for show, and what to do with the flowers or buds when cut. This last seems a simple matter, and the man in the street would think it almost a joke that it should be mentioned at all. Nevertheless, Mr. E. M. Crossfield, who is one of our very best show men, told us that he had five temperatures in which to put the different flowers after they were cut. Another fact of interest was stated by Mr. Chapman of Rye, viz., that big buds should always be selected, and that it was advisable to make the cut in a slanting direction, so as to expose a larger absorbing surface. Everyone seemed agreed that a change of soil was, as a rule, good; but that the factor, which is more important than all others, is that of climate.

When the discussion seemed to be coming to an end the writer made a few remarks about the show classification difficulty. It does not seem to be much use to go on raising beautiful "doubtful" flowers if we do not know where to put them when we have them. A flower of Messrs. Cartwright and Goodwin's had been the subject of much difference of opinion up at the show, and to meet such cases it was suggested that something ought to be done officially by the Royal Horticultural Society. It would be a boon to every judge and every show committee to have some generally recognised standard to go by. What that standard is does not so much matter as that there should be one. Mr. P. R. Barr, Mr. W. Barr, Mr. James Walker, Mr. Sydenham and several others gave their views on the question, and so a most interesting talk delayed the hour of breaking up much later than usual. JOSEPH JACOB.

ROYAL HORTICULTURAL SOCIETY.

At the fortnightly meeting held at Vincent Square, Westminster, on the 28th ult., the exhibition was a very extensive and interesting one, despite the miserable weather that prevailed. Flowers were displayed in abundance, Narcissi, Roses and forced flowering shrubs predominating. The display was augmented by the exhibition of Auriculas and Primulas held under the auspices of the National Auricula and Primula Society. A few fruits were shown, just a few vegetables, and a most interesting little collection of salads came from Messrs. James Veitch and Sons, Limited, Chelsea. When will our leading growers give us some good groups of vegetables? They would much increase the interest of the exhibitions and also prove of educational value.

FRUIT AND VEGETABLE COMMITTEE.

Present: Mr. George Bunyard (chairman), Messrs. J. Cheal, W. J. Jefferies, W. Bates, H. Markham, Alex. Dean, E. Beckett, R. Lye, H. Parr, A. R. Allan, J. Millard, J. Lyne, Charles Foster, G. Reynolds, J. Jaques, J. McIndoe, Owen Thomas, George Wythes, W. Poupard, A. H. Pearson, J. Davis and J. Vert.

Messrs. James Veitch and Sons, Limited, Chelsea, staged a very fine group of Apples and Pears, including fifty-eight different varieties and all in an excellent state of preservation. Gloria Mundi, Bramley's Seedling, Harvey's Wiltshire Defiance, Lane's Prince Albert, Lord Hindlip, Melon Apple, Rhymer, Chelmsford Wonder, Claygate Pearmain, Annie Elizabeth, Belle Pontoise, Dumelow's Seedling, Blue Pearmain, Newton Wonder, Bismarck, Cox's Orange Pippin and Lord Derby were the best among the Apples. Silver Knightian medal. This firm also had a very interesting exhibit of Lettuces and Radishes grown under cloches in the French style. These were very fine and created much interest among visitors. The Passion Cabbage Lettuce is a bright green compact-growing variety with solid white heart; Early Frame Cabbage is a green tinged with brown sort and somewhat loose in texture; and Early Market Cos is a white variety of self-closing habit and large size. Silver Banksian medal.

Sir Edmund Loder, Bart. (gardener, Mr. W. A. Cook), exhibited a very fine dish of Seakale grown in the open from thongs planted in April last year. The heads were very large and firm and were perfectly blanched, the exhibit constituting the best we have seen of this vegetable for a long time. Cultural commendation. Some nice heads of Broccoli Sutton's Eastside, from seeds sown on May 2, 1907, also came from the same source.

The Right Hon. Lord Hillingdon, Hillingdon Court, Uxbridge (gardener, Mr. A. R. Allan), exhibited three boxes of very fine fruits of Strawberry Royal Sovereign. They were large, regular, well finished and of grand colour. A plant in fruit was also exhibited, this carrying seven large and well-ripened fruits. Silver Knightian medal.

ORCHID COMMITTEE.

Present: Mr. J. Gurney Fowler (chairman), Messrs. James D. Vinn, Harry J. Veitch, H. Little, W. Boxall, G. F. Moore, Richard Thwaites, John J. Cypher, J. Forster Alcock, Walter Cobb, W. P. Bound, Arthur Dye, W. H. White, H. A. Tracy, Gurney Wilson, J. Wilson Potter, C. J. Lucas and W. Bolton.

Mr. H. Little, The Barons, East Twickenham, staged a nice bank of well-grown Orchids, including many Cattleyas, Cypripediums, Laelio-Cattleyas and a few Odontoglossums. Cattleya Mossie, C. lawrenceana, C. schilleriana, Laelio-Cattleya hyeana splendens, L.-C. highburyensis, Cypripedium Curtisii and C. villosum aurea were some of the best specimens. Silver Flora medal.

Messrs. Armstrong and Brown, Tunbridge Wells, staged a very pretty group of Orchids, the arrangement here being of a novel and pleasing character. Choice plants were thinly arranged at varying heights in a loose, irregular bank of Adiantums and fresh moss, thus affording visitors an opportunity of seeing them at their best. Odontoglossum crispum varieties, Cypripedium bellatulum, C. lawrenceanum variety, Laelio-Cattleya Mercia, L.-C. Isabella purpurata, a very curious little Bulbophyllum, Laelia

majalis and Masdevallia courtauldiana were the most conspicuous in a very interesting group. Silver Banksian medal.

Messrs. James Cypher and Sons, Cheltenham, had a very choice little group of grandly grown Orchids in the annex. Leptotes bicolor (very pretty specimen), Odontoglossum nevium, Laelio-Cattleya dominianum magnificum (very large and rich), L.-C. diglyana Mossie, Miltonia vexillaria, M. blueana and Ada aurantiaca were the most noticeable in a lovely group. Silver Banksian medal.

Messrs. Hugh Low and Co., Royal Nurseries, Enfield, Middlesex, were represented by a nice collection containing some very fine plants of Dendrobium barbatulum. These were very floriferous and made quite a striking display. Cattleya Mendelii General Botha and C. intermedia alba were other fine plants in this exhibit. Silver Banksian medal.

From Messrs. Heath and Son, Cheltenham, came a nicely-arranged group of various subjects. These included Odontoglossums, Cattleyas, Cymbidiums, Cypripediums and similar kinds in great variety. Silver Banksian medal.

J. Gurney Fowler, Esq., Glebelands, South Woodford (gardener, Mr. Davis), exhibited a very fine group of Oncidium marshallianum. One plant was exceptionally good, the huge pseudo-bulbs being surmounted by five magnificent inflorescences. The individual flowers, too, were very fine, the colour and substance being first-class. This plant received a cultural commendation, and a silver Flora medal was awarded for the group.

FLORAL COMMITTEE.

Present: Mr. William Marshall (chairman), Messrs. Charles E. Shea, C. R. Fielder, James Douglas, W. A. Binley, J. Green, T. W. Turner, G. Reuthe, J. Jennings, J. W. Barr, W. F. Ware, Charles Dixon, Arthur Turner, Charles E. Pearson, William Cuthbertson, J. T. Bennett-Poe, H. J. Cutbush, W. P. Thomson, E. H. Jenkins, W. J. James, C. T. Drury, R. C. Notcutt and James Hudson.

Messrs. James Veitch and Sons, Limited, Chelsea, staged a fine assortment of Daffodils in many choice varieties, also a delightful lot of pot-grown plants of Schizanthus in many colours, and which are known as Veitch's grandiflorus hybrids. They are certainly a very fine strain with larger flowers than the type, of deeper colour and with a more compact habit of growth. Among many interesting things from this firm we noted batches of Primula cockburniana, Hydrangea Hortensia rosea (blue), Veronica diosmifolia, Rhododendron Lady Alice Fitzwilliam, together with a choice lot of Cinerarias of an excellent strain. Silver Flora medal.

Messrs. G. and A. Clark, Limited, Dover, exhibited alpine and early hardy flowers in variety, including Aubrietias, Primroses, Daffodils, Starch Hyacinths and other flowers.

Mr. Alex. M. Wilson, East Keal Manor, Spilsby, had a pleasing lot of new Narcissi, many being seedlings bearing numbers only. Of the named sorts King's Norton, self yellow ajax; Grayling, white, with lemon cup; and Cuckoo, a lovely white flower, with lemon orange crown, were among the best in the group. Some capital bunches of Polyanthus represented an excellent strain of these flowers.

Stove plants of table utility came from Messrs. William Bull and Sons, Chelsea, the firm also displaying a collection of Daffodils.

Messrs. Cannell and Sons, Swanley, had a large, imposing lot of their Zonal Pelargoniums, handsome bunches of these invaluable flowers being set up in superb fashion. There were some three dozen vases of these showy flowers staged in the leading sorts. Silver Banksian medal.

Messrs. T. S. Ware, Limited, Feltham, had a large display of Aubrietias, such as Græca, Dr. Mules, Bridesmaid (pink), Prichard's A1 (a very dark variety), Crimson King and others. Primula Sieboldi was also largely displayed.

The Misses Hopkins, Shepperton-on-Thames, had a very charming exhibit of early hardy flowers most tastefully arranged on a rockery bank in moss and rocks. Single and double Primroses, Aubrietias in variety, Primula frondosa, Auricula Queen Alexandra (a fine yellow-flowered sort of robust growth), Fritillarias, Gerberas, Cambric Poppies and many more were included, the whole being nicely displayed. Silver Banksian medal.

Messrs. Barr and Sons, Covent Garden, staged a delightful lot of choice Narcissi, representative of several sections of the flower. Buttercup is a lovely flower of the richest golden yellow, very firm in texture and of splendid stature; Funnace, with fiery orange cup, is a gem in its way; while Staysail, Faction, Radiant (a glorious Poet), Peter Barr, Cygnet, Pedestal, Lucifer, Mrs. Beteridge, Chancellor, Cosmos and Pixie (a glorious Engleheartii) were among the best of a wonderful lot.

Messrs. William Cutbush and Sons, Highgate, had a very fine group of Heaths, Spiræas and Carnations in fine flower. Rhododendron Smithii aurea in many fine bushes was exceptionally well grown, the pale yellow trusses of bloom being most effective. Colous Cordelia is very showy and good, and the new Spiræa Peach Blossom is very fine. The Carnations were superbly shown, Robert Craig making a grand display. Lady Hermione was also fine, and Victory is one of the best of the scarlet sorts. Silver-gilt Banksian medal.

Mr. H. J. Elwes, Colesbourne, Gloucestershire, showed a few interesting plants, such as Cantua dependens, Alpina nitans, Amaryllis and Bonareas.

Messrs. Hugh Low and Co., Enfield, had a very fine display of Metrosideros floribunda, a score of specimens, each 2 feet or more across, making a most effective display with the scarlet bottle-brush-like inflorescence. The plant is known as the Bottle-brush Tree, and is one of the most showy of Australian plants. Silver Banksian medal.

Messrs. Dobbie and Co., Rothesay, set up a beautiful lot of bedding Violas and Pansies in great variety, the many

self-coloured flowers attracting a good deal of notice. Snowflake, Royal Sovereign, A. J. Rowberry, Blue Cloud, Admiral of the Blue and Maggie Mott were a few of the most distinct. A fine strain of Polyanthus came from this firm, and among these were a few of the gold-laced varieties. Silver Banksian medal.

Mrs. Burns, North Mymms Park, Hatfield (gardener, Mr. C. R. Fielder), showed fine white Amaryllis seedlings, of which Purity is, perhaps, the best of all.

A very fine specimen of Echium calithyrsum, with only two of the fine blue inflorescences on a 6-foot high plant, came from Mrs. Bridget Talbot, Berkhamsted (gardener, Mr. E. Pincock). It is a very handsome plant of quite woody growth.

The Carnations and trumpet Lilies from Mr. W. H. Page, Hampton, were superb. Enchantress, Mrs. Lawson, White Enchantress, Britannia (very fine scarlet), White Mr. Lawson, Winsor, My Maryland and Governor Roosevelt were all grandly displayed over a bed of Maidenhair Ferns. Silver Flora medal.

Mr. George Mount, Canterbury, again showed Roses in superb fashion. Bold groups of Ulrich Brunner, Frau Karl Druschki and Mme. Abel Chatenay at the ends and centre were very fine, and these, with fine groups of Mrs. Sharman Crawford, Catherine Mermet, Captain Hayward, Richmond, Liberty, Joseph Lowe and John Laing, made a really grand display. Silver-gilt Banksian medal.

Mr. G. Reuthe, Keston, Kent, had a most interesting lot of hardy things, many species of Primulas, Fritillarias, Aemone memorosa atropurpurea (very fine), Androsace carnea, with a number of Saxifragas and other plants. Paracarya angustifolia is a fine blue-flowered plant of merit, growing 1 foot high or more. Some pretty Daffodils and flowering shrubs were included in the group. Silver Banksian medal.

A group of Rhododendrons, such as Aucklandii, Dalhousii, victoriana Aucklandii hybrida, with handsome bunches of Cantua dependens and Posoqueria longiflora, came from Mrs. F. G. Godman, Horsham (gardener, Mr. Moody), and formed a sumptuous feast of the flowers named.

Mr. J. R. Box, West Wickham, showed a very pretty lot of alpine in pans, &c.

Messrs. Cartwright and Goodwin, Kidderminster, had a lovely lot of the newer Narcissi, in which Chloë, Evangeline, Weardale Perfection, Homespun, Rising Sun (a fine yellow self), Mme. de Graaf and Astrophel were among the finest.

Messrs. Pope and Son, King's Norton, Birmingham, had a pretty group of Narcissi, in which Glory of Leiden, Lucifer, Gloria Mundi, Weardale Perfection and others were seen. Among the seedlings many were very fine, and gave one pleasure to view.

An interesting group of plants, such as Rhododendrons, came from Messrs. Paul and Son, The Old Nurseries, Cheshunt.

Messrs. Frank Cant and Co., Colchester, staged many pillar Roses in variety. Silver Banksian medal.

Lilacs, Berberis and other shrubs were freely shown by Messrs. J. Cheal and Sons, Crawley.

Messrs. Paul and Son, Waltham Cross, had a few lovely Roses, Lyon Rose (copper, with salmon merging to pink) being very pleasing. Albatross (a good white) and Kathleen (a deep carmine pillar variety) were also noted. Silver-gilt Banksian medal.

Messrs. Carter and Co., High Holborn, displayed Cinerarias in a large, well-formed bank. Silver Flora medal.

Mr. L. R. Russell, Richmond, had a delightful group of Azaleas, Lilacs, Prunuses and Clematis arranged in the most pleasing fashion. Silver-gilt Banksian medal.

Messrs. R. and G. Cuthbert, Southgate, had a lovely group of Azaleas, Lilacs, Prunuses, Wistaria and other plants associated with Palms, Acers and other plants. Silver Flora medal.

Alpine and rock plants were shown by the Misses E. and M. Kipping, Hutton, Essex, Primroses and Auriculas being prominent.

The Guildford Hardy Plant Nursery showed Primulas, Aubrietias, Thalictrum anemonoides and many other choice plants.

Messrs. Peed and Son, West Norwood, arranged a group of alpine in boxes, together with Gloxinias in good bloom. Silver Banksian medal.

Mr. M. Prichard, Christchurch, Hants, had a pleasing exhibit of Aubrietias, Cyclamen, Crown Imperials, Primula Sieboldi and other plants in a quite fresh condition. Silver Banksian medal.

Mr. James Douglas, Great Bookham, Surrey, showed three fine plants of Myosotidium nobile (the Chatham Island Forget-me-not) in fine condition.

Messrs. George Bunyard and Co., Maidstone, had many delightful hardy plants, such as Marsh Marigolds, Primulas, Aubrietias, Daffodils and Saxifragas. Silver Banksian medal.

Messrs. Wallace and Co., Colchester, had a delightful lot of Tulips and hardy flowers generally, Caltha polypetala being very fine.

Mr. C. F. Waters, Balcombe, Sussex, had a very pretty group of Carnations of the American section in many good varieties. Silver Banksian medal.

Messrs. H. B. May and Sons, Edmonton, staged a group of flowering and foliage plants, in which Ferns, Petunias, Clematises, Calceolarias and other plants were seen. Silver Flora medal.

Messrs. Carter Page and Co., London Wall, exhibited a charming lot of Tufted Pansies in many varieties; and Mr. Robert Sydenham displayed Narcissus and Lily of the Valley in fibre moss.

Tulips were freely displayed by Messrs. Cuthbert and Co., Southgate; and Messrs. George Jackman and Son, Woking, had Primula Sieboldi and other good hardy plants in plenty.



SOME NEW FUCHSIAS.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

HOW TO MAKE A SMALL ROCK GARDEN.

(First Prize Essay.)

ONLY to those who have made or possessed a rock garden is known the intense fascination and perennial interest which attaches to the culture of the little alpine races. Much more space than is here permitted would be required in which to thoroughly instruct the uninitiated in the art of making even a small rock garden which would be entirely suited to the needs of all its charming inhabitants. The likes and the antipathies of each one of these must be studied and learned by experience (a far better instructor than a library full of books), such as, for instance, that *Ramondia pyrenaica* droops in the sun, that lime in the soil will kill the beautiful ever-flowering *Lithospermum prostratum*, while our brilliant little native *Sedum aere*, though waxing fat, will refuse to bloom if given much or rich soil. By studying a few leading trade catalogues the beginner will find which plants require sun or shade, moist or dry positions and so forth. A general outline only, therefore, will be given to enable the rockery to be constructed, and a list of 100 suitable plants arranged as to colour and selected so that there may be bloom all the year round.

SITUATION.

Select your ground in the open, if possible, but if it must be near a building, then on any but the north side. Large trees and shrubs overhanging or near the rockery are fatal to success. The general trend of the garden should be north and south, in order that practically all parts may be reached by the morning or afternoon sun, for the majority of alpine delight in sunshine.

MATERIALS.

Large and small limestone and sandstone rocks of irregular shapes will be required, while tree stumps and anything in the nature of bricks, clinker or artificial stonework must be avoided. The soil should consist of gritty loam, made rich or poor here and there as required, and mixed with a quantity of sandstone chips in order that while it may be moist and cool in summer it will be porous and light in winter, for, at all costs, there must be thorough drainage. Stagnant moisture is among the worst enemies of rock garden plants.

CONSTRUCTION.

The shape of the garden matters little so long as Nature is studied and, as far as possible, followed. Avoid straight lines by making the rockery in all its parts as irregular as the mountain homes of our alpine friends. Create a definite idea in your mind and keep to it; then mark out on the ground the proposed outline, clearing away all grass and vegetation for a distance of at least 3 feet, as it merely acts as a harbourage for

slugs and other pests and detracts from the appearance of the garden. Having collected the materials, carry out your preconceived design, always bearing in mind that each rock should be two-thirds buried and one-third exposed, that the soil must fill up all spaces below, behind and between the rocks, leaving no empty hollows for roots to enter and perish in, and that the upper surfaces of the rocks should slope inwards and downwards in order that rain and moisture may find its way to the roots of the plants and not towards their crowns. It will be found of advantage to so construct the garden that any part of it may be reached without treading on other parts, containing, perhaps, deciduous treasures or germinating seeds. For this reason it will be best to make a winding pathway, at least 3 feet in width, through the garden, and paved with flat, irregular stones, placed at intervals and slightly raised above the general level of the path. Some alpine, though small in stature, have very long roots, which creep and find their way for many inches down below the rocks in their search for food and moisture, therefore throughout the garden there must be plenty of root room, that is to say, depth of soil, which in no case should be less than 1 foot.

Again, since such plants as *Saxifraga longifolia*, in their native haunts, grow in verticle crevices in the faces of cliffs, provision must be made to meet their wants by constructing miniature precipices as well as level spaces, care being taken, when building, that the rocks do not project beyond or overhang those below them, as in this case moisture cannot find its way in. These steep positions will also be required on the north or shady side of the garden, where we will find *Ramondia pyrenaica* and its more beautiful form *alba*.

In this way the garden will gradually be built up and take form, with gentle slopes and levels, and steep diminutive cliffs, down the faces of which trailing plants will fall with fine and natural effect; then there will be well-drained peat-filled pockets for miniature *Rhododendrons* and *Daphnes*; narrow chinks for *Androsaces*, *Sedums* and *Saxifrages*, with dry stony positions for *Sempervivums*. Thus we shall avoid creating one of those horrors so often seen, which look more like graveyards than rock gardens.

Having completed the building of the garden, it should be well watered and allowed to settle before being planted.

As much thought must be given to the planting as is necessary in the construction, for not only must the plants be placed where their colours may blend harmoniously with those of their neighbours, but also where they are in no danger of being overgrown and smothered by more vigorous kinds. It is useful to remember that bulbs, such as *Snowdrops*, *Chionodoxas* and *Muscari*, do well, and look well if planted where they may in time push up their leaves and flowers through some carpeter like *Saxifraga Whitlavi compacta* or *Arenaria balearica*. The following plants are given as most suitable for a small rock garden, needing little or no special care in their culture, and from which the necessary number may be selected according to the size of the rockery to be filled. The colours

refer, of course, to the flowers and fl.-pl. means double flowers:

White.—*Anemone alpina*, *Arabis albida* fl.-pl., *Arenaria balearica*, *A. montana*, *Cerastium tomentosum*, *Cistus florentinus*, *Crocus*, *Dryas octopetala*, *Galanthus nivalis*, *Hutchinsia alpina*, *Iberis sempervirens* Little Gem, *Leucojum autumnale*, *Primula pubescens* alba, *P. denticulata*, *Ramondia pyrenaica* alba, *Saxifraga aizoon*, *S. granulata* fl.-pl., *S. pyramidalis*, *S. longifolia*, *S. Wallacei*, *S. Whitlavii* compacta, and *S. valdensis*.

Pink and red.—*Androsace carnea*, *Aubrietia Moerheimi*, *A. Fire King*, *Armeria maritima*, *Anemone fulgens*, *Dianthus alpinus*, *D. caesioides*, *D. neglectus*, *Daphne Cneorum*, *Geum rivale*, *Helianthemum Beauty*, *H. Double Red*, *Hepatica triloba* rubra, *Lychnis alpina*, *Phlox amœna*, *P. subulata*, *Potentilla nitida*, *Primula rosea*, *P. viscosa*, *Rhododendron racemosum*, *Saponaria corymbosa* splendens, *Saxifraga muscoides*, *S. oppositifolia*, *S. Rhei*, *S. Guildford* Seedling, *S. umbrosa*, *Sedum Lydium*, *Sempervivum tectorum*, *S. Laggeri*, *Shortia galacifolia*, *Silene acaulis* and *S. Schafta*.

Yellow.—*Alyssum saxatile* fl.-pl., *Adonis vernalis*, *Cheiranthus alpinus*, *Crocus*, *Draba aizoides*, *Fritillaria armena*, *Helianthemum luteum*, *Hypericum Coris*, *Iris pumila* lutea, *Linum flavum*, *Morisia hypogœa*, *Primula auricula*, *Papaver nudicaule* (various colours), *P. alpinum* (various colours), *Saxifraga Sancta* and *Sedum acre*.

Blue.—*Anemone blanda*, *Aquilegia alpina*, *Campanula garganica*, *C. g. hirsuta*, *C. pusilla*, *C. muralis*, *Chionodoxa Luciliae*, *Gentiana acaulis*, *G. verna*, *Hepatica triloba*, *Muscari*, *Myosotis dissitiflora*, *Scilla sibirica*, *Veronica rupestris* and *Lithospermum prostratum*.

Mauve, purple, &c.—*Anemone Pulsatilla*, *Aster alpinus*, *Aubrietia purpurea*, *A. Dr. Mules*, *Erinus alpinus*, *Crocus*, *Colchicum autumnale*, *Iris pumila* cœrulea, *Phlox Stellaria*, *P. divaricata*, *Primula denticulata*, *P. farinosa*, *P. marginata*, *Ramondia pyrenaica* and *Sempervivum arachnoideum*. CAPTAIN TREHERNE.

Muirbarn, Strathaven, N.B.

PRIZES FOR READERS.

APRIL COMPETITION—AWARDS.

In this competition essays on "How to Make a Small Rock Garden, with a List of Suitable Plants," were asked for. The prizes are awarded as follows:

The first prize of four guineas to Captain Treherne, Muirbarn, Strathaven, N.B.

The second prize of two guineas to D. B. Allwork. No address sent; please forward it.

The third prize of one guinea to H. Buckton, 53, Albion Place, Reading.

The fourth prize of half-a-guinea to the Rev. H. Kingsmill Moore, D.D., Cedar Mount, Dundrum, Dublin.

The number of essays sent in was very large, and the quality was correspondingly high. Evidently rock gardening is a most popular subject at the present time, and our readers seem to have a very good grasp of the principles underlying the proper construction of a rock garden. The lists of plants submitted were, generally speaking, good, although a few were weak. A curious feature about a number of essays was the fact that they were almost identical so far as general statements were concerned, although the phrasing was different. Those from the following were particularly good, and deserve high commendation: Gilbert Walshaw, E. J. Lloyd Edwards, D. Reynolds, C. W. Caulfield, James R. Taylor, Alfred B. Melles, George Cooper, Mrs. C. L. Sutherland, W. H. Scott, W. E. Wood, A. M. Darling, Miss Barclay, P. Reid, S. Johns, G. H. Webster, W. L. Lavender, W. H. Morton, C. W. Crosby, L. Bigg-Wither, Leah Daly, G. Satterley, F.

Corlette, James Glasheen, J. W. Forsyth, M. E. Dishurnal, E. Anderson, R. Laycock Routh, H. J. Poate, Ralph E. Arnold, H. Lancelot Robson, A. L. Simpson, F. W. Lovell, A. M. Morton, J. H. Yarrow, B. J. Beekton, T. H. Barnard, Ruth B. Cannon, A. H. Thompson, M. R. Dunn, E. P. Martin J. Richards, Mrs. F. A. Bardswell, E. H. Howard and C. Blair. One competitor, whose essay was also commendable, and accompanied by a photograph, omitted to attach name and address.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

May 26, 27 and 28.—Royal Horticultural Society's Spring Flower Show, Inner Temple Gardens, Thames Embankment; 12 noon to 7 p.m. the first two days, 9 a.m. to 6 p.m. third day.

Kew Guild Dinner.—We are requested to remind our readers who are Old Kewites that the annual dinner will take place at the Holborn Restaurant on the 25th inst., at 7.30 p.m.; and that the secretary, Mr. W. N. Winn, would be glad to hear before the 18th inst. from all who intend to be present.

Royal National Tulip Society.—The annual exhibition in connexion with the above society is to be held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, on the 26th inst. A silver cup and numerous silver medals are offered for competition, and it is hoped that lovers of this old-fashioned yet beautiful flower will do all they can to make the exhibition a success. Copies of the schedule and full particulars can be obtained from the hon. secretary, Mr. W. Peters, Farewell House, Cambridge.

A new source of Cajaput oil.—In the genus *Melaleuca*, which comprises a number of species—all fine evergreen trees or shrubs, natives of Australia—several species are in cultivation as greenhouse plants in this country, among them being *M. Leucadendron* var. minor, and *M. squarrosa*, which are interesting plants outside their horticultural value. Most of the species are more or less aromatic, from the presence of a volatile oil in the leaves, the timbers are intensely hard and durable, and the barks are remarkable for their paper-like nature. It is for one or other of these properties that most of the species have some economic value, though the most important and best known in this connexion is *M. Leucadendron* var. minor, a tree growing from 15 feet to 20 feet high and a native of the Indian Archipelago, the Malay Islands, and Australia. From the leaves of this plant the well-known Cajaput of commerce is distilled. Rumphius describes the mode of collecting and distilling the oil as follows: "After gathering the leaves they are put in sacks where they become hot and damp; they are afterwards macerated in water and left to ferment for a night before distillation." Two sackfuls of the leaves are said to yield only three fluid drachms of oil. It is mostly distilled in Celebes, Bonro, and Amboyna, and comes to this country in ordinary black glass wine or beer bottles. It is used in this country internally as a stimulant and antispasmodic, and externally—either alone, or in the preparation of croton oil liniment—as a rubefacient. Good Cajaput oil should be of a deep green colour. Quite recently a new source for Cajaput oil has been reported from Australia, where one of the native species (*M. uncinata*) is said to yield an oil resembling the Malayan product in some respects; "but its stearoptene or solid alcohol is a new substance not hitherto described or investigated, nor does it agree with any known substance obtained from plants. It may be that this discovery will have profound importance. Eucalyptus oil has attained world wide repute, and it is likely that the Australian Cajaput will

soon be recognised as a useful agent by medical men and chemists." Maiden states in his "Useful Native Plants of Australia," that the leaves of *M. uncinata* "if chewed are very useful in alleviating and curing ordinary catarrh. This observation is well worth repeating, especially as this particular species is widely distributed, and there is no reason to suppose that this property is confined to this species." A similar oil, but in very small quantity, is furnished by *M. squarrosa*, the bark of which, on a full grown tree, is composed of innumerable layers of a thin, papery nature, which are easily separable, and are used for making shields and canoes, and for covering huts, as well as for tinder and for other applications.—JOHN R. JACKSON, *Claremont, Lympstone, Devon.*

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Narcissus Buttercup.—In the excellent account given in your issue of the 2nd inst. of the Midland Daffodil Society's show at Birmingham I notice that your correspondent refers to the complete stock of *Narcissus Buttercup* as having changed hands. As this may give a wrong impression I write to say that the stock of this variety, which is very limited, is in my possession, and I have practically only decided to this season break the stock, and have parted with a very few bulbs.—CHARLES DAWSON.

The perpetual-flowering Carnation as a summer-flowering plant. Last summer one or two of our best gardens had experimental beds of perpetual-flowering Carnations planted out for summer flowering in the open, and they gave perfect satisfaction in this somewhat new sphere. We, at Messrs. Hugh Low and Co.'s nurseries, carried out rather extensive experiments in this direction, and found that plants put out in early May produced an abundance of flowers during the summer and were much more satisfactory than the ordinary border Carnation. It is no small advantage in being able to plant Carnations out in May for summer flowering, because with the ordinary border Carnation autumn or very early spring planting has to be done to ensure summer bloom. The best class of plant for summer flowering is that from a 5-inch pot with from eight to ten growths, that which has produced an early winter crop of bloom or which has been wintered in a cold frame giving similar results. Early-rooted cuttings in 3-inch pots with four or five growths also give quite good results. Almost any variety of the perpetual-flowering Carnation does well when so grown, and *Lady Bountiful*, *White Perfection*, *Robert Craig*, *Harlowarden* and the *Enchantress* family give grand results. During the last winter we had quite a large collection of perpetual-flowering Carnations planted out in the open along with ordinary border varieties, and hardly a plant has succumbed to the severity of the season and are now making good growth for flowering again. In an absolutely cold frame we wintered several thousands of perpetual-flowering Carnations in 5-inch pots, and these withstood 15° of frost and scarcely a plant has died.—MONTAGU C. ALLWOOD.

The Poeticus section of Narcissus.—Amid the trials and troubles that beset Daffodil enthusiasts as to where one section ends and another begins, I had hoped that at any rate those who cultivate and study true *Poeticus* (as I do) had little to fear in their regard, but at the Birmingham show my faith was a little shaken. I was there shown several flowers spoken of as *Poeticus*, which were masqueraders. One was on Mr. P. D. Williams's stand and was pointed out to me as the deepest red-cupped *Poeticus* yet raised. I had a good look at it, but it certainly was not true *Poeticus*. Again, Sir J. Gore-Booth's representative showed

me a flower of the much-vaunted Acme, which he had not put up, as it was not quite in form. Now Acme is a very perfect flower in its way, but again I say, at the risk of raising a storm, it is not true Poeticus. If the raiser were to tell me he could vouch for the integrity of its parentage I should tell him there had been some wandering bee about. The crown of Acme has a very fine shade of red suffused evenly throughout the whole of it, but it is not Poeticus red. To my mind there is no red like Poeticus red, as there is no white just like Poeticus white, and I believe I could tell an interloper anywhere. The colouring of Poeticus is so lovely, pure and distinct that the very greatest care should be exercised to maintain the section in its integrity, and no flower showing a trace of "outside blood" should be permitted within its pale.—

POETASTER.

Sweet Pea nomenclature.—Seeing the letter *re* Sweet Pea Nomenclature in THE GARDEN, may I add my mite to the correspondence. I do not see any objection to the giving of personal names to the lovely flowers; in fact, I think they are far more distinctive than such words as Pearl, Lovely, Beauty, &c., and provided we steer clear of the bastard Latin, so dear to the lovers of the Orchid, and do not start weighing them down with such titles as Dorothei Eckfordiensis or Horacooni wrightiana I do not think we can seriously find fault.—
F. W. B.

Crickets in a greenhouse.—I saw in THE GARDEN for April 25 that some one had been writing to you for advice as to how to get rid of crickets in a greenhouse. About two years ago the potting-shed and greenhouses here were infested with them. One day I noticed two large ones in a condensed milk tin, clearing out a little milk that had been left in it. I put in a teaspoonful more milk and added a teaspoonful of weed-killer powder to it, and put the tin back in the same place again. I have not seen or heard a cricket here since.—J. RAWLINGS, *The Gardens, Ridgmount, Enfield.*

Double Arabis.—In a short time the spring bedding-plants will be cleared from beds, and a note on the above-named subject will not be out of place. They should be lifted with a spade and heeled in in good soil in a partially-shaded place and well watered. By next October they will be a mass of growths. If these are broken off about 5 inches long and put in 3 inches deep with a trowel, 98 per cent. will grow and flower the following spring. I have put in thousands of cuttings this way, always trying to get it done during October and the first week in November, and it has always been successful.—J. RAWLINGS.

Finches and Polyanthus buds.—It is most disheartening to learn from "Festina Lente" that finches, in addition to sparrows, had learned to pick off the buds of Auricula and Polyanthus flowers. Having suffered severely so far as Polyanthus were concerned in and near a town from sparrows picking out the flower-buds ere developed into flowers, I had thought it was due to the general absence so early in the spring of other forms of vegetable food in or near towns. In any case, these depredators have made the growing of these beautiful hardy spring flowers near to populous places most difficult, except the plants be protected by nets or black cotton, this latter, simple as it is, having shown itself to be, so far as the sparrow is concerned, an excellent protector. But when finches, the most destructive of all garden birds, prey on our spring flowers, reckless of such simple obstructions as cotton or thread, we find it difficult to be longer tolerant when birds become man's enemies rather than his friends; the protection now granted them must be withdrawn and, in spite of real or spurious sentiment, they must be destroyed. At our present rate of progress soon nothing will be safe from birds except where gardens are wired or netted all over.—A. D. □

AN ANGLO-FRENCH ENTERPRISE

IN GROWING FLOWERS AND VEGETABLES IN THIS COUNTRY.

IN the little market town of Thatcham, in Berkshire, an interesting Anglo-French vegetable and fruit industry is being developed. Thatcham is situated three miles to the east of Newbury and fourteen miles south-west of Reading, and is watered by the river Kennet, and bounded on the south by the river Auburn, which separates Berks from Hants. The soil is gravel and clay, with a sub-soil of gravel, clay and peat, which does not sound very promising. In spite of this, two ladies from Wales have settled there and have brought over from France a clever gardener. In the five acres of land they have commenced a very interesting and somewhat novel method of growing early vegetables and salad stuff for London and other markets. For the vegetables only one acre has been cultivated, as it is found to be sufficient; the rest of the ground has been planted with fruit trees. The area is enclosed by high corrugated iron fencing and the whole plot is one hot-bed. As you enter the place the rise in temperature is remarkable. The hot-bed is intersected with footways just wide enough to allow a man his passage through, all the soil, manure and things required for cultivation being carried on men's shoulders.

On these hot-beds a thin layer of well-sifted soil is placed, and crowded all over them are small frames of the simplest possible construction, and these are supplemented by hundreds of bell-glasses or cloches. Under each cloche are Lettuces, the Cos in the centre and the Cabbage round, every tiny space left being filled in with Carrots, Radishes and small salad; not a fraction of an inch is wasted, and as fast as one Lettuce is cut another is pricked out. A thousand Lettuces a day is the present output; the packing-cases for these even are made on the premises. The French gardener, who is the instructor as well as a most diligent worker, and has practised this method for many years in France, lives in a bungalow in the middle of the enclosure. Melons also are grown, and are supposed to be a paying crop if got in early enough. Some of the fruits are already set, and it is to be hoped that they will get sun enough to ripen them in our uncertain climate, for whose vagaries their guardian from a sunnier clime has no good word.

The demand already for Miss Jones's vegetables is very great. Besides this industry these energetic ladies have started a jam factory, so little Thatcham is well on the way to prosperity. About profits and expenditure it would be as well for those interested to go to the owners, who are most kind about answering questions and anxious to exploit their valuable ideas. I am assured that it is likely to be a most profitable concern, and I believe that it would answer to start other gardens on the same principles. As there are fourteen pupils of both sexes attending the work these would eventually be able to instruct others, but the simplicity of the method hardly requires much tuition.

There is no doubt that these home industries are what are wanted to help England and to keep her sons and daughters on the land. We have the finest agricultural country in the world, and in many parts of Berkshire alone a much finer soil than Thatcham. It would be perfectly easy with energy and a small capital to start just such another garden. The system is not costly, because it is such a rapid way of producing. The plants under the cloches grow much quicker than those in frames, owing to the light having perfect access. The soil is so carefully prepared that there is little danger of the ravages of the slugs and snails which so often destroy one-half of the seeds sown in ordinary conditions. The cloches are expensive and

are easily broken, and I should fancy the stable manure used must tot up to a considerable sum, but as a set-off against these two items the labour is not heavy. After some years residence in a small Berkshire village I can commend that. If agricultural England is to be saved it must be done by the educated classes taking the lead and showing the working man how to use his brains and his hands to his own advantage. They say that the power of work is lessened by the boys being kept so late at school. I am not going to argue whether this is true or not, but I am certain it is no use putting up notices in a village that holdings and allotments can be had on application until an incentive is given to the men to work. Here there has not been one single application. We have, however, now begun to instil into the minds of the villagers a desire to work for themselves by starting a small society, and several cottagers are growing Peas, Beans, Lettuces and Sweet Peas for a market we have found in London. We choose the sorts of Peas, &c., and when ready all the vegetables will be brought to us and each grower will receive market price without responsibility of carriage or packing. We have also started an egg industry, and we are sending to a well-known London restaurant about 1,000 eggs a week. These are brought to us every week in large or small quantities. The idea has been received with great enthusiasm, and it is impossible to buy more beautiful eggs, which are also highly approved of by the purchaser. The price given is ruled by the nearest market. This week we have added Water-cress, grown in pure, untainted streams, quite a boon to the town that accepts the dangerous stuff grown in the neighbourhood of London on its own sewage. We hope at no very distant period to see the allotments taken and the little society on its own feet. The working man's day ends at five o'clock, and the hours afterwards which he now spends in the public-house he could turn into gold. This better way we are trying to show him.
A. DE LACY LACY.

THE EDITOR'S TABLE.

WILD DAFFODILS FROM THE LAKE DISTRICT.

Mr. Cuckney of Arnside, Carnforth, sends a most interesting box of wild Daffodils, with the following note: "I am sending you by post a few flowers of *N. pseudo-Narcissus* as they grow in countless thousands in the beautiful Lake District. The flowers are just as gathered from near Cartmell Fell Church (this is a most primitive building; no touch of the restorer here, it is God's acre all aglow with *Narcissus*), in a little narrow dingle, with its small, rushing stream tumbling over rocks. After the glow of Daffodils this dingle is just one mass of the loveliest Lady Ferns, many of them last year over 5 feet high. In open spaces also grows the Grass of Parnassus, fair as its name implies, having the waxen whiteness and delicate green veins of a Snowdrop."

DAFFODILS FROM MR. PETER BARR.

Mr. Peter Barr, V.M.H., sends us another interesting lot of Daffodils from his Scottish home. Considering the very rough weather we have experienced in the South we were much surprised to receive flowers in such good condition. Among many others the following were particularly good, both as regards colour, shape and size: *Maximus*, large, rich yellow trumpet self; *Gloria Mundi*, flowered under glass; *Glory of Leiden*, *Nelsonii* major, *Santa Maria*, resembling *maximus*, but with narrower perianth segments; *Captain Nelson*, *Queen Anne's* double Daffodil, *Minnie Hume*, a charming *Leedsii* form; *Leedsii amabilis*, *Engleheartii* *Sequin*, a chaste flower of this new and popular section; *Barri conspicuus*, a very fine bloom; *incomparabilis* *J. C. Backhouse*, *incomparabilis* *Mabel*

Cowan, poeticus Cassandra, grown under glass; Mrs. Langtry, Katherine Spurrell, a lovely Leedsii; P. R. Barr, Victoria, princeps, the white form of which Mr. Barr says is the true Margueretta; Horsfieldii, Princess Ida, Mme. Plemp, very large; odoros rugulosus, Mrs. Vincent, moschatus, King of Spain, very handsome; Millie Barr, Admiral Togo, and the pretty little triandrus calathinum.

PRIMULA OBCONICA FROM SURREY.

Mr. George Boyd, Danehurst, Epsom, Surrey, sends some excellent blooms of a purple-flowered strain of this valuable Primula. He writes as follows: "I enclose a few sprays of Primula obconica from a plant among a batch of seedlings raised from Messrs. Webb's seed. It is far better than any of the others, as it has long, stout, wiry stems, and I consider it quite worth growing on. Primula obconica is one of the very best plants to grow for table decoration, the blooms last for a long time, the plants are easy to grow, are continuous blooming, and their beautiful lilac colours leave nothing to be desired. I sow a packet of seed each year, the first week in March, scattering the seed on some finely-sifted soil, watering the soil first, and then place a pane of glass over the pan. When the seedlings are



A SHADE-LOVING PLANT: OMPHALODES VERNA. (See page 241.)

up I prick them out into a seed tray. When two or three leaves have formed they are potted up into 2½-inch pots, repotting as they advance into growth till they reach 6-inch pots. A mixture of two parts loam, one part leaf-mould and one part well-decayed manure, with a little sand, suits them admirably."

ROSE CATHERINE MERMET.

Mr. George Leadbetter, The Gardens, Elm Hurst, Wilmslow, near Manchester, sends flowers of this beautiful Rose, which, for glass-grown flowers, are very fine indeed. He encloses the following note: "For your table I am sending a few flowers of Catherine Mermet, in my humble opinion one of the best all-round Roses. It is a very pleasing colour, is a beautiful flower either in bud or fully open, and is not without perfume, so that I think it may fairly be called one of the best. For room decoration or for button-hole work it is very good indeed. The flowers sent have been cut from a tree planted out at the end of a greenhouse with south aspect, and it generally gives us three crops of flowers during the year. I fancy a poll on the most popular inside Rose might be interesting, and I think Catherine Mermet would give a good account of herself."

TREES AND SHRUBS.

THE SHRUBBY SPIRÆAS.

(Continued from page 228.)

SPIRÆA BELLA.—This is a native of temperate Himalayas, and is a strong-growing species, attaining a height of upwards of 5 feet, and bearing clusters of deep pink flowers opening in June.

S. canescens is a tall-growing plant from the Himalayan region, and forms a large bush 6 feet to 8 feet in height, with slender, arching branches clothed with corymbs of snow-white flowers in June and July. It has a free and graceful habit, and makes a splendid small specimen when grown as an isolated plant.

S. japonica (*S. callosa*) is an old and well-known species, and is found from Northern India through a great part of China to Japan. When left unpruned it reaches a height of 6 feet or more, but when kept cut back every spring it only reaches half that height. The rosy red flowers are produced in late summer, and are borne in terminal flat corymbs 6 inches to 1 foot across on young, vigorous shoots. There are several varieties, of which alba, which grows

by underground growths, each slender shoot attaining a height of 4 feet or so, and terminated in July and August with a dense panicle of rosy red flowers. It is a plant for the wild garden or rough spots where it has room to spread about.

S. salicifolia is a widely distributed species, being found from Eastern Europe to Japan, while one variety of it hails from North America. The type somewhat resembles *S. Douglasi*, but has rather paler flowers and a less spreading mode of growth. The variety *paniculata* is a native of North America, and has broader foliage and larger panicles of flowers than the type. Varieties *floribus albis*, *f. roseis* and minor are described by their names.

SECTION VII.—BASELIMA.

In this section the foliage is pinnate, and the flowers are borne in large clustered panicles. They require little pruning as a rule, but are benefited by an occasional thinning.

S. Aitchisoni.—This is a native of the Himalayan region, and makes a plant 8 feet or more in height, with stout stems clothed with elegantly-cut pinnate leaves, and terminated in August and September with large panicles of snow-white flowers. It is a handsome plant during the summer, and the warm brown-red of the stems makes it a welcome addition to the garden in winter.

S. lindleyana is also a native of the Himalayas, and somewhat resembles the preceding, but the foliage is somewhat coarser and more rugose, and the stems are green. The large panicles of white flowers open in August.

SECTION VIII.—HOLODISCUS.

S. discolor (*S. arivifolia*).—This is the only member of the section, and is a strong-growing species from North-west America, reaching a height of upwards of 12 feet. The stout, greyish stems are topped in July with feathery plume-like panicles of creamy-white flowers. It is a very easy plant to deal with, and when in bloom is one of the handsomest subjects in the garden.

Bagshot, Surrey.

J. CLARK.

A NEW GUELDER ROSE.

(VIBURNUM CARLESII.)

This is a most valuable addition to hardy evergreen flowering shrubs and one that will be welcomed by all lovers of choice plants. Of Chinese origin and recently introduced, we are not sure if the plant has flowered previously in Britain. The plant possesses an additional value by flowering in the spring-time with Pyrus, Magnolia and other subjects then in beauty. It forms a bush of spreading habit with hoary or downy ovate, slightly serrate leaves, and the flowers are produced in terminal clusters somewhat freely. The blossoms, which are deliciously fragrant, are at first of a pinkish hue, but upon expansion are of the purest white and in form remind one of *Luculia gratissima* somewhat reduced. The exhibited example to which we now refer was grown by Sir Trevor Lawrence, Bart. (gardener, Mr. Bain), and had received the protection of a cold frame. The plant is believed to be quite hardy, and, indeed, has proved to be so in Yokohama and other places. A few more novelties in the way of fragrant flowering shrubs would be most welcome, especially those that flower in the spring. The advances that have been made in this direction during recent years lead us to hope that flowering shrubs will soon take the prominent place in the garden that they deserve. Shown before the Royal Horticultural Society on the 14th ult., when it received an award of merit.

SECTION V.—PACHYSTACHYA.

S. brachybotrys (*S. canescens* × *S. Douglasi*).—This is a hybrid of garden origin, and forms a large upright bush 6 feet to 8 feet high, with short terminal spikes of pale pink flowers opening about midsummer. The growths of this plant should be kept thinned to encourage young, strong shoots.

S. nobleana is a native of California, and makes a plant about 3 feet high, topped with short panicles of rosy red flowers in July. It is of no great garden value, nor are any of the other members of this section, which are all hybrids, so much resembling the above two that it is unnecessary to plant them.

SECTION VI.—EUSPIRARIA.

S. Douglasi.—This is a native of North America, and makes a spreading plant, increasing

THE FLOWER GARDEN.

HISTORY OF THE PRIMROSE, COWSLIP AND AURICULA.

P PRIMROSE is not so old a name by centuries as Cowslip, the latter being Anglo-Saxon, while Primrose is derived from the French. The Cowslip, on account of its presumed medicinal qualities, is frequently

referred to in old medical treatises, and there is no question that it is our fragrant wild flower the writers had in mind. It appears not as Cowslip only, but also as Plaggis, Pagle, Paigle, Peter, Herb St. Peter, Palsiewort, Maierole and Primerole. Not infrequently the Oxlip is confounded with the Cowslip; on the other hand, Primrose, with its variants in English, probably represented plants other than our Primrose. It was, indeed, not until the time of Edward VI. that we can be certain of the identity of the flower. We know, at least, that the Daisy and *Primula veris* were identical; hence, when Chaucer describes the carpenter's "fair yonge wyf" as a "Prymerole," it may be merely the fourteenth century way of saying she was a "Daisy!"

Lydgate, too, seems to have had the Daisy in his mind when he writes that "the fraishe Prymerollys Ther levys splaye at Phebus up-rysing." But as *Pimpinella*, *Ligustrum* (Clover?) *Calendula* and *Solsequium* is each regarded as *Prymerose* or *Primerolle*, to say definitely that Daisy is intended would be somewhat fanciful.

Oxlip does not occur at so early a date as either of the above. In Turner's "Herbal" (1562), part 3, page 80, it is mentioned in the chapter "Of the Coweslippe," that the latter is of two kinds. "One is redder than the other and the paler; they differ also in smell, for one smelleth better than ye other. The one is called in the north contre, of some a Cowslip and the other an Oxislip, and they are both call(ed) in Cambridgeshire Pagles." In the same chapter is the note, "Our Primrose which I never saw grow in any place saving in England and East Freseland." The Auricula was first introduced to English gardens, according to Gerard, as "Beares Eares or Mountain Cowslips," and was cultivated in London gardens towards the end of the sixteenth century. The first writer who distinguished this plant as the Auricula was Evelyn in his "Kalendarium Hortense" (1664), but in the following year Rea mentions it in a way that shows the name to have been in common use long before that time.

The Polyanthus is a still later flower. It is first referred to by Parkinson in his "Paradisus," and is described by Ray and other botanists

later, but the name itself (sometimes *Polyanthos* and *Polyanthous*) does not occur until the beginning of the eighteenth century.

The Cowslip is first described as a garden plant by Turner in the chapter of "A New Herbal," already quoted. "There are," he remarks, "some grene Cowslippes and some dubbel, tripel, quadrupel that grow in gardines." Double, it may be remarked, is equivalent to two rows of petals, triple to three and quadruple to four rows. Cowslips are not mentioned in either "The Gardener's Labyrinth" or "The

the esteem in which they were held in the country as apart from London.

R. P. BROTHERSTON.
(To be continued.)

AURICULA PHYLLIS DOUGLAS.

THIS is a very showy and well-formed Alpine Auricula of large size, with cream centre and mauve and purplish shading. It was exhibited by Mr. James Douglas, Great Bookham, Surrey, before the Royal Horticultural Society on the 28th ult., when it was granted an award of merit.



A NEW ALPINE AURICULA: PHYLLIS DOUGLAS. (Natural size.)

Profitable Arte of Gardening," but a year or two later, in Lyte's "Herball" (1578), they occur as garden flowers. By Gerard we are introduced to the double Paigle "so commonly knowne that it needeth no description," and "Cowslips, two in a hose," appear for the first time. In 1618, Mr. Lawson, a Yorkshireman, in "The New Orchard," mentions "Purple Cowslips and Double Cowslips," as garden flowers of great beauty, and adds, in the 1623 edition, "double double Cowslips," which is interesting, as showing not only a break in the colour, but also

with soil, as plants growing either in or out of limestone succeed with equal luxuriance. The plant is a perennial, belongs to the Borage worts, and is generally considered a native of Southern Europe.

T. SMITH.
Walmsgate Gardens, Louth, Lincs.

WILD PINKS.

ALIKE esteemed for their beauty, fragrance and the variety of conditions under which they succeed, the *Dianthus* family is more or less



A NEW GUELDER ROSE: VIBURNUM CARLESII. (About two-thirds natural size.)

recognised in every garden. Some of them, like *D. Carthusianorum*, with its tall stems thickly set with clusters of red flowers, and *D. eruentus*, commonly known as the "Blood Pink," with black stems supporting vivid crimson flowers, are useful for the herbaceous border; of lesser stature, with deliciously-perfumed flowers and yielding a great range of beautiful colours, is *D. barbatus*, or the Sweet William, still held in high esteem as one of the best of old-fashioned garden flowers. Perhaps the brightest range of colours in the *Dianthus* family is found among the hybrid Chinese or Indian Pinks, *D. chinensis* and *D. chinensis Heddewigii*.

There is a large section of these wild Pinks which show to indifferent purpose when treated as border plants, their natural home being the rugged slope of the mountain, and they can therefore be employed to advantage in gardens when boldly placed upon the rock garden or draping the face of some old weather-worn wall, while one of their greatest charms is that they lend themselves to informal grouping by the side of steps, around sundials or beside some old stone seat. The wild Pink (*D. plumarius*) from which so many fine garden Pinks have originated, is pre-eminently suited for these positions; it is robust in growth and soon forms a large spreading mass of glaucous leafage; the flowers are generally rosy purple, but the shade varies a good deal from seed. *D. cæsius* (the Cheddar Pink) is similar in growth, but with shorter flower-stems, while there are several named forms of this Pink which are quite distinct.

D. monspessulanus has narrow grassy foliage, producing deeply-fringed flowers of a pleasing shade of mauve-pink. *D. deltoides* (the Maiden Pink) is quite one of the loveliest species; the plant is very dwarf, having deep rose-coloured flowers with a dark circle. Established plants flower during early summer, but treated as an annual it will flower well into October. *D. neglectus* is one of those brilliant species which no garden should be without; the foliage is very narrow and grass-like, forming close, dense tufts from which arise large solitary flowers of a lovely rose-carmine colour. It is generally recommended as a granatic species, but it succeeds when planted in the chalky soil of this district.

D. alpinus forms a close-set mass of herbage, producing big rose-coloured flowers freely spotted with crimson; it succeeds best in gritty soil, and I find it enjoys more than an ordinary degree of moisture in summer. *D. glacialis* is not a success in chalk soil, and has therefore to be planted in a prepared compost of sandstone, being one of the best mountain species.

Most of these wild Pinks grow freely in rather poor soil, or that which is just rich enough to promote vigorous growth without the least suspicion

of rankness, otherwise the shoots become sappy and the plants have a straggly appearance. On the other hand, poor soil accentuates the tufted habit and imparts a deeper hue to those having glaucous leaves, while the firm and well-ripened shoots always produce the richest and most abundant harvest of flowers.

T. SMITH.
Walmsgate Gardens, Louth, Lincs.

AUBRIETIA LAVENDER.

THE varietal name is sufficiently descriptive of the colour of this variety for general purposes, apart from which it may be regarded as the best of its shade up to date. The flowers are large, and are borne with characteristic freedom on a perfect habit of growth. It was exhibited by Mr. M. Prichard, Christchurch, Hants, before the Royal Horticultural Society on the 28th ult., when it received an award of merit.



AUBRIETIA LAVENDER. (Natural size.)

THE ROSE GARDEN.

ROSE MEDEA.

THINK we do not sufficiently realise what a valuable Rose this is. I would rather possess it than that shy bloomer Cloth of Gold, a variety it resembles in certain points. The marvellous fulness and beauty of its blooms appeal alike to the exhibitor and those who love Roses for the garden decoration, and it is a sort that is not at all difficult to grow. Under glass in almost a cold house I have had its superb blooms almost as large as a goose's egg. Exhibitors have proved its value many a time, especially during a trying hot season, as it is one of the few Roses that will stand the ordeal of a hot show tent. The colour is of a beautiful lemon yellow, with canary yellow centre, and the blooms are globular, with high centre. It has a splendid habit, yielding marvellous foliage, and it would be a grand sort for a 5-foot wall with west or south aspect. Doubtless the most successful form to grow it is as a half-standard. P.

SINGLE AND SEMI-DOUBLE ROSES AS STANDARDS.

WITH the advance of good taste in gardening and a departure from the old florists' stereotyped ideals there will be an opportunity of displaying some of the lovely single and semi-double Roses in a manner that a few years ago would have seemed ludicrous. I am persuaded that if such Roses as Bardou Job, Irish Elegance, Gloire des Rosomanes, Stanwell Perpetual, Old Crimson China, Sinica Anemone and such like were budded upon standards and allowed to develop into such glorious heads as they are capable of doing we should find they would quickly gain a notoriety that would make them in great demand. The more semi-rampant the growth the better. What a grand standard Zepherin Drouhin would make with its spreading head of most lovely rich rose-pink blossoms and delicious

fragrance. Such Roses as these are far and away superior for growing on stems than such stiff puny growers as Louis van Houtte or Victor Hugo. If Roses of this latter type are wanted on stems, then let them be short, so that their moderate heads may correspond to the dwarfness of stem.

I am certain the more picturesque we try to make our Rose gardens the more we shall have need to go to these outside sorts to lend us their aid, and we shall have to bnd our own if they are not procurable. The advent of the wichuraiana race, with its possibilities of elegant growth when on stems, has opened the way for still further advance. We find now all sorts being budded on standards, not only Rugosa and China Roses, but even the ramblers of all sections, and I for one welcome this innovation.

AYRSHIRE ROSES.

THE true value of these fast-growing Roses is apt to be overlooked in these days when the wichuraiana group is so popular. hut these latter, except in a few instances, do not produce the splendid display of blossom that we obtain from sorts such as Bennett's Seedling or Virginian Rambler. What a delightful mass of snow-white blossoms a large plant of Bennett's Seedling will produce if allowed to grow absolutely as it likes without even so much as taking out the old wood.

Ruga is a very excellent sort, almost Tea Rose-like in its refinement, and of a delicate pink tint. It is a lovely sort to ramble up an old tree; in fact, most of the Ayrshires are splendid for this purpose.

Dundee Rambler is effective in a mass, but it has rather a wild Rose-like style about it, but in Virginian Rambler we have a really lovely gem, the large clusters of expansive white flowers being prettily edged and suffused with pink. Queen of the Belgians is a near approach to a Tea Rose in colour, for it is a creamy white and a large double flower. The growth of this variety is especially slender. These Ayrshire Roses make splendid weeping plants, and may very suitably be grouped with wichuraiana Roses for the same purpose. Their season of flowering is from the end of June to the third week in July. If only one variety can be grown I would recommend Bennett's Seedling.

This group should not be confounded with the Rosa Sempervirens tribe, generally known as evergreen Roses, a title few of them can justify in their behaviour.

ROSE RENEE WILMART-URBAN.

THIS fine novelty was well exhibited by Messrs. William Paul and Son of Waltham Cross at a recent meeting of the Royal Horticultural Society. In its form and substance there is evidently in this variety a Rose that will gladden the heart of the exhibitor. It reminds one somewhat of Souvenir du President Carnot in the delicate flesh pink of the inner petals, and in form there is a resemblance to Queen of Spain, without the somewhat too close arrangement of the petals, which would seem to point to the latter Rose being a difficult opener in a wet season. I certainly think in the Rose under notice M. Pernet-Ducher has given us one of his best. Evidently it is going to be a splendid pot Rose, for in size, firmness of petal and erect stem it is all that one could desire.

THE KITCHEN GARDEN.

ORNAMENTAL GOURDS FOR ARCHES AND FENCES.

WE do not make enough use of the above during the summer months, and in most amateurs' gardens there is a bare fence which could be utilised, or these plants are most effective when carried over arches or doorways. I have also seen them effectively used on a fence to hide a building or divide one portion of the garden from another when the screen was only required during the summer. To get the best results early seed-sowing is advisable, so that the plants can be put out about the middle of May. It often happens that amateurs are unable to purchase seedlings; and I am not quite sure but that this is a gain, as it is such an easy matter to pass off inferior varieties, or, at least,

following are worth culture and are of a trailing or running habit: Turk's Turban, rich orange coloured fruit, yellow flesh and of good flavour; Pineapple, a very peculiar shape, white skin and a good late variety; Orange Marrow is a very early distinct sort with delicate flavour, a good winter variety as it keeps well; Winter Crook-neck is much liked in the States, it is an ornamental variety and quite distinct; Fordhook is also excellent; Golden Bronze is a very dark green form, with golden flesh and very sweet; Marblehead is very productive, it has a grey skin and is a good keeper with very dry and sweet flesh; Delicata is orange yellow with green stripes, very small and prolific, and also one of the earliest to mature; Delicious is a green variety, orange flesh, sweet and one of the best for pies.

The plants when placed in their growing or fruiting quarters do well in a light soil, and if the ordinary soil is at all heavy it is well to lighten it with any rich light material. A spadeful of well-decayed manure for each plant mixed with the



WILD PINKS IN THE GARDEN.

the sorts not asked for, when one has to purchase from an unknown source. It is an easy matter to sow seed in small pots, and place these in a box and cover with a sheet of glass till quite strong enough to plant out. I have sown seeds late in April and early May; indeed, the latter date gives good plants by the end of the month. These plants, once they get a good start, grow so rapidly that they soon cover a large space, and, given liberal supplies of food in the shape of liquid manure, they fruit grandly; they also delight in being damped overhead in the evening after a hot day.

Varieties are numerous, and they assume all shapes and forms, which make them most interesting. On the Continent there are many forms, and in the United States they are mostly known as Squashes; some are very large, others small and highly coloured. In this country the distinct forms are not often catalogued, mixed ornamental Gourds being usually offered, but even then one gets some interesting objects. The

soil will give good results, and in a dry season it is a good plan to mulch the surface with short manure.

AMATEUR.

RUNNER BEAN VEITCH'S HACKWOOD PARK SUCCESS.

THIS new Runner Bean, recently raised by Mr. Bowerman, is well named, as it certainly is a decided success, not only on account of its size, but for its earliness and good eating qualities. It bears straight, handsome pods, averaging from 9 inches to 12 inches in length. The pods, in addition, are produced in clusters in great numbers, often as many as ten hanging on one stem. At the trials conducted by the Royal Horticultural Society this new Runner Bean received an award of merit. It is a fine Bean for the amateur who can only grow a limited number of plants, as grown on a fence or wall its handsome pods are much admired, and its early cropping makes it more valuable.

G. W. B.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE GREENHOUSE.—Young plants of the Heliotropes and Petunias that were struck some time since I have just pinched. The tip of each shoot is taken out, and this causes them to make bushy plants. Bouvardias may be propagated at this period for flowering next winter. These plants are increased by stem or



1.—ROOT OF COMMON THYME SUITABLE FOR LIFTING AND DIVIDING.

root cuttings, but the former is the method I invariably practice. Young growths some 2 inches to 3 inches in length should be selected for cuttings. Trim off the lower leaf and cut through the stem just below a joint. Insert the cuttings around the side of a 3-inch pot that is well drained with crocks and filled with light sandy soil, and plunge the pots in Coconut fibre refuse where a genial bottom-heat can be provided. For flowering next autumn I am just putting in a batch of Geranium cuttings. Five or six cuttings in a 5-inch pot, using a sandy compost, will serve the purpose of propagation very well. Observe care in watering, and never make the soil too moist.

The Vegetable Garden.—French and Runner Beans may be safely sown at this period to follow the earliest supplies. Turnips should be sown in quarters that have been carefully prepared. Sow in fine weather in rows about 1 foot to 15 inches apart, and, roughly, 1 inch or rather less deep. Sow for successional supplies once a month till August. Many autumn-planted Cabbages have "bolted." I gather the tops for kitchen use before they get too far advanced and then root up the plants. The quarters are then forked over and replanted with fresh young plants, which invariably go ahead at once. I am planting the first of my Vegetable Marrows, giving the plants a position in a frame placed over a hot-bed that is now almost spent. By these means I am able to procure the fruit in mid-July. The frame-light is removed immediately all fear of frost is past. Parsnips have made much progress of late. I am now thinning these, leaving the plants about 1 foot apart in the rows. A weekly hoeing between the rows is highly beneficial.

The Flower Garden.—Should the weather be more settled at this period I do not hesitate to

plant climbing Nasturtiums, tall Convolvuluses and Canary Creeper. For covering unsightly walls and fences and for garden arches and trellises they are useful subjects. Half-hardy annuals that have been raised in heat and thoroughly well hardened off in the cold frames may now be planted in their flowering quarters. Begin with the warm and sheltered situations in case we should get a late snap of frost. In the event of plants being purchased, they should be subjected to cold frame treatment for a time, as it is very probable they may be very tender. To make room for other subjects, Primroses and Polyanthus may be lifted and divided, assuming they are large plants. The divided pieces should be replanted in a spare corner of the garden, to be again lifted and planted in their flowering quarters in the autumn. In this way provision is made for the succeeding spring display.

The Fruit Garden.—At the present time I make it a rule to apply liquid manure, made from cow or horse manure, to Gooseberries, Raspberries and Currants. Do not apply this too strong, however, but see that it is well diluted. A mulching of the surface soil about the Gooseberries is also highly beneficial at this season. Sunlight soap in solution is an excellent and cheap insecticide for spraying Apples. Should aphides infest Cherry, Plum and Peach trees, a spraying with Fir tree oil in weak solution in the early morning or evening will eradicate the pest.

Cold Frames.—Dahlias that have been potted up some time and are well established may now be placed in the cold frames. For a few days keep the lights on and shade from bright sunshine. Subsequently gradually inure the plants to hardier conditions. Bedding plants that were removed from the greenhouse a short time ago should also be given hardier treatment preparatory to planting outdoors. Take note of the weather, and close the lights should frost be anticipated. Chrysanthemums in pots that are now in the cold frame should be placed outdoors in a sheltered situation. The early-flowering varieties may be removed outdoors or lifted and planted in their permanent quarters. D. B. C.

METHODS OF PROPAGATING THYME.

THE Thyme is one of the more popular herbs, but, unfortunately, it is not met with in our gardens nearly so frequently as was the case a few years ago. There are so many uses to which this herb can be put that it becomes a matter for surprise that the present generation fail to appreciate its real worth. The botanical names of the Thyme are *Thymus vulgaris* for the common Thyme and *Thymus Serpyllum vulgaris* is the Lemon Thyme. The common Thyme is a native of Spain and Italy and the Lemon Thyme of Britain.

Soil.—Although the Thyme prefers a rather light and sandy soil that has been well drained, it will succeed in many odd corners of the garden, provided the position be a sunny one. Heavy soils are not recommended, as the plant does not appear to thrive therein. Before planting the soil should be deeply dug and well manured, and if this preparatory work can be done some time beforehand so much the better. The plant may be increased by division, by cuttings or seed.

Seeds.—The spring is an excellent time to sow the seeds, and if we had the choice of time just now we should most certainly choose the month

of March. Success may attend our efforts, however, by making a sowing even at this protracted period. Procure a shallow box and fill this with any light sandy soil that has been passed through a sieve with a half-inch mesh, and sow the seeds thinly on the surface of this, lightly covering them with some of the finer soil. Those who have a hot-bed, from which a gentle bottom-heat can be obtained, may place the box on this and thus ensure speedy germination of the seeds. We would prefer, however, to make a sowing on a bed of light soil in a sunny aspect now, and are confident good results will accrue. When the seedlings are 1 inch or 2 inches in height transplant them 3 inches apart in rows, and when they have attained a useful size finally plant them in their permanent quarters.

Division.—At this season it is an easy matter to acquire an old plant from a nurseryman or from the garden of a friend, and with this we have sufficient material to make quite a large number of ideal pieces that will ultimately develop into capital plants. Fig. 1 represents a plant such as market growers send to market in large numbers. It is a simple matter to divide a plant of this description into either large or small pieces. In Fig. 2 there is represented one of the larger divided portions of the original plant. From a large plant it is possible to make quite a number of such pieces, and these are obtained by pressing both fingers and thumbs well into the centre of the plant. Assuming the demand for plants is small, these larger pieces will amply suffice for supplying the needs of



2.—ONE OF THE LARGER DIVIDED PORTIONS OF THE PLANT SHOWN IN FIG. 1.

most small gardens. However, there are undoubtedly cases where for seasoning and other uses the Thyme is more frequently in demand. Where this is so the larger divided pieces may be divided again, these sub-divisions of the old roots each making small plants that will quickly develop into useful specimens under proper conditions. The divided pieces of the old plant as represented in Fig. 3 give a very good indication of the character of the sub-divided portions,



3.—SUB-DIVIDED PIECES OF FIG. 1.

It is necessary, of course, when breaking up the pieces to endeavour to retain as many roots as possible, and this is all the more easily done by placing both fingers and thumbs well down among the roots, thus bringing the latter more under control. If there is a desire to grow the Thyme extensively, each individual growth may be utilised for this purpose. Fig. 4 portrays four different growths, each with roots or rootlets developed in varying degree. That on the extreme right reveals a number of roots already evolved and its nearest neighbour with a lesser number. The two shoots on the left have been detached with what is known as a "heel," and these pieces root quite readily.

By using the pieces with a "heel" attached it is possible to regard these as cuttings. They should be dibbled in a few inches asunder in sandy soil outdoors in specially prepared beds, and this work may be proceeded with from this time forth and throughout the summer months. Should the weather be unduly warm, it may be well to shade the cutting-bed from the direct rays of the sun until they are rooted. Always maintain the soil in a moist condition. Plant the larger divided portions 1 foot apart each way in prepared quarters in a sunny position outdoors, and except for an occasional hoeing between the plants to aerate the soil and to keep the weeds under, nothing further will be required. Lemon Thyme, referred to earlier in these notes, cannot be increased by seeds. We always increase our plants in the spring by division of the roots as advised for the common Thyme. The Gold and Silver Thyme, as the two prettier forms are more often spoken of, are capital for edgings if lifted, divided and replanted in the spring. The golden variety maintains a bright colour throughout the winter and spring months. To ensure a neat appearance during the summer an occasional clipping should be given.

OUTDOOR TOMATOES.

TOMATO plants which are intended for planting outdoors should be grown as sturdy and hardy as possible. The best position for the plants at the present time is a cold frame standing in a sheltered and sunny position. Air should be freely admitted to the plants at all times except during frosty nights, when the lights should be closed and protection afforded by means of mats or litter. During warm days the lights may be entirely removed. Water the plants when the soil shows that the roots are becoming dry; on bright days, when the pots are full of roots, water will be required twice daily. When watering, fill up the pots, do not apply water to any plants in dribbles, but give sufficient to nourish every tiny fibrous root that the pot contains. The plants should not be allowed to become too crowded, and as frame room is often none too plentiful at this season it may be advisable to remove some of the plants about the middle of

the month (May), standing these under the shelter of a wall or building. In this case it is advisable to erect a light framework of poles or Bamboo canes over which mats can be placed during the night to protect the plants from frost. Stakes must be provided, and all side shoots should be removed as soon as they are discernible.

It is safe to plant Tomatoes outdoors about the end of the first week in June. During bright, warm summers in the South Tomatoes have yielded a splendid return when planted in open fields and gardens. Owing, however, to the uncertainty of the weather it is always advisable to plant on the warmest and most sheltered site possible. The foot of warm walls or fences are good positions for the plants. Room for plants may often be found between fruit trees which are trained to warm walls. Failing any wall or fence select the warmest corner of the garden in which to plant. If the soil is in good condition, all that is needed at the time of planting is to prepare holes about 3½ feet apart each way, place a stout 5-foot stake in the centre of the hole, turn out the plants, the roots of which must be in a moist condition, place them at the foot of the stake, fill in the soil and tread firmly. Where there is plenty of room give the plants more space for the convenience of their after treatment. Tie the plants loosely to the stakes as growth advances, water when required and keep the soil around them frequently stirred with the Dutch hoe. A mulch of half-rotten farmyard manure is most beneficial during hot summers, as it provides food to the plants and retains the soil in a moist condition. After four bunches of fruit are set the top of the plants should be pinched out just above the succeeding leaf, as it is seldom that more than four bunches can be matured when grown outdoors. Some growers pinch the plants after the third bunch, but this is a question that must be decided on the spot. Two varieties which have proved excellent for outdoor culture are the happily-named Satisfaction and the new Carter's Sunrise.

Munden Gardens, Watford.

C. RUSE.

CANTERBURY BELLS AND HOW TO GROW THEM.

It would be difficult indeed to find a race of plants that will give a better return for a little trouble than the old-fashioned yet beautiful Canterbury Bells, as the several forms of Campanula Medium are popularly called. The seeds are cheap and easy to buy, the seedlings can be raised with a minimum amount of trouble, and the resulting plants are so easily accommodated that they form an ideal subject for the beginner to try his or her 'prentice hand on. The plants are true hardy biennials, although by sowing early in the spring under glass plants can be induced to flower the same season.

The early part of June is an excellent time to sow the seeds, as the resulting plants then have an opportunity of developing into fine sturdy specimens by the end of autumn. Well prepare a seed-bed in an open position by forking it up thoroughly and breaking any large lumps encountered. Then

tread the surface rather firmly and rake over, so as to get a good tilth of fine soil in which to sow the seeds. Draw out flat-bottomed drills 1½ inches deep and 1 foot apart, and scatter the seeds thinly therein. Should the soil be very dry, give the drills a good watering before sowing the seeds. As the latter are small and rather light, a still day should be chosen for the sowing. Cover the seeds with about an inch of fine soil and rake all down neat and tidy. If dry weather prevails after sowing, it may be necessary to give good waterings through the fine rose of a can at frequent intervals until the seedlings have developed their first true leaves.

When the young plants are sufficiently large to be handled with ease, they must be pricked out singly in a bed of well-worked moderately rich soil, placing them in rows 15 inches apart and 6 inches asunder in the rows. If possible choose a showery day for the pricking off, and failing this do the work one evening, giving each plant a good watering in when the work is finished.

Treatment for the remainder of the summer will consist in hoeing frequently between the rows and giving an occasional soaking with water and weak liquid manure. With the end of autumn comes the usual time for transferring the plants to their flowering quarters. This should be done carefully, moving a good ball of soil to each plant so that the roots are disturbed as little as possible. The distance apart to plant where beds are to be filled is, roughly, from 15 inches to 18 inches each way, and when in flower the plants will touch each other and thus form a floral mass. For the front of a border a good system is to insert three plants to form a triangle, each side of which is 18 inches. If it is not possible to plant in the autumn, excellent results can be obtained by leaving the plants in the nursery bed until March, and then place them where they are to flower. In this case a little extra care is needed in moving them. When coming into bloom each plant will need the support of a short, stout stake, and as soon as the flowers are fading they should be removed; by this means a second crop of flowers is frequently obtained.

Canterbury Bells make excellent pot plants for the cold greenhouse. During October carefully lift some of the strongest plants with a good amount of soil adhering to their roots and pot them into pots of a convenient size to take the plants. Usually 6-inch or 7-inch pots are suitable. Give a watering in and then plunge the pots to their rims in ashes in a cold frame for the winter, giving an abundance of air on all possible occasions. Early in the spring the plants may be removed to the greenhouse and there allowed to develop their flower-spikes. The one thing to remember is that Canterbury Bells are quite hardy, hence coddling in any form will end in disaster. Besides the ordinary type in white, pink and blue shades there is the Cup-and-Saucer form.



4.—SINGLE GROWTHS. THE TWO ON THE RIGHT HAVE ROOTS; THOSE ON THE LEFT HAVE BEEN DETACHED WITH A HEEL AND MADE GOOD CUTTINGS.

THE TOWN GARDEN.

THE CARE OF HEDGES.—There is not the slightest doubt that the streets of our towns are immensely improved in appearance by the trimly-kept hedges with which the occupiers adorn their forecourts and in which they obviously take such a great pride. The prime favourite for this purpose is Privet, the green preponderating, though the Golden has come more into popularity during the past decade. Euonymus is used to some extent, but the fact that it is liable to serious infestations of the small ermine moth hinders its extensive planting. Laurels and Aucubas also enjoy a meed of favour, but they are too large-leaved for the majority of fronts. However, it matters little what the particular plant may be, provided that it is correctly attended to at all seasons of the year. As a rule clipping is done cleverly and regularly, but few growers seem to give a thought to the desirability of watering occasionally, and also to the application of weak liquid manure. The position of the roots of most hedges is such that it is impossible for them to get the benefit of the rain that falls, and this deficiency of moisture should be compensated for by heavy watering. The soil must first be loosened, and then the water given at the rate of at least four gallons to the square yard; a few hours later follow with a similar quantity of liquid manure, such as soot water or Clay's Fertilizer in solution. If this is done thrice in the summer the hedge will be vastly improved in thickness.

ANNUALS.—The present is an excellent time to sow the seeds of all hardy and half-hardy annuals in the garden. It is, of course, more than probable that seeds will have been got in some time back, but those sown now will provide later flowers, and the longer we can keep our gardens attractive the better. The wisdom of sowing half-hardy annuals out of doors earlier than this date is doubtful, as the youngsters are so tender that many will be lost. For sowing where the plants are to bloom I have had the most gratifying successes with Phlox Drummondii, Ten Week Stocks and dwarf Victoria Asters. With good soil and allowing the plants an abundance of space I have had Phloxes quite equal to those from frame-sown seeds, but they have been rather later. Stocks also are invariably very fine, but Asters vary with the weather of the season and the natural quality of the soil. In moderately strong ground and a cool season they are splendid, while in light soils and hot summers they become eaten up with fly, which it seems impossible to hold in perfect subjection. In the case of hardy annuals I find that all thrive satisfactorily, except the Chrysanthemums, with which I have never been really delighted, as they come weedy.

WATERING.—The importance of watering must never be overlooked by the town gardener. In many cases, as everyone is doubtless perfectly well aware, as much harm as good is done by the aid of the water-pot, but this is only in those instances where it is customary to give mere surface sprinklings each evening, sufficient water only being given to moisten the top half inch of soil, and thus make the ground steadily colder and colder. By watering is now meant thorough applications that will soak well down and rise steadily, bringing food to the plants. If this is made the rule the frequency of application will be much reduced, and one may be assured that each time water is given it will do material good. In one respect at least sprinkling is excellent, but this is not when directed towards the surface of the soil, but to the leaves of shrubs and creepers. Hosing after dry days then washes off the accumulations of dust and thus leaves the foliage in a condition to perform its functions, while at the same time many of the commoner insect pests will be subjected to a course of treatment to which they strenuously object.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

KITCHEN GARDEN.

HIGH pressure is generally placed on this department during this month, and any seeds that have failed through the late Arctic weather should at once be made good. Asparagus seedlings in seed-drills or beds should be thinned as soon as they can be handled, and whenever they come up in twos or threes they should be thinned to one.

Cutting Asparagus should be done with regularity and all the shoots gathered as fast as they become fit, sorting them out afterwards for the various purposes.

Broccoli.—The latest batch of these should now be sown, using those varieties which are expected to come in about this time next season, such as Latest of All, Late Queen, Model and Carter's Summer. Savoys, Kales and sprouting Broccoli should also be sown. The old Scotch Kale and the Asparagus Kale are very hardy and give a lot of wholesome dishes at a time when greenstuff is short.

FLOWER GARDEN.

Material for beds and borders should now be gradually hardened and made ready for planting out as soon as all fear of frost is over. Sow another batch of annuals for succession, and thin out those already sown. Sow more Sweet Peas for late flowering; give these good culture to produce the best results. Plant out early-flowering Chrysanthemums in the herbaceous border; a good supply of these is always acceptable in the reserve garden for cutting purposes. Plant in a position where they can be protected from October frosts.

Polyanthuses.—Prick these out in the nursery garden for planting out in the autumn; give plenty of room so that a hoe can be pushed between them to keep down weeds. Pick off all seed-vessels from Narcissus as soon as these have finished flowering. This process helps to ripen up the bulbs.

HARDY FRUIT.

Cherries and Peaches must be looked over carefully and kept clean from black fly. Peaches should be syringed with Extract of Quassia and at a strength that will kill the aphid. Pick off any distorted leaves which have been caused by the cold weather, and when warm weather arrives they will produce clean, healthy foliage. Start disbudding as soon as the growths can be conveniently handled. Cherries should be examined also for the slugworm (*Selandria Cerasi*). These attack the foliage.

Apricots.—These must be looked over frequently. There is a yellowish green insect (*Ditula angustiorana*) which does injury very quickly by feeding on the leaves, and forms a colony in the ends of the shoots, thus causing the leaves to curl up.

Gooseberries should be syringed with Quassia. This will sometimes ward off an attack of the dreaded caterpillar. All big buds must be picked from the Black Currant bushes, as it is now that the maggot will be shifting its quarters, and the best possible way to get rid of the pest is by this method. Burn all the buds gathered.

FRUIT HOUSES.

Sow Melons now and again in a fortnight for the latest crops. Melons ripening should have a chink of air left on the top ventilators at night. Continue to thin late Grapes as they become fit. Stop all lateral growths, and tie in the main growths. Water thoroughly and wash in some of Thomson's or Le Fruitier; this will help the Vines considerably.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CINERARIAS.—In most places these plants are not required in flower until after Chrysanthemums are over, and in most cases the middle of May is time enough to sow. Although Cinerarias are among the easiest of plants to grow if kept clean and well treated in other ways, it is surprising in how many gardens their culture ends in failure. The seeds germinate freely in a greenhouse temperature, and if sown thinly in pots the seedlings may remain there until they are in the rough leaf, when each one may be pricked into the centre of a small pot, using as compost good loam with a liberal addition of leaf-mould and decayed manure.

Orchids.—Many of the varieties of the *Cattleya* and *Lælia* species will now be advancing their flowers through the sheaths. It is advisable to place plants that are in a forward condition in a position where they may obtain the maximum amount of strong light, with due consideration for protection of the foliage from injury by the direct rays of the sun. This will be found not only to add substance to the flower, but considerably assist in the colour development.

FRUIT UNDER GLASS.

Orchard House.—Fruit trees in pots will need constant attention if they are to be kept in a healthy, flourishing condition. Some of the early varieties of Cherries will be approaching maturity, so the trees must not be allowed to suffer from want of moisture or they will be deficient both in size and flavour. Keep the trees clean by a frequent use of the syringe on fine days when the house is closed. The shoots of trees occupying walls should be kept tied in while they are plant, for if allowed to get hardened before doing so there will be more difficulty in getting them into their places.

FLOWER GARDEN.

Summer Bedding Plants.—The spell of cold weather experienced at the latter end of March and the early part of April was responsible for arresting the progress of spring-flowering plants. Wallflowers, *Myosotis* and things of a similar nature are consequently very late, and will be removed when just at their best if the early planting of summer-flowering stuff is practised, the alternative being to let them remain as long as they are furnishing a good display, and see that the plants that are to follow them are thoroughly well cared for, so that when they are planted out they will be in a condition to go well away without check.

ROSES.

Should we get cold east winds green fly will make an appearance, and unless this is checked the points of the young shoots will soon become so badly infested that growth will be stunted and few flowers of any quality be produced. Syringe the plants with some insecticide that is distasteful to the insect, such as a solution of soft soap and Quassia, or anything that will not injure the foliage.

KITCHEN GARDEN.

Frame Cucumbers.—With these plants every bit of warmth should be conserved, then there will be healthy plants and a good crop. It is not advisable to put out plants that have been some time in pots; far better plant those with four or five stout leaves 6 inches to 9 inches high with fresh roots that will soon take to their new quarters. Shade, warmth and moisture are the three principal factors; and, given these, fruit may be cut in four to six weeks from the time of planting. With shade little air is needed, and early closing is a necessity, allowing ample moisture in all parts of the frame, not only at the roots, but all over the surface of the soil.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

A selection of garden Cactus Dahlias (Tilston).—The following constitute the chief varieties of the selection of garden Cactus Dahlias made by the National Dahlia Society. The selection is taken from trials in various places or made by growers generally. Amos Perry, deep crimson; Dainty, lemon yellow, shaded pink and gold tipped; Ena, pure white; Glow, yellow, suffused apricot; Mrs. J. S. Brunton, yellow, shaded salmon; Pearl, pink, tipped white; Star, bronze and yellow; Alexander, maroon-crimson; Lustre, vermilion-scarlet; Primrose, sulphur yellow; Florence Stredwick, pure white; and Mrs. H. L. Brousson, yellow, shaded salmon. Cactus Dahlias at the best are not good garden plants, as so few have stiff, erect flower-stems. They want a little help in the way of thinning and disbudding so as to enable the flowers to be well seen. Some day it is hoped a real garden or decorative strain will be created.

Exhibiting and staging Narcissus (C. D.). If you desire to succeed in exhibiting the above in open competition you must be prepared to give yourself a little trouble, and to carefully observe a few simple rules. A primary consideration is that the blooms are quite clean and free from smut and dirt. This is best secured by gathering the blooms when they begin to expand, the drooping stage of the fully grown bud or at the first signs of opening being the best time. At this stage of the proceedings the question of "timing" the blooms for the show arises, and nothing but experience and judgment can help you in this. We can, however, tell you that a bloom gathered in the early opening stage may, in the warmth and moisture of a greenhouse at this season of the year, develop fairly well in twenty-four hours, though it may not be clear or quite in character, and that the same bloom may, by placing it in a cool cellar, be kept in good condition for a week or even ten days or more. Blooms that have been quickly opened in artificial heat, especially those varieties belonging to the poeticus and incomparabilis groups and their cross-bred forms, do not last very long, the perianth segments incline to reflex on the tube, and in other ways display their sensitiveness at a method of treatment which, to say the least, is quite foreign to these plants. To what extent this may ensue will depend largely upon the way the work has been done. Another important item is stature, i.e., length of stem, and blooms gathered early in the opening stage have grown but little more than half their length. In these circumstances an inch or more may often be gained by pulling the blooms instead of cutting them as usually recommended. When gathered, the flowers should at once be placed in water, employing cylindrical vases for the purpose, so that the blooms may be kept erect. If the flowers are placed in any shallow receptacle where the stems can possibly assume an horizontal position, you will find that in a few hours the stems will have curled upwards, and being then fully charged with water, will break at very little pressure. It is important, therefore, that erect vessels only be employed or that ample precautions are taken to keep the stems as erect as possible. The curled stem is about the most awkward thing an exhibiting amateur has to contend with, and the beginner might easily make so simple an error. Where bunches of so many blooms each are required, the bunches should be made up fully twenty-four hours before the show, and by giving absolute freedom to each flower in the bunch, secure not only the best arrangement possible but a well-faced bunch withal. Equally necessary is it when opening the blooms to give each ample room for its expanse of wing. Threes or sixes are easily arranged by placing a plug of paper or moss in the tube to keep them erect. The most effective way of staging the blooms is by arranging them on a step stage, painted a dark green if possible. A little of their own foliage should be added to each vase. In those instances where a background is necessary, one of dark green baize will be found to be the

best, or a good result may be secured by arranging the flowers in a bank of good green moss. Grey-green canvas is not so good, and the more so when many white or pale sulphur-coloured blooms are employed. Always adopt the natural pose of the variety when staging, that is to say, a variety of the drooping type, as in some ceruus forms, should not be made to look at you in any rigid or staring fashion, which would at once destroy its character. You cannot exhibit two varieties of Aubrietia; or indeed two forms of any one plant or group as "one variety," and "twelve varieties" must be taken to mean that the "collection" is to contain twelve varieties only. If you have given us a copy of the wording in the class to which you refer, it would appear that a "Collection of hardy spring flowers" is asked for "in twelve varieties." If, on the other hand, the class reads thus: "Best collection of hardy spring flowers, not less than twelve varieties," you are certainly at liberty to show duplicates. You should have sent us a copy of the schedule, which is always most welcome in these cases, as so much turns on a very small word or phrase. Possibly you could send us the schedule as it is.

Tree Peonies (Jap.).—If your Peonies were only planted last autumn you will be fortunate if you have flowers this year, as they generally require to be established for about three years before they bloom. Your soil is not very suitable, and you will require to manure freely and to water liberally in dry weather. The guano is best applied in the form of weak manure water, which can be given at intervals during the growing season, but it would be much better to top-dress round about the plants with good old rich cow manure. In any case mulching should be practised in your light soil with gravel underneath. Failing good manure, some straw might be put about the plants and plenty of water given as suggested.

Daffodils in grass (Cam).—In many gardens Daffodils are not flowering so well as last year, and we have visited a number of places where the blooms are very scarce, probably due to last year's dull and sunless summer. Did you leave the foliage on until it became yellow, as should be done? Neglect of this is a frequent cause of failure. Another is want of sun, although in some gardens many Daffodils do with less sun than in others. The following are the later bloomers which do best with shade: Fred Moore, odorus heminalis, o. pleus and Campenelle plenus. This is a very limited list, and you may add Countess of Annesley, Golden Spur, Henry Irving, obvallaris, spurius, English Lent Lily, princeps and the Poeticus varieties. A few of these are a little early for you.

Garden position and borders (A. Saunders). It is not possible for us to tell you the position of your garden from the oblong sketch you submit, and if you desire to be accurate a compass will afford you the best guide on the spot. For general purposes the position of the sun at noon will possibly meet your requirements. So far as flower gardening is concerned, the surroundings have far more to do with success or failure than the actual position in such a case, and walls and high buildings are at times somewhat troublesome. If you will give us these particulars and whether you require permanent subjects or merely summer-beding things, we will assist you as much as possible. If the garden is not overshadowed by trees or buildings, you may grow many plants; but the above particulars and the extent of the garden will be helpful in dealing with a subject of which we have no information.

Hardy Primulas (Mrs. B. M. L.).—We are glad that the articles on hardy Primulas have interested you, and are pleased to see the photograph of your flowers, which do you credit. Seeds of all those named are not offered by the trade, but Thompson and Morgan, 5, Carr Street, Ipswich, can supply seeds of *Primula frondosa*, *P. pedemontana* and *P. rosea*, with many more. An article on raising hardy Primulas from seeds will appear in THE GARDEN shortly. *P. marginata* and *P. nivalis* you will have to buy as plants. *P. rosea* could be grown quite well by plunging the plants in pots outside in summer, and bringing them in when showing signs of bloom. The pots, if well drained, could be set in flats or saucers of water when in the house. All the hardy species would be better outside during summer, as you suggest, but will be better plunged in the ashes or in sand than simply set on the top. You will find these flowers delightful as pot plants, but they must be kept absolutely free from green fly.

Violet culture for ladies (E. R.).—Whether you may successfully grow Violets for market and make a living profit thereby depends on many things, such as the nature of the soil, situation, culture, marketing and prevalent prices. Because so easy of transit, Violets come to us in immense quantities from the Continent, where, favoured with warmth and other conditions, these flowers are easily grown. With us it is not possible to obtain early Violets except from frames, and to have a big supply of flowers such as could be sent to market day by day a big range of frames would be needed. It is only in that way early flowers of the De Parme and Neapolitan doubles, and Princess of Wales, Admiral Avellan and other singles can be got early outdoors; but there are other things to be considered. If you live in the London fog area, and Woodford is hardly out of that area, then Violets find in fogs formidable troubles, as these kill leafage wholesale. Violets, again, are subject to the attacks of a fungus, which often eat up the leaves; but if you have a good deep natural soil and the position is sheltered from north-east and east winds, and will plant out your Violets on beds made to slope slightly to the south, the beds being 6 feet wide and of any length, the plants in rows 12 inches apart,

you may have, in spite of the troubles we have indicated, material success. You should get plants in at once, and plant out as advised. The ground, besides being deeply worked, should have in it a fair dressing of half-decayed manure and a good dressing of soot. If you could have a number of common wooden frames having lights to cover them fixed in a very sheltered position, and filled to within 6 inches of the glass with good soil, then in the autumn fit strong plants from the open and plant them into the frames, nearly close together, giving a good watering, and putting the lights over, but giving some air behind, flowers should come a month earlier than outdoors; while the stock remains healthy, they can be propagated readily each autumn. Isaac House and Son, Coombe Nursery, Bristol, grow Violets largely, and may give you an opportunity to obtain practical instruction.

THE GREENHOUSE.

Tuberous Begonia stems rotting (R. W.).—Such trouble with Begonias is by no means unknown, and it is considered to be caused by the plants receiving more nourishment than they can assimilate, and in this way decay is set up by the rupture of some of the tissues. This is borne out by the fact that plants less liberally treated are seldom or never troubled in this way. As far as we can see, there is nothing whatever the matter with your treatment, but would advise you to lessen the manure water during the coming season. A favourite plant may be increased by division or by cuttings. If three or four shoots are thrown up from a tuber it can be divided into as many pieces as there are shoots. The best time to do this is when the shoots are about an inch long; they must then be at once potted. If the tuber has only one shoot it may, when long enough, be taken as a cutting, after which more shoots will be pushed up. Lastly, the flowers may be fertilised with pollen from the same plant; but although most of the seedlings will probably be the same, there is no certainty that any of them will be identical with their parent.

Dendrobium for name and valuation (S. C., Bexley Heath).—As far as can be judged by a single flower, and that in a partially shrivelled state, the *Dendrobium* is a cross between *D. Ainsworthii*, itself a hybrid, and *D. nobile*. Its value will, of course, depend upon the size and condition of the plant, but if healthy it may be worth from 10s. 6d. to a guinea. On this point, however, nothing definite can be said.

Iris for cold greenhouse (W. S. C.).—All the early bulbous Irises are suitable for the above-named purpose, and so far as their cultural requirements are concerned, may be grown in pots or pans of sandy loam with every hope of success. The size of the pot to employ would depend entirely upon whether you desire to cultivate solitary examples of each or to group several in one pot. We may say here that nearly all the species and their varieties are quite cheap by the dozen, and a dozen bulbs of many sorts could be readily accommodated in a pot 7 inches across. Single bulbs may be grown in pots of 3 inches or 4 inches across. The bulbs should be planted in September. The following are the best of the winter and early spring-flowering sorts: *I. alata*, December; *I. stylosa* or unguicularis, winter-flowering, not bulbous, may be planted at once and grown on for flowering; *I. persica* in variety; *I. Tauri*, *I. Heldreichii*, *I. Danfordiae*, *I. reticulata* and its varieties, *I. Histris*, *I. histrioides*, *I. Krelagei major purpurea*, &c. *I. sindjarenis* and *I. orchidioides* are of larger growth and require more room. The above, with the exception of *I. orchidioides*, all flower during the first three months of the year, and the majority in February.

Geranium buds poor (E. M. K.).—Judging by the poor attenuated condition of the buds sent, we have little doubt that the roots of your Geraniums are in a very bad state, and therefore quite unable to take advantage of the liquid manure so liberally supplied to them. A dose of manure once a fortnight would be quite sufficient for even healthy plants at this season of the year. The only thing you can do to renovate your Geranium seedlings is to turn them out of their pots and shake almost, if not quite, clear of the old soil, as, being so impregnated with manure, healthy roots will not start in it. Then repot into comparatively small pots in a mixture of loam, leaf-mould and a liberal sprinkling of silver sand. If well incorporated together these ingredients will form a good sweet compost. The pots for the reception of the plants must be effectually drained, and after the potting is done the plants must be stood in a good light position in the greenhouse, but where they are shaded from the direct rays of the sun. They must be kept watered, but at the same time care must be taken not to get the soil too wet, as the main object is to further the development of good healthy roots. When the pots are well furnished with roots the plants may, as required, be shifted into larger pots. It is a very common mistake to give plants in ill health liquid manure, for, as with human beings, the illness must be overcome before rich nourishment can be taken. We cannot understand your question re *Daphne Cusorium*, for you speak of it as a tree, whereas in reality

it is a low-growing shrub about 1 foot in height. It naturally forms a tuft composed of many shoots, and propagation is readily effected by pulling it to pieces after the manner of a herbaceous subject. No pruning is needed. *Daphne Cneorum* thrives best in a fairly moist soil containing a certain amount of peat or leaf-mould.

ROSE GARDEN.

Roses pegged down (*Mrs. L. G.*).—The object of bending over the long growths of Roses is to induce the eyes all along the shoot to start into new growth and to produce blooms. If the long growths are not so bent, the sap flows to the extreme ends, and only those buds at the ends will move. If you observe a wild Rose in the hedgerows you will usually find some long growths are arched over naturally and they are studded with shoots and blooms. It is not at all necessary to peg the ends into the soil. The best plan is to drive a few stout pegs into the ground, then attach tarred twine to them by making a notch so that the string cannot come off. The end of the growth is then secured to the string and bent at any angle preferred. The ends may touch the ground or be a foot or so away; it is immaterial. We like to peg one or two growths and allow the others to grow naturally on such plants as are suitable to treat in this way. If such as *W. A. Richardson* are pegged, all the growths may be bent, and towards autumn a number of new shoots will spring up from the base, and after attaining a height of about 3 feet will flower at their extreme ends, and most lovely sprays they will produce. Any Rose at all shy in blooming should have its growths trained horizontally or arched over. This will induce it to bloom quicker than anything, only the growths must be hard and well ripened. We cannot expect much bloom from pithy wood. We have seen standards of such shy bloomers as *Réve d'Or* with their growths tied out horizontally to a framework of Bamboo, and in a year or two they bloomed marvellously. Some of the old growths are removed after flowering, and new growths take their place another year.

Roses for growing near Manchester (*A. A. C. JF.*).—It is most difficult to grow good Roses in the neighbourhood of large cities such as Manchester, but even there a deal depends upon the soil. If you could obtain a barrowful of really good soil for each plant, you might be rewarded with fair success, especially if you took the precaution during the growing season to thoroughly cleanse the foliage every evening. Good white varieties would be *Frau Karl Druschki*, *Gloire Lyonnaise*, *Baronne de Maynard* and *Violettes Bouyer* as bushes, and if you have space to grow a climber plant, *Mme. Alfred Carrière* or *Félicité Perpétua*. Yellow Roses are difficult to grow, even under favourable conditions. We believe one of the best would be *Bouquet d'Or*. This is a half climber, but may be grown as a bush if afforded plenty of space and sparsely pruned. Other good sorts are *Josephine Bernacchi*, *Marie van Houtte*, *Mme. Hector Leulliot*, *Gustave Regis* and *Soleil d'Or*. If you can utilise a very fast-growing sort suitable for grow over an arbour or similar building, or against a dead tree, plant the *wichuraiana Gardenia*, a real gem, yielding most lovely canary yellow buds. Should you be able to find room for a good pink, plant *Caroline Testout*; or if a strong, bold grower were needed, plant *Conrad F. Meyer*. This fine Rose may be grown into a large shrub as you would a Lilac bush.

Roses to flower during winter and spring in France (*C. C.*).—It is not at all difficult to have Roses in bloom during the winter and early spring in such a locality as the Riviera, especially if the easy opening sorts, such as *Safrano*, *Papa Nahonnand*, *Papa Gontier*, &c., are grown. The best plan to adopt is to keep the flower-buds removed during autumn, then go over the plants and thin out shoots where crowded and allow the others to bloom. A few portable glass lights made to lean against each other so as to span over the bushes would be a great help if your district is at all a cold one. Climbing Roses on walls would pay to have a glass structure built in front of them, and about 3 feet or 4 feet or more distant from the wall. Such a structure should have air admitted from the base, and the ends would have no doors, so that a free circulation of air could be maintained at all times. It is difficult to advise you as you do not explain whether you are sheltered or otherwise, but as a rule these winter Roses, even in sunny France, pay for some slight protection from the weather without diminishing the supply of air. *Acacias* would be all the better if one or two growths were cut back to the base. This would encourage a more bushy growth nearer the ground. Your soil would benefit by applications of liquid manure during the growing season. We should say it is the want of such manure that causes the foliage to turn yellow. You will find "Century

Book of Gardening" a great help to you, also "Trees and Shrubs," by E. T. Cook. To enable the *Bougainvilleas* to blossom early in the year, they should be grown in pots in a greenhouse where a temperature of about 55° at night can be maintained. During the summer such plants require a good ripening of the growths by full exposure to the sun.

Roses with unhealthy growths (*Mrs. A. M. B.*) All the growths sent were of such a soft, pithy character that we are not surprised they are in an unhealthy condition. We believe frost is mainly the cause, and you should have such growths cut away at pruning time, for they cannot give you good results. It seems to us that your Roses are growing too rank, that is to say, the soil is too rich. What is wanted in order to obtain good blooms is ripened, medium wood. You must not overdo them with manure. If this variety of which you send shoots is *Climbing Devonensis*, we are not surprised to see them, for it is much given to produce very rank growth, especially after such a wet summer. Try pruning hard back any plants that are showing these injured growths, even cutting them down to the ground, but retain the hard, ripened wood. We should have been able to give you more information had you afforded us more details.

FRUIT GARDEN.

Diseased bark of Apple tree (*W. F. S. H.*).—The tissues of the bark are permeated by the mycelium of a fungus, which is the probable cause of the flaking off of the bark. The hyphae of the fungus in all probability secretes a ferment which has the power of attacking a portion of the cell walls of the tissues of the host and so liberating one cell from another. The fungus is very likely a species of *Polyporus* or a near ally. Several species of that and allied genera attack fruit and timber trees and produce symptoms similar to those seen here, but usually the wood is also attacked. You do not say whether that is the case here or not. In the absence of the fruit of the fungus it is not possible to say what species it belongs to, but most of them are wound parasites. If the tree is of little value it would be just as well to remove it and burn it, because when the fungus produces fruit the tree will be a menace to others in the garden.

New greenhouse for fruit (*B. K. G.*).—It is better to have the wire trellis running from front to back under the rather than crossways. If placed crossways you will find that it will render the work of cleaning the roof and washing the glass most tedious and difficult. The wires should be at least 2 feet below the glass in order to prevent the sun from burning the foliage in hot weather. A Peach tree would not succeed on the back wall. The shade would be too dense and the temperature too high; on the other hand, a Fig would succeed fairly well in such a position, and so would Figs grown in pots if placed in the lightest position in the house. The best varieties to grow are *St. John's*, *Brown Turkey* and *White Marseilles*.

Spot on young Fig fruits (*C. W. G.*).—The cause of the brown spot at the end of the Fig is a too close and moist atmosphere. Give more air and a little extra fire-heat in order to keep the air more buoyant and dry for a time, and you will find the injury arrested. The Carnation foliage sent is suffering from an attack of a virulent fungus, commonly called the Carnation rust. Once it gets a thorough hold of the plants it is fatal to their future success. It has destroyed scores if not hundreds of fine collections in England. If only a few of your plants are affected, we advise you to throw them away or certainly to keep them well isolated from the healthy plants. A too close and damp atmosphere favours the growth of the fungus, therefore let a free circulation of air play among your plants. You might try spraying with methylated spirits and water, one part of the former to 100 parts of water.

Almond trees gumming (*D. S.*).—The cause of gumming in Almond trees (and it is a common one) is the action of hard frost in winter injuring the abnormally strong and soft growths made in summer. The Almond, especially if planted in rich soil, is very apt to produce those strong soft branches, with the inevitable result of damage by frost, and as a consequence gumming is sure to follow. To prevent this the tree should be planted in moderately poor soil only. As regards the tree under notice, we should cut out the dry rot part, afterwards washing the wound clean with soap and water, and as soon as dry paint over the wound with *Stockholm tar*. The gumming part (not the whole branch, only the part injured) should be cut out also, and afterwards served in the same way. In the autumn examine the roots, when, we think, it will be found that two or three strong fibrous tap-roots have been formed, which have struck deep down into the subsoil. These are usually the cause of the growth of these strong branches. When found they should be cut clean through, 1 foot below the surface of the soil, taking all possible care not to injure the smaller surface roots of the tree while carrying out the work. This treatment should restore your tree to perfect health if carried out with care.

KITCHEN GARDEN.

Tomato plants diseased (*F. J. H.*). There is no doubt that your Tomato plants are suffering from an attack of the Potato disease fungus (*Peronospora infestans*). The conditions which favour the growth of this fungus are dull skies like we have had lately, too much moisture at the roots and about the stems of the plants, and the crowding of them too closely together. We do not know if these conditions are responsible for the mischief in your case; if so, we would at once give the plants more room, so that air may circulate freely among them, and thus render the land on which they stand less wet and sodden. Better still would it be to remove the plants to fresh ground on which Tomatoes had not been placed before, as it is a well-known fact that the mycelium of this fungus, once it has secured a footing in any soil, will reappear year after year if the conditions for its growth are favourable. A keen look-out should be kept for affected plants, which should be destroyed, as there is no known cure for the disease.

Cucumbers in a cold frame (*Tantallon*).—We take it for granted that by the term "cold" frame you mean one without hot-bed or any other form of artificial heating. In such a frame, which is entirely dependent on sun warmth for the requisite heat for Cucumbers, it is useless to look for such heat until the end of May at least. Your course just prior to that should be to place your frame firmly on the ground in the sunniest position in your garden, to well fork up and pulverise the soil in it, then to put in the centre a bushel at least, and more if you have it, of a compost composed of three-fourths well-decayed turfy loam and the other part of decayed old stable manure well mixed. Leave that as a mound, give the entire soil a good soaking of water, then shut it up close to allow the sun to warm the soil, covering up the frame closely at night to box the sun-heat in. After three or four days put out your plants into the centre of the mound. If the soil be fairly moist when planting is done no water is needed. If dry, then give the plants some tepid water. Shut up the frame close all day, giving the plants a little shade if the sun shines out hotly, and covering over the lights with mats at night to box in the warmth generated. If the frame be a single light one of the normal size, 6 feet by 4 feet, two plants which may have been in one pot will suffice. If a smaller frame, one plant will be ample. When tiny white roots are seen coming out from the sides of the mound, a thin coating of fresh soil should be added, and just a very tiny sprinkling of some guano. As the plants grow strong give a little air at the back of the frame, and a liberal sprinkling with sun-exposed water just as the sun goes off the frame each evening before shutting close down. If the plants grow dense, thin out fruitless shoots. Plants should be purchased from a forist to plant.

MISCELLANEOUS.

Cocoanut fibre refuse as manure (*Beginner*).—Were yours a stiff, holding soil, working into it a dressing of Cocoanut fibre refuse that has been during the winter employed to cover bulbs in pots would be very helpful in rendering the soil more porous; but as your soil is light the effect would be to render it too porous, and thus dry quickly. You could, however, use the refuse to mulch or top-dress flowers or crops where the soil does dry too quickly, especially were it laid on an inch thick directly after the soil had received a good soaking of rain or a watering. It is a slow decomposing fibre, but dug into any soil would gradually decay and thus become plant food. Were it used as advised, then dug into the soil in the autumn, especially with some manure, it would no doubt become decomposed materially through the winter. If you prefer to store the refuse in a shed or heap outdoors for covering bulbs next autumn it will be safe to do so.

Fungus affected lawn (*Laxtonian*).—The sample of soil from your lawn sent shows it to be as full of fungoid mycelium or root matter as is Mushroom spawn. No doubt it is the same as the fungus which creates "fairy rings" in pastures. That impoverishes the grass while active, but as the mycelium spreads into new ground its old mycelium dies and thus for the moment becomes manure for the grass, thus causing the green rings or clumps seen in pastures. But each year as the rings spread wider, the inner soil becomes exhausted or poorer and the grass starved and weak. Presuming, however, that your grass is not influenced thus, it is to be assumed that, while the fungus in the soil runs deep and kills or impoverishes the deep-rooting grasses, the surface soil is less affected; hence with wet weather shallow-rooting grasses do well. Dressings of sulphate of ammonia are recommended as correctives of the trouble, but while it is worth your while to test such dressings by applying at once and again a month later 2lb. per rod area of very finely-crushed sulphate it is possible that such may not be effectual, and that only breaking up the lawn in the autumn, dressing it with 40lb. per rod of well-broken gas-lime, letting it lie on the surface for a month, then well forking it in, will prove a complete remedy.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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THE WILD GARDEN.

AMONG the more interesting phases of modern gardening, the wild garden or the naturalisation of hardy plants in or near the woodland, the shrubbery, copse, or similar places deserves more than a passing thought. The wild garden must not be confounded with grass gardening, or the planting—too often in meaningless fashion—of thousands of bulbous plants in meadow or park or pasture, but rather that thinner planting or grouping of varied plants, bulbous and otherwise, that help to provide in unkept garden scenery those touches of Nature all too rare even at the present time.

Just what the wild garden should be cannot be arranged by any fixed plan. Any formality of this kind will be the undoing of the whole. It must, therefore, be regarded rather in a local sense, and from the standpoint of soil and surroundings in particular; but those who know the country and have seen the sheets of the white Wood Anemone, the taller effects of the Bluebell, or the pale sulphur tones of the Primrose now fringing the copse, or presently spreading in greater profusion into the woodland itself, will require little guidance when it is desired to adapt this most beautiful of Nature's ways of flower gardening to the garden itself.

The wild garden is just that particular spot in the garden, be it the shrubbery, the outer fringe of the lawn, the shady or half-shady dell, or copse or glade or woodland, where the plants, once placed, not merely take care of themselves, but in an unmistakable way thrive much better and are seen to far greater advantage than in garden beds or borders in the trimmer parts. In these latter the bare soil—dark, sombre, uninteresting—too frequently catches the eye, and in winter time the "kept" flower border is bereft of the life and interest that even dead stems afford. In the wild garden it is not so, and here, while the Bracken in its maturer tones still provides a picture in the landscape, we have also those natural beauties of Oak, Birch or Dogwood, in grey, silver or scarlet respectively, waiting the rare gleams of sunlight to reveal their charms. At the same time, the Hazel in the copse may be studded with its ruby-like blossoms, and a little later the yellowing of its catkins catches the eye, and just then the Winter Aconite, Snowdrop or Grecian Windflower carpeting the ground beneath leafless trees may be seen, or later, the Glory of the Snow (*Chionodoxa*) and the Apennine Windflower, staining with blue the sides of woodland walks and drives and the rugged tufts of verdure from which these spring.

Presently, in cool and shady woods and like places, the Primrose spreads its leafy tufts, or the Wood Anemone and the Bluebell are seen, sometimes alone, sometimes carpeting the earth in sweet companionship. In the wild garden no bare places should be seen, and much may be done by free plantings of the Megaseas, Christmas and Lenten Roses, with *Helleborus viridis* and other species to secure this end. Just what a wild garden may be depends not a little upon its immediate surroundings, but the more densely shaded parts, banks or slopes may be permanently clothed with such Ferns as *Scelopendriums*, *Polystichums*, &c., and be carpeted with London Pride or other suitable plants. In the Royal Gardens, Kew, near the Cumberland Gate, may be seen in February a pretty effect of this type of planting, and where Snowdrop, Christmas Rose, Hepatica, hardy Cyclamen and Fern go hand in hand to render the spot more beautiful. Not least in point of beauty or effectiveness is a small grouping of the remains of the Honesty (*Lunaria biennis*), the remnants of whose silvered inflorescence are seen at some distance. At the outskirts of the lawn, and where by a steep bank or slope some higher ground is reached, the Solomon's Seal should be seen, and in cool, moist places certain Bamboos, the *Acanthus* or *Saxifraga peltata* would be seen to advantage. In shrubbery borders the Evening Primrose and the Foxglove should meet the eye, while in the background the taller stems of *Helianthus decapetalus* or *H. orgyalis* would be an advantage.

In the woodland itself or the approaches and in places where the Rhododendron and other shrubs grow quite freely the taller-stemmed Lilies should be seen. Of these none are better than the forms of *L. auratum*, together with *Henryi*, *tigrinum* in variety and others. Near to a shrubbery belt of Laurels the white Madonna Lily should be seen, and in more thickly-covered spots colonies of the giant species of the Himalayas would be a great gain. In quite moist or wet spots *Lilium pardalinum* and *L. canadense* should be freely grouped, and so, too, the larger growing of the *Spiraeas*, or those giants of Ferns the Royal Ferns (*Osmundas*).

Of Tulips, Daffodils and the like there is no end, and many of these are seen at their best in quite wet places, such as near the margin of a lake or pond. In those districts where Heather and Bracken abound much should be made of them, and where difficulty is experienced with the latter the raising of seedlings is suggested. In the smaller gardens the opportunities for this planting or effective grouping are not great, but any unkept corners may be utilised by the London Pride, Ferns, the great wealth of Daffodils, Crocuses or Snowdrops, Dog's-tooth

Violets, &c. The Daffodils alone are quite a host and appear to thrive better than in the more richly-fed soils. Where a belt of evergreens afford the requisite shelter the giant Asphodels or Eremuri should be planted with care, and few things are so noble or so good in flowering as these.

Hampton Hill.

E. H. JENKINS.

NEW ORCHIDS.

BRASSO CATTLEYA HEATONENSIS WESTONBIRT VARIETY.

This very handsome Orchid is one of the very highly-fimbriated forms of this bi-generic family, and in addition to this fimbriation we have a unique colour scheme and flowers of enormous size. The sepals are long, lanceolate and recurved, with bluntish tips, the colour being a mixture of cream and faint purple. The labellum naturally is the most conspicuous portion of the flower, this being very broad; canary yellow in the centre, this being surrounded by a broad band of pale old rose colour. Shown by Major Holford, Westonbirt, Tetbury, Gloucester. First-class certificate.

CATTLEYA MOSSIE GOOSESIANA.

This is a very pretty variety of an Orchid that has been largely used for hybridising purposes in the past. The sepals are narrow and of medium length, the colour being white very faintly tinged with purple. The petals are very broad, pointing off rather shapely at the apex, and the colour is very pale lilac. The labellum is very conspicuous, this being rather spreading, much waved at the edge and of a bright purple ground colour, surrounded by a narrow white band. At the base of the labellum and extending down the throat the colour is rich yellow. Shown by Sir Trevor Lawrence, Bart. First-class certificate.

ODONTOGLOSSUM WILCKEANUM SCHRODERIANUM.

This, as one would expect, has a good amount of yellow in its colour composition, and the specimen exhibited was a very beautiful one indeed. The flowers are large and very freely produced on a stout, robust stem. The bright yellow ground colour of the sepals, petals and labellum is heavily blotched with large masses of rich brownish crimson, the yellow at the tips being left unspotted. The markings are very distinct and regular. The plant shown had ten fully-developed, large flowers and a number of healthy leaves and pseudo-bulbs. Exhibited by Baron Schröder, Egham. First-class certificate.

ODONTOGLOSSUM APTERUM MOSSIE.

A very small plant of this carrying only two flowers was shown. The flowers are of medium size, much wooded, and of a creamy white colour, except the labellum, which is spotted with dull yellow dots. Exhibited by Mr. J. Moss, Wintershill Hall, Bishop's Waltham. Award of merit.

ODONTOGLOSSUM ILLUSTRE THEODORA.

This is one of the few rosy lilac-covered Odontoglossums, the older flowers being of this hue, and each segment edged by a very narrow white band. The blooms open an almost dull orange colour, apparently changing to the lilac hue with age. The blooms are of medium size only, and are loosely placed on a rather thin stem. Shown by Mr. de B Crawshay, Rosefield, Sevenoaks. Award of merit.

ANGRÆCUM GERMINYANUM.

A very curious little Orchid with white and dull greenish yellow flowers, the segments of which are attenuated and form almost spiral threads. The leaves are small, opposite, and very much like those of the Crassulas in general appearance. Shown by Sir Trevor Lawrence, Bart. Award of merit.

ODONTOGLOSSUM OSSULSTONII GLEBELANDS VARIETY.

This is a beautiful variety, the long pendulous raceme on the plant shown being composed of twenty-one flowers. The white ground of these is very densely mottled with dull magenta, the characteristic yellow blotch appearing on the labellum. The flowers are loosely placed on the stem, and the raceme is slightly compound. Shown by Mr. J. Gurney Fowler, Glebelands, South Woodford. Award of merit. All the above were exhibited before the Orchid committee of the Royal Horticultural Society on May 12, when the awards were made.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

May 26, 27 and 28.—Royal Horticultural Society's Spring Flower Show, Inner Temple Gardens, Thames Embankment; 12 noon to 7 p.m. the first two days, 9 a.m. to 6 p.m. third day.

The Kew Bulletin.—This publication for May contains a mass of information that should be of special interest to those interested in economic botany and in the work being done by Kew men at the botanical stations abroad. The contents comprise particulars of the South African locust fungus, new rubber-containing plants, Cacao pests of Trinidad, mud-binding Grasses, raffia fibre from Madagascar, with reports on the botanic stations of the West Indies.

Bath and West and Southern Counties' Show.—The fire protection arrangements for the above show, which opens at Dorchester on the 27th inst., have received most careful attention and have again been entrusted to the capable hands of Messrs. Merryweather and Sons. A detachment of their private fire brigade will be in attendance, men being on duty day and night. The fire station in the show yard will be well equipped with motor and horse fire engines, there will be a system of fire-mains and hydrants laid down, while hand pumps and buckets will be placed at various points about the yard. Efficient means of fire protection at agricultural shows is an absolute necessity, and the precautionary measures taken in this respect cannot be too elaborate.

Next year's Hyacinth show.—The president and council of the Royal Horticultural Society have accepted the offer of the Dutch Bulb Growers' Society at Haarlem of prizes for forced Hyacinths, to be competed for at the society's exhibition to be held on March 9, 1909. The prizes are as follows: Division I., for amateurs and gentlemen's gardeners: Class 3 (eighteen Hyacinths), first prize, £6 6s.; second prize, £5 5s.; third prize, £4 4s.; fourth prize, £3 3s.; fifth prize, £2 2s.; sixth prize, £1 1s. Class 4 (twelve Hyacinths), first prize, £5 5s.; second prize, £4 4s.; third prize, £3 3s.; fourth prize, £2 2s.; fifth prize, £1 1s. Class 5 (four pans containing Hyacinths, ten roots in one pan), the blooms of each pan to be of distinctly different colour, first prize, £4 4s.; second prize, £3 3s.; third prize, £2 2s.; fourth prize, £1 1s. Division II., for nurserymen: Class 6 (for the finest collection of Hyacinths, either in pots or pans or in glasses), prize, the gold medal of the Dutch Bulb Growers' Society at Haarlem, valued at 50fr. Regulations: For class 3 and 4 each bulb must be in a separate pot (size optional). Classes 3, 4 and 5 must be all single flowers; no flowers may be tied together. An exhibit must not contain more than one specimen of any one variety. Exhibitors may show in not more than one class, except in the following: Competitors may enter in Classes 3 and 5, or Classes 4 and 5, or singly in either one. In Classes 3, 4, 5 and 6 all bulbs shown must have been forced entirely in Great Britain or Ireland.—W. WILKS, Secretary.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Tulip Ophir d'Or with bulblets in the leaves.—I wish to record what I suppose is a remarkable development in three specimens of Tulip Ophir d'Or. They have each produced good-sized bulblets in the axils of the lowest leaf and well out of the ground, each plant being in full flower. Also another plant of the same variety has produced two fully-developed blooms on one stem at the same time. Any remarks thereon will be greatly appreciated, as I have never seen anything of the kind before, although I have grown hundreds of the same variety, which I consider quite one of the best of its kind.—A. E. SPER.

[Several varieties of Tulips almost always, under favourable conditions, develop bulbils in the axils of their leaves. The well-known Mrs. Moon usually has a bulbil in the axils of its lowest leaf. It is more unusual among the early varieties as far as our experience goes. It frequently happens that Tulips have two flowers on one stem, but as a rule one is much finer than the other. Last year we heard of a lot of Artus that had many double-flowered stems among them. The reason usually assigned is that they have done very well the previous year and accumulated some extra energy, which they get rid of in this way. It is extremely interesting to hear of your experience with Ophir d'Or.—Ed.]

Polyanthuses at Camberley.—Mr. John Crook, whose beautiful strain of border Polyanthuses secured wide popularity while he was resident at Forde Abbey, having now come to reside at Camberley, Surrey, has there in his garden at Fingest several thousands of these charming spring flowers in bloom, and when seen by me just recently they exhibited in a very remarkable degree their recuperative capacity, having but just previously been buried in snow, which laid all the flowers flat to the ground. But on the 7th inst. all traces of that visitation had disappeared and the blooms in every case stood up stiff and erect, and as seen in such numbers and in blocks of colours presented a delightful show florally, such as no similar spring flower could furnish. Great blocks running into several hundreds of plants, white, yellow, red, crimson, mauve and purple, with others of mixed hues, gave beauty which served to delight and over which any lover of flowers might well rejoice. Not a single plant out of so many represented any other form of propagation than raising by seed, and that one fact also assists so greatly to popularise the Polyanthus, because of which everybody can grow it, and it seems to do well alike in all soils. It costs but a small sum to secure seed sufficient to raise hundreds of plants, hence they are everybody's flower literally. Many of the reds, crimsons, mauves and purples were surpassingly fine in form, as in size, and rich in colouring. Oddly enough ladies seem to prefer browns, buffs, terra-cotta, or similar quaint hues such as do not usually appeal to the sterner sex. These prefer the more fixed and richer colours, named with pure whites and glowing yellows. In any case, whether seed be purchased in colours or in mixed forms, quaint colours will certainly crop up, while the original ones will be chiefly reproduced.—A. D.

Erica codonodes.—I have read the article in THE GARDEN of the 25th ult. on Heaths with much interest, but am surprised it does not include Erica codonodes, the beautiful Australian Heath. It does not appear to be described under any other name, as its long spikes of white blooms, tipped with pink, which begin to appear in January and last until April in Devonshire, are unlike any of the varieties mentioned. It is quite hardy, and flowers best if

clipped over after the time of blooming.—F. SANDERS. [*Erica codonodes* is a synonym of *E. lusitanica*, a plant which has also been called *E. polytrichifolia*. In the article in THE GARDEN the plant is mentioned as *E. lusitanica*. As you say, it grows well in Devonshire; it is also largely grown in Cornwall, where it is highly thought of. It is an excellent shrub, and well worth growing on an extended scale in the warmer parts of the country. You are wrong in considering it an Australian plant, as it is a native of Spain and Portugal.—Ed.]

Narcissus Buttercup.—As several erroneous accounts have appeared in the Horticultural Press of *Narcissus Buttercup*, described and illustrated in THE GARDEN, page 229, will you kindly allow me to state that it was raised by myself from *N. Emperor* by pollen of *N. jonquilla*.—G. H. ENGLEHEART.

Cactus Dahlias.—It would be interesting to know which is really the best way of storing Dahlia tubers. Last season, after the frost had cut down the plants, I lifted all my tubers with the exception of one, which was of the Cactus variety, and, strange to say, when taking these from the shed in which they had been stored I found they had all rotted away. The plant which I left outside, however, has withstood all the frosts and is now making good shoots. It would be useful to hear the experience of other readers of your valuable paper.—E. G.

An interesting plant parasite.—Your illustration of the parasite *Orobancha* reminds me that some years ago I had one that grew up through a *Pelargonium* planted in the border here, and, wondering what it came from, I carefully removed the soil and found it attached to the roots of the *Pelargonium* in the same way as shown in your illustration. At that time I thought it a very exceptional occurrence, but evidently the *Pelargonium* is a congenial host. It would be interesting to know if it is subject to any such parasite in its native home in South Africa.—R. J. G. READ, *Ealing*.

Rabbits and wire netting.—I am sure all those who are tormented by rabbits eating their garden produce should be most grateful to those of your correspondents who have been kind enough to write, giving suggestions for the prevention of such a state of affairs. I have been at my wits' end for the past twelve months. Bulbs, which I paid 3s. 6d. each for, were uprooted and nibbled, and either left on the ground in the frost or else were carried bodily away (this latter presumably by rats, which abound in great numbers all round my premises). Rose trees and bushes were eaten through, more especially Noisette bushes, as the rabbits seem to prefer tender green wood. Tough standard Roses were merely eaten through the bark and left to die; but the Noisettes were eaten down to the earth. All told, I think I am not exaggerating when I say I have lost over £10 worth of Lily bulbs and Roses during my first winter here. It is especially remarkable that the cheaper bulbs (which I would not have minded so much losing) were never attacked, such as the common Madonna and Tiger Lilies, but I had some white Turk's Caps, some Henryii and several beds of *Auratum rubrum vittatum* Lilies, all of which were utterly annihilated. Just as things had reached such a climax I had become positively murderous, I saw Mr. Fred Street's letter in THE GARDEN and tried the buried wire netting, with a piece turned up all along the lower edge. Although I was positive my enemies would find some way of getting in it has been erected three weeks and up to the present has been a complete success. This is all the more wonderful, because this place is a sandy, rocky soil, ideal for wild rabbits, and they exist in shoals for miles around. Through the columns of THE GARDEN I tender my sincere thanks to all who have given such helpful suggestions concerning the rabbit nuisance.—J. HUTH, *Bures, Essex*.

HISTORY OF THE PRIMROSE, COWSLIP AND AURICULA.

(Continued from page 241.)

IN the "Paradisus" nine kinds of Cowslip are described, of which the Primrose Cowslip is not improbably a *Polyanthus*. Those worth mention are respectively "Cur'd Cowslip" or "Gallegaskins," in which the calyx was crumpled and frilled like the garment of that name then worn, "Hose-in-hose, the Franticke or Foolish Cowslip, or Jack-an-apes on horsebacke," which had the calyx developed into leaf-like forms (the Jack-an-apes of Gerard is noted in his "Herbal" as an Oxlip), also "the greene Rose Cowslip or double greene feathered Cowslip." From the description the "flower" of this was simply a calyx of an abnormal size and shape, divided into many narrow leaves. Rea notes a great variety in the colours of the Cowslip, of which one was a Hose-in-hose.

By the beginning of the eighteenth century Cowslips, as garden flowers, appear to have gone out of fashion, or rather, perhaps, they were superseded by the *Polyanthus*, Miller, in 1733, remarking of the double yellow that it was very rare. The Primrose is in several respects a better garden plant than the Cowslip, and the early gardeners, as well as the ladies who in mediæval England effected as much for the progress of gardening as the ladies of to-day are doing, seem to have taken kindly to the garden forms of the Primrose. The earliest date, however, it is possible to assign to the Primrose in the garden is 1578, when Lyte mentions it as "fayre and dubbel." A special paragraph is devoted also to the green Primrose. Tusser catalogues the Primrose among the herbs for the kitchen, while Cowslips and Paggles (Oxlips) appear among "flowers for windows and pots."

As the green Primrose is the earliest recorded variety, and there are writers who are doubtful of its identity, it may be worth remarking that, along with the green Cowslip and Oxlip, it continued in both its single and double forms to be a favourite flower until at least the end of the seventeenth century. Parkinson, with his delightful habit of detailing with exactitude the slightest things, enables us to picture to ourselves from his word painting the light green shade of the single and the darker green of the double (or two-rowed) Primrose. Bacon, too, in "*Sylva Sylvarum*," refers to it, but in order to prove his contention that there was no such thing as a green flower, "There is," he remarks, "a *greenish Prime-Rosa*, but it is pale and scarce a green." Among the Elizabethan poets who may be said to have popularised the Primrose, Spenser is the only one who refers to the green variety:

Upon her head a Cremosin coronet
With Damaske Roses and Daffadillies set,
Bay leaves betwenee,
And primroses greenee,
Embellish the sweete Violet.

The Primrose in Drayton's "Garland," though sweet, was not a green one.

A course of Cowslips then I'll stick,
And here and there (though sparely)
The pleasant Primrose down I'll prick
Like pearls which will show rarely.

Gerarde mentions and figures a double white Primrose, but one is left to conjecture if he had the plant at all. It is certainly suspicious that it is not mentioned in the catalogue of 1599, nor do we hear of it elsewhere. Parkinson refers to the common double only and remarks that, though better known in the West parts of the kingdom and in the North, Primroses were not usual in the vicinity of London.

A quarter of a century later Rea introduces us to a great variety of sorts, "there being about twenty diversities of reds, some deeper and

others lighter, from blood red to pale Pink colour: some are of a bleuish Rose colour, sader and paler, some brick colour, some Dove colour, others of the colour of an old Buff coat and some hair colour." Then he goes on to more particularly describe "the fair red," "the Scarlet" and the "Red Hose-in-hose and the double red" "the rarest of all kinds," but not known to Rea himself. His son-in-law, the Rev. Samuel Gilbert, describes it as a "dull Horse flesh hue" and of no value.

Like the Cowslip, the Primrose would seem to have lost repute among florists, and very little is to be found regarding it all through the eighteenth century. Milter (1733) mentions, along with the common double, the Paper White, pale flesh, and double Paper White, and distinguished them as Primroses of Constantinople. Later, the latter appellation was withdrawn. An Edinburgh nurseryman in 1774 names three double sorts, viz., double yellow, double red and double velvet, which he described as "a great beauty, being almost of a crimson colour with a bright gold-coloured stamina."

Martyn in "*Flora Rustica*" figured a dingy-coloured variety which he called "Scotch Primrose," and asserted that the plant grew wild in Scotland, and in his dictionary he further remarks that it partakes to some extent of the nature of a *Polyanthus*. The pink or lilac double Primrose was figured by Curtis in the *Botanical Magazine*, and for a long time or till about the third decade of the last century the Primrose remained in almost a stationary condition. Since then many double and fine single varieties have been produced. R. P. BROTHERSTON.

(To be continued.)

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

POLYANTHUSES FROM CAMBERLEY.

Mr. J. Crook, The Avenue, Camberley, sends us a splendid lot of these charming spring flowers in many colours. One of an old gold shade is particularly pleasing, and the deep rich yellows are also very fine. This strain is a very good one indeed, and, as Mr. Crook is now making a speciality of these flowers, we may expect some extra good things from this source in the near future.

ARCTOTIS ARBORESCENS FROM HERTS.

Mr. A. G. Gentle, gardener to Mrs. Denison, Little Gaddesden, Berkhamsted, Herts, sends beautiful flowers of this useful greenhouse plant. He writes as follows: "I am sending some *Arctotis arborescens* for the Editor's table. We have a dozen plants that have been in flower since the latter part of January. I think it excellent for cutting, as the flowers last a long time. It is a good greenhouse plant, as no insects, except green fly, attack it."

DAFFODILS FROM MR PETER BARR.

Still another interesting and fragrant contribution of these beautiful flowers has reached us from Mr. Peter Barr, V.M.H., and which have been grown in the garden of his Scottish home. Among them were two flowers of *triandrus albus*, one grown under glass and the other in the open.

The latter was very pure, had the pale yellow markings in the perianth better developed, and had longer anthers and style. *Corbularia conspicua* (true) is a lovely little rich yellow flower. *Biflora hybridus*, collected at Nimes, had three flowers on a stem, these being rather small and pale cream coloured. The corona is very small and bright orange in colour. In the Poeticus section were Cassandra, rich red cup, which appears to come a better colour in the open than under glass; Glory, also deep red cup; Almira and *precox grandiflorus*.

Among the Magnis were the beautiful J. B. M. Camm, Mrs. Camm, the huge Mme. Plemp, Glory of Leiden, extra large; Millie Barr and P. R. Barr. In the Barri section B. conspicuus, Lady Godiva, Maurice Vilmorin and Crown Princess were all beautiful and good. Princess of Wales is a charming bright orange-cupped Leedsii, and others in this section were Beatrice, with rich cream-coloured cup; Duchess of Westminster, large, pale sulphur cup; Mrs. Langtry and Katherine Spurrel, broad open canary yellow cup. *Incomparabilis Catherine* has a very wide deep yellow cup with a much serrated edge; I. Lulworth is very handsome, the bright orange scarlet cup contrasting well with the cream perianth.

MUNSTEAD PRIMROSES FROM WATFORD.

Mr. Daniel Hill, Herga, Watford, sends excellent flowers of this strain of Primroses. The rich yellow and cream colours are very pleasing. He writes as follows: "I am sending for your table just a few Munstead Primroses. I noted them in Messrs. Sutton and Sons' last year's list and obtained a packet, sowed it early in February (1907), pricked the seedlings out in boxes, and planted them out when large enough in a somewhat damp and rather shady piece of ground, where they stood until early in February this year, when they were removed to their flowering quarters, being then very large plants with a big ball of soil to each. They commenced flowering at the end of March, and, notwithstanding being laid quite flat by the snow, are now a perfect mass of flower. There are only a few very deep orange varieties, and it is curious these individual flowers are much smaller than the others."

POLYANTHUSES FROM EPSOM.

Mr. George Boyd, gardener at Danehurst, Epsom, Surrey, sends a very fine lot of Polyanthuses. The blooms are large, and are evidently the result of good culture. He writes: "I am sending you a few blooms of Polyanthuses for your table. They are from seedling plants sown on May 1, 1907. Now is the best time to sow the seed if good strong plants are wanted for next autumn. It must be sown in good sandy soil in a pan. Place in a cool greenhouse till up, and when large enough to handle prick the seedlings out into seed-trays. Place in a cold frame, give plenty of air and shade from strong sun for about a month. Then face a frame towards the north, and put into it about 1 foot of soil composed of equal parts of garden soil, loam and well-decayed manure (old hot-bed is best). Plant out into this a few inches apart; the sashes can be removed altogether if the weather is very hot. Shade for a few days. Plant out in the open after the beds are cleared of summer plants. Give the bed a liberal supply of cow manure before planting."

CINERARIAS FROM SCOTLAND.

Miss Clark Cooper, Thornfield, Selkirk, Scotland, sends very fine blooms of an excellent strain of large-flowered Cinerarias with the accompanying note: "I forward a small box of sample flowers of large Cinerarias grown at Thornfield from one packet of seed procured from Messrs. Daniel Brothers, seedmen, Norwich. The variety of colouring and handsome masses of bloom have been much admired."

TREES AND SHRUBS.

THE DOUBLE-FLOWERED GORSE.

NO one who sees a common or hillside covered with Gorse in full flower can fail to appreciate its beauty, and we can well understand such plant-lovers as Linnæus and Dillenius going into ecstasies of delight, as they are reported to have done, when such a sight first burst on their view after being acquainted with the plant from botanical material only. Although, however, it is found in such abundance in a state of Nature, we rarely find it in the garden, though, for certain positions, it, or better still, its double-flowered form, has few equals. The double-flowered variety is of more compact habit than the type, and is neater for garden work, while the fact of its being sterile is much in its favour, as the type becomes somewhat unsightly during summer when covered with burst seed-pods.

As a rule the double variety is met with as a dense bush 2 feet to 3 feet high of fairly uniform outline. It attains its greatest perfection in poor, gravelly soil in an open and sunny position; in fact, a far greater profusion of flowers is produced from examples growing in poor ground than from those planted in richer soil. The rich golden flowers open during April and May, and the plant is at its best from four to six weeks, during the greater part of which it is a blaze of colour. As it never produces seeds it has of course to be increased from cuttings. These are made from young wood taken in July or August, and should be about 4 inches in length. They are inserted in sandy soil in a cold frame or under a hand-light, and are left undisturbed save for an occasional watering until growth commences the following spring. The commencement of growth is a sign that roots have been formed, and at this period it is necessary to lift the tiny plants and pot each one singly into a 3-inch pot. By placing them in a cool frame as soon as potted, and keeping them close for a week or two, they establish well, and may then be plunged out of doors. By following this treatment first-rate results can be obtained; it is, however, inadvisable to give cuttings artificial heat as they cannot be hurried.

On no account should young plants be put out in nursery beds, as they transplant badly, but keep them in pots until placed in permanent situations. When preparing a position for a plantation simply dig the ground over to bury the turf or weeds, then tread it well and insert the plants. Be careful when planting to avoid hard, marginal lines, and try to obtain an undulated, natural outline, running into the grass or surrounding vegetation on all sides. If the clump is to be kept dwarf, it is a good plan to go over it as soon as the flowers are over, and cut out a number of the strongest shoots. When once established a clump will continue to give good results for many years, and will require very little attention. W. D.

A BEAUTIFUL WILLOW.

(*SALIX GRACILISTYLA*.)

NEARLY all trees or shrubs which bear catkins during the earlier months of the year deserve extended cultivation in our gardens, and many only require to be better known to be more largely appreciated. The Willows include numerous species and varieties of great merit, and who does not admire the common Goat Willow (*S. Caprea*) of the woods—the "Palm" of the woodland. The subject of this note is a Japanese species, sometimes known under the name of *S. mutabilis*, and in its catkin stage is probably the most beautiful of the whole family, owing to the exquisite colouring of the flowers and the great freedom with which they are produced. When they first appear they are silvery grey with a suffusion of red, but with age or the process

of expansion only the former colour remains. During the latter part of March and in April a good specimen is most pleasing. As a bush this Willow is attractive, but it is undoubtedly seen to much greater advantage when worked on to a stem of good height, so that the somewhat slender branches may form a pendulous growth. A position close to the water's edge should, if possible, be afforded this shrub, but failing this it will succeed in a damp soil. It may be easily increased by cuttings inserted during March in an open border. Unlike some varieties, which must be severely pruned annually to reveal their charms, this Willow requires little attention in this respect. A. E. THATCHER.

THE ROSE GARDEN.

ROSE RUST OR ORANGE FUNGUS.

WHERE this pest was troublesome last year the plants should be sprayed at once with a solution of potassium sulphide. The bushes should be sprayed just when the leaves are expanding. Already the rust is showing on the hedge Briars. Where it is seen in patches on the hard wood of Rose plants, a capital remedy is methylated spirit and water in equal quantities. Thoroughly rub this in with a piece of sponge. This rust will attack seedling Briars that are planted out for budding, and if not checked will cause considerable damage. P.

ROSE DOROTHY PAGE ROBERTS.

We have in this beautiful Hybrid Tea a decorative Rose of charming colouring, reminding one of Mme. Abel Chatenay and Mme. Eugénie Boulet. There could scarcely be a more interesting combination of tints, and, judging from blooms exhibited, I should say this Rose will become a favourite. We all know how popular Mme. Abel Chatenay now is, and I think a search into the back numbers of THE GARDEN would show that we predicted this on its appearance, but it is remarkable how a Rose attains popularity, and equally remarkable that no new comer succeeds in dethroning the favourite. For instance, there was introduced, soon after the advent of Mme. Abel Chatenay, a variety named Ferdinand Jamin, very much like the former, and in quality of bloom oftentimes much superior, but somehow this Rose has never "caught on," and I question if many Rose growers know it. Dorothy Page Roberts has already attained a certain amount of favour, and I imagine it will be found in the front rank of beautiful tinted Roses, although it is rather devoid of petals. But many of these newer Roses are wanting in fulness, yet by their size of petal and exquisite colouring they make amends for this. P.

RAMBLER ROSES IN POTS.

Now that the sprays of bloom are showing, great care will be required in the matter of watering and feeding. These ramblers are very thirsty subjects. On a fine day they will need water three or four times, as they are usually grown in comparatively small pots, mostly 9-inch or 10-inch, and these are quickly filled up with roots if the plants are in a healthy condition. Where they had a dusting over with some good artificial manure in February, they will now benefit by liquid manure at least once a week. That made from cow manure and soot is as good as can be given; but where this is not practicable, then guano water is a good fertiliser applied at the rate of about 1oz. to a gallon of soft water. The syringe should still be freely applied to the under side of the foliage, as red spider is specially partial to the Crimson Rambler and Dorothy Perkins tribe. As the blooms commence to unfold, they develop more beautifully if the plants are placed in a somewhat cool

temperature, such as a house with a north aspect. When employed for decoration in draughty positions, great care is needed that the plants are well watered beforehand. We have seen splendid plants ruined in a few hours by neglect of this simple precaution.

These ramblers can be grown in such a variety of ways that the skilled gardener has little difficulty in developing his taste in this direction. When Dorothy Perkins first came out it was grown as a bush, and most beautiful it was. Most of the sorts now grown can be made to bloom as dwarf bushes by simple pruning and pinching of the growths. Growers will find two and three year old own-root plants excellent for making these bushy specimens. Everyone must grow the new Tausendschon. Nothing finer has ever been raised. Its huge bunches of bloom measure fully 9 inches across, and they are such exquisitely beautiful individual flowers, quite 2½ inches over, with a lovely shading of white and cream on a lively Carnation pink ground. The blooms are very durable, and it is not unusual to have a plant in flower for a month if placed in a cool temperature. A charming dwarf companion to Tausendschon will be Aennechen Müller. This would make a groundwork to pillars of the former, either for indoor or outdoor decoration. P.

COLOURED PLATE.

PLATE 1348.

SWEET PEA EVELYN HEMUS.

THIS charming Sweet Pea is the latest addition to the somewhat limited Picotee section, and was raised by Miss Hemus, Holdfast Hall, Upton-on-Severn, by whom it was exhibited last summer and to whom we are indebted for the flowers from which the accompanying coloured plate was prepared. The variety was granted an award of merit by the Royal Horticultural Society when exhibited before them last summer, a rather rare distinction for a Sweet Pea. As will be seen by the coloured plate, the flowers are large, with delicately-waved standards, the creamy buff ground colour being edged with bright pink. It will be interesting to note what position this variety takes in the National Sweet Pea Society's audit this year. Last season it was exhibited once only, owing, of course, to the raiser holding all the stock. Seeds of it were sold out at an early date this year, so that those who secured any may consider themselves fortunate. Miss Hemus was very successful with Sweet Peas last season, the magnificent flowers staged by her at Vincent Square attracting much attention. Although self flowers appear to be favoured most at present, the bicolors or fancies have much to commend them, especially when we have colours that harmonise so well as they do in the variety now under notice. How it will behave this summer grown in various soils and under varying circumstances can, of course, only be ascertained at the end of the season, but we hope that it will retain the excellent points displayed last year. Providing it is properly fixed and has a good constitution, this Sweet Pea should have a rosy future in store for it. As exhibited last season it had splendid stems, each carrying three or four blooms, these being well placed on the flower-stalks.

THE FLOWER GARDEN.

VENUS' LOOKING-GLASS.

(SPECULARIA SPECULUM.)

THIS hardy annual resembles in general appearance some of the Campanulas or Bellflowers; indeed, several botanists have included it in that family under the name of *C. Speculum*. When the seed is sown in autumn, Venus' Looking-glass is one of the earliest and showiest annuals to flower in early summer. Coming into bloom as they do after the blaze of spring-flowering bulbs is past, and before the summer bedding is at its best, annuals such as the subject of this note are worthy of more general cultivation. When once grown in a garden, if the ground is not disturbed beyond weeding and lightly forking over the surface, the plants seed and come up year after year, requiring no attention beyond thinning the seedlings if too thick. Grown in small groups near the front of the mixed border, or for massing along the edge of a shrubbery border, as illustrated, this *Specularia* is an ideal subject. The

solitary specimen, however good that may be. Then seedling plants are usually more vigorous than those from divisions, and, if the amateur has a small collection of species, he may profitably devote a little time and attention to hybridising and raising hybrids between some of the best of the species. There is no limit, or almost none, to the variety he may thus secure.

In raising these hardy Primulas from seeds an important consideration is the freshness of the seeds, and in the case of purchased seeds it is difficult to secure these absolutely fresh. It is well known to those of experience that the seeds of these plants germinate much more freely if they are sown almost as soon as ripe, but it is almost impossible to secure such from the trade, and it is thus generally necessary to depend on those ripened the previous year—and it may be an earlier one still—and only obtainable with other seeds in spring. In this case the seeds are generally a long time in germinating, and not only patience but some care is needed if a full measure of success is to be reaped. Some of these seeds may germinate the same year as they are sown, but many will remain dormant until the



THE WHITE-FLOWERED VENUS' LOOKING-GLASS: SPECULARIA SPECULUM ALBA.

plants grow 9 inches to 1 foot high; the flowers are bell-shaped and violet-blue in colour. The white variety, alba, the subject of the illustration, is even prettier than the type for massing. A. O.

HARDY PRIMULAS FROM SEEDS.

THERE are many beautiful hardy Primulas which can be easily raised from seeds, but, in order to achieve a full measure of success, certain considerations must be kept in view. The writer has for many years raised a number of the hardy Primulas in this way, and an account of the methods he has found most profitable may be of assistance to many of the readers of THE GARDEN. It is almost unnecessary to say anything in favour of this plan of securing a stock of these beautiful flowers, many of which are comparatively expensive, and by means of seeds in a year or two quite a little colony of vigorous plants will be secured for what is often less than the price of an individual. The latter consideration is by no means to be despised, as a group of even half-a-dozen is much more effective and attractive than

following one, and it is thus necessary to prick out the seedlings very carefully, so as not to disturb the more tardy seeds and to leave the pans unemptied for another year. I have even found it profitable to wait for the third season before discarding the chances of additional seedlings; but it will be found that the exposure of these seed-pans to frost or snow for a week or two in early spring will frequently hasten the growth of the seeds and give one a better crop of seedlings.

SOIL TO SOW THE SEEDS IN.

In preparing the soil for the seeds it must be remembered that these will lie a long time, and that not only is ample drainage required, but it is advisable to bake or roast the earth so as to destroy the seeds of weeds and other growths injurious to the Primulas. This may be done by placing the soil in an iron shovel over the kitchen fire. Then the drainage requires to be very good. A large crock should be put over each hole in the seed-pan or pot, others over that again, then some smaller pieces, then a little moss or rough fibrous soil, and the pot filled up



ANEMONE (WINDFLOWER) NEMOROSA BLUE QUEEN.

to within an inch of the rim with sandy, open soil of loam, leaf-soil or a little peat and sharp silver sand. Press this gently down with a piece of flat wood and sow the seeds very thinly, pressing them down and covering with a little very fine and sandy soil, which, again, should be well pressed.

I have practised two methods of watering with satisfactory results, both at the time of sowing and to keep the soil moist afterwards. According to one plan the pots are dipped in water until the latter rises just through the soil. This is allowed to drain away, and then the seeds are sown and slightly covered with earth as already indicated. In the other way the seeds are sown first, and then the whole carefully watered. It will be found a good plan to put a piece of paper or small piece of wood on the top of the pan or pot, and on this the water is poured and allowed to soak through to the soil. In subsequent waterings I prefer the dipping method when time is available, but it is more tedious than the other.

AFTER TREATMENT.

After the seeds are sown the pans or pots are covered with a sheet of glass to prevent evaporation, and a piece of brown paper is put on the top to keep the seeds in darkness. As soon as any of the seedlings begin to appear, the paper and glass should be gradually removed and light and air thus admitted. When the young plants have made a pair of rough leaves, they should be pricked out into similar soil about an inch apart and grown on under glass, but with plenty of air, until the following spring, when they may be planted out.

In the management of the seedlings it must be observed that they have plenty of air, and, so long as under glass, be shaded from the full sunshine, but kept near the light. Green fly must be guarded against, and either checked by occasional fumigations or kept away by the use of a small brush and plenty of clean water. If these directions are carefully carried out and the seeds are of good germinating power, a considerable measure of success will follow, and the garden will be enriched by the possession of many very beautiful plants not too common in the garden of

the amateur. Among the hardy Primulas which can be successfully raised from seeds are japonica, Sieboldii, sikkimensis, denticulata and its forms, calycina, frondosa, involucrata, pubescens, villosa, viscosa, capitata, carniolica and, of course, the Auriculas, Primroses, Cowslips and their allies in great variety. S. ARNOTT.

TWO RARE WINDFLOWERS.

THE APENNINE WINDFLOWER.

THE Apennine Windflower (*Anemone apennina*) is well known as one of the most beautiful of our lower-growing spring flowers, and as a plant particularly suitable for naturalising, as well as for borders and rockwork. It is naturalised with the most charming effect in the pleasure grounds of several mansions, and the writer has seen little wooded glens carpeted by the blue

flowers of this Windflower as thickly as some places are covered with our native Wood Anemone (*A. nemorosa*). This Windflower thrives splendidly under the shade of deciduous trees, while it also blooms freely in the open, giving its starry flowers in great profusion in either situation about March, April and May. Nor is it fastidious as to soil, as it will thrive freely in the vegetable earth to be found in most woods, in the ordinary soil of the border and in the somewhat stony material which forms the basis of the provision for plants grown in many rock gardens. In either it will flourish, giving its pretty, elegantly-formed foliage and its starry flowers well raised above the plant and from 6 inches to 9 inches high. The colour of the typical *A. apennina* is blue, but the plants have yielded some variation both in nature and under cultivation. The shades of blue vary, and there are also both white and rose varieties, all being beautiful in their own way. The newest of the coloured varieties of *A. apennina*, however, is that called *A. apennina purpurea*, a plant of which is illustrated. The colour is distinct from that of any other variety offered, being of a bright and pleasing mauve. The flowers are also large and elegant in form, and for cutting this variety should prove useful. It originated in the nurseries of Mr. C. G. Van Tubergen, jun., at Haarlem, and was sent out in 1906. It is as easily grown as any other variety, and the plant figured was cultivated in poor and stony soil at the lower part of a small rockery, which partly screens it from the midday sun. Planting should be done in autumn. Plant the tubers about 1 inch or a little more deep.

ANEMONE NEMOROSA.

Charming as is the *Anemone* of our woods, *Anemone nemorosa*, it is so plentiful in many districts that it is needless to take up the space of our gardens by planting this wilding, save for those who are out of reach of the sight of its fragile, starry flowers. There are, however, some exquisite forms of the Windflower which lend a charm to any garden, and some of these are of the most beautiful shades of colour or are noteworthy from some other feature which makes them distinct from the ordinary one. The most distinct of the white varieties are the double one (*A. nemorosa* fl.-pl.) and the curious *A. nemorosa bracteata*, the "Jack-in-the-Green" of the race, which has its white flowers surrounded by a ruff of green, and is quaintly pretty in its own way. The coloured forms are—many of them, at least—of great beauty, none being so well known, however, as *A. nemorosa robinsoniana*, which is one of the most charming with its opal-like shades of



THE PURPLE APENNINE WINDFLOWER: ANEMONE APENNINA PURPUREA.

tinting. It has been the parent of some very beautiful flowers, several of these having been raised by the late Mr. James Allen of Shepton Mallet, famed for his work among the Snowdrops. Mr. Allen raised some very beautiful varieties from *A. nemorosa robinsoniana*, one of these which bears his own name, *A. nemorosa Alleni*. This is a glorified form of its parent in size of flower, height and in warmth of colouring. His great desire, however, was to raise deep blue forms, and he succeeded in his object, that which is figured in the accompanying photograph, and called Blue Queen, being one of the best of all. It has remarkably deep, true blue flowers of good size, and freely produced on a good plant. I had the privilege of receiving from Mr. Allen this and others of his seedlings from *A. n. robinsoniana*, and all are beautiful, that called White Queen being even larger than *A. n. Blue Queen*. No difficulty is experienced in cultivating these Wood Anemones in ordinary soil in the garden, and they are obliging in other respects as well, as they can be cultivated in a sunny border or at the lower part of a sunny rockery as well as in the half shade of trees, the latter being, of course, the conditions they enjoy in their woodland haunts. When free from shade they are slightly dwarfer, and do not last quite so long in bloom. Plant in autumn.

Dumfries.

S. ARNOTT.

GREENHOUSE.

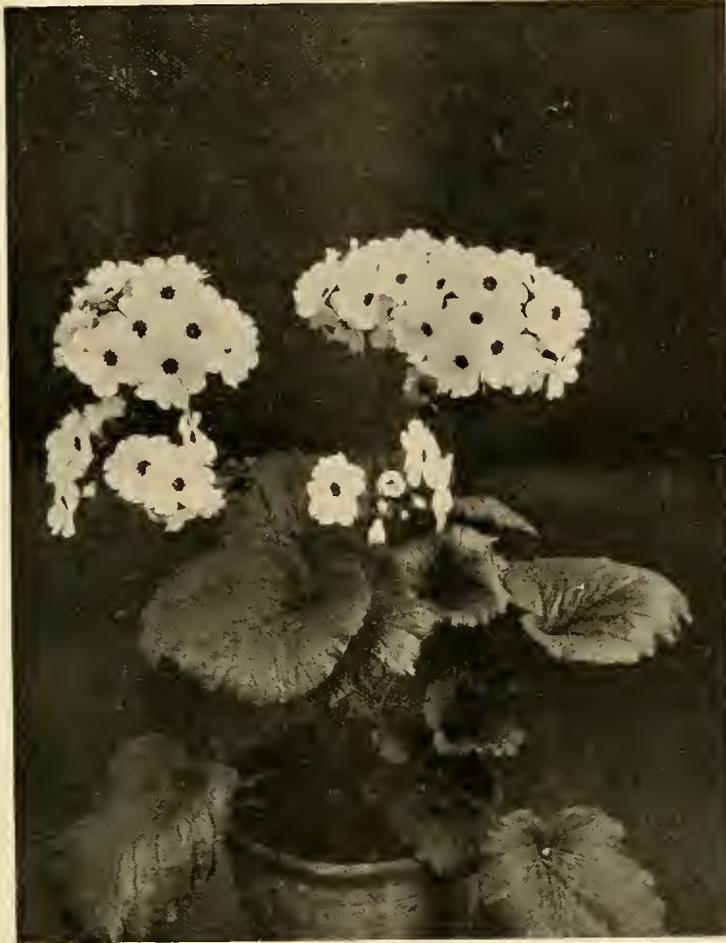
PRIMULA OBCONICA.

AMONG the many species of greenhouse Primulas it would be difficult to find one that is more generally useful than *P. obconica*, or the inversely cone-shaped Primula, the name being derived from the shape of the calyx. During recent years many fine varieties of it have been introduced, ranging in colour from the palest lilac to a very good blue. The size of the flowers and the length of the stems have also been greatly improved by selection and good cultivation. Plants are easily raised from seeds sown any time during spring, using well-drained pans filled with finely-sifted soil composed of loam and leaf-soil in equal proportions, with a good sprinkling of silver sand added. Make this moderately firm, scatter the seeds thinly on the surface and just cover them with silver sand. Water very carefully through a fine rose, cover with sheets of brown paper and stand the pans in a slight hot-bed or warm greenhouse. The paper must be removed as soon as the seedlings appear. When large enough prick off the seedlings into boxes or pans of similar soil and give them more air when established. When several leaves have formed pot the plants singly into small pots, using soil composed of two parts good loam, one part well-decayed cow manure and one part leaf-soil, with a good dash of silver sand. Shift on as the plants require it until they are in 4½-inch or 6-inch pots, in which they will flower the winter and spring following seed sowing. The plants are excellent for a slightly warm greenhouse, and also make fine subjects for a window. Gloves should always be worn when touching them as they are highly poisonous to some persons and on this account should not be placed where children can reach them.

THE KITCHEN GARDEN.

RUNNER BEANS FOR AMATEURS.

THIS vegetable can be grown to great advantage by the amateur who has only a small garden, as in many cases a fence or wall may be covered by it, and the plants also answer admirably to cover a screen or fence if the roots have sufficient food and moisture. On the other hand, there are certain difficulties to cope with. Soils are often far from the best, and the worst is a heavy clay soil. Slugs, too, have to be got rid of. I have also seen far too much food given at the start, with the result the plants grow rampant in a season like the last,



AN EASILY-GROWN GREENHOUSE PRIMULA: P. OBCONICA.

and the crop is by no means satisfactory; on the other hand, a very poor soil requires help.

PREPARING THE SOIL.

With heavy clay soil it would well repay the amateur to lighten it with fine old mortar rubble; failing this, use road sweepings, coarse sand, wood ashes or burnt earth. In many gardens a certain amount of success may be obtained in heavy soil by having a raised border if under a wall or fence, the only objection to this being that in a hot, dry summer more moisture is required. With a light soil a raised border is not advisable, and the amateur would do well to give a liberal amount of food in the shape of manure, cow manure being excellent if it has been laid in a heap for a few months. Soil at the foot of a wall or fence often dries quicker than in the open, and in this respect so much

depends upon the position of the border and other small details the amateur well understands. I am sure much better results would often be obtained if a little more attention was given to the soil at the start, and it should be borne in mind the labour is not lost, as it will grow the plants satisfactorily for years. In heavy land I have used old leaf-soil to advantage or spent Mushroom manure.

SEED-SOWING AND PLANTING.

The amateur frequently sows too early; only recently I saw Runner Beans sown the early part of March. I am aware every allowance should be made for mistakes, and that the amateur is anxious to secure early pods, but often this is retarded by too early sowing, growth not being sufficiently rapid when the soil is not warm enough to encourage root-action. I do not advise sowing earlier than the second week in May, and other sowings can with advantage be made until the end of the month. It is a good plan to make a drill or trench and sow the seeds in this 4 inches apart.

AFTER MANAGEMENT.

So much here depends upon the season. Last year a friend of mine lost much of the early crop by over watering with a hose; the weather was wet and cold and the soil heavy, and when watered every day the blossom dropped. In dry, hot weather, of course, it would be the reverse, and in a light soil plants in full bearing require liberal supplies of water and food, and the latter may be given in the shape of liquid manure or a good fertiliser, the last-named used as a surface dressing about every ten days and well watered in. Another point often overlooked is stopping the plants; it is often thought that the higher they run the better, but it is not so, as this growth is obtained at the loss of pods at the base. I certainly advise stopping or pinching out the points at 4 feet or 5 feet from the ground, or even less with a dwarf fence, as this induces the plants to throw out side growths and to fruit much sooner. The stopping must be continued as required through the season. This stopping does not apply later on in the season if a large space or height is required to be furnished. If the plants are allowed to grow as they please, the tops will double over after they get a few inches beyond the tops of the stakes and become badly bruised by winds and heavy rains. For plants on low fences or walls, the advice given above is specially applicable; but I would advise a trial of the Climbing French Beans. These are admirably adapted for limited space and low walls or fences. They resemble the Dwarf French in some ways, but run freely, and they are earlier than the ordinary Runner. There are some splendid sorts, such as Veitch's Climbing, Princess of Wales, Sutton's Epicure, Carter's July and Successor. Among Scarlet Runners we now have some very fine sorts. Carter's Scarlet Emperor is a variety that produces large clusters of very long pods; Sutton's Prizewinner is another that belongs to the long-podded section, and is splendid for exhibition; and Webb's Exhibition is also one that is capable of winning many first prizes. Other splendid varieties are Sutton's Best of All, Sutton's Scarlet (a good one for a hot season) and Carter's Jubilee Runner. G. W. B.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

VEGETABLE GARDEN.—Owing to the cold and unsatisfactory weather in the early spring many subjects are very backward. I am now thinning my Parsnips, leaving a space between them of about 1 foot. From a patch of Cabbage seed sown in early March and from seedlings subsequently pricked off I propose in the immediate future to plant them in their permanent quarters, observing a distance between the rows of 18 inches and 1 foot between the plants in the rows. The thinning of Carrots and Onions should not be delayed. The shorthorn Carrots should be thinned to about 2 inches apart, the intermediate varieties to 3 inches and the long-rooted to 4 inches apart. Subsequently it may be advisable to thin them again. If Runner Beans have not yet been sown, put them in at once. The earliest sowings are producing plants that are now making vigorous growth, and these will be staked at once.

The Greenhouse.—I am just now moving my Lilliums outdoors, standing them on tiles, boards, slates, &c., in a sheltered quarter of the garden. If stood on a good layer of coke breeze or sifted ashes the plants do well. The beautiful Arum Lily may be divided now and planted forthwith in specially-prepared quarters in the open. This operation was fully dealt with and illustrated in these pages some time ago. As the showy Pelargoniums go out of flower I am standing them outdoors for the growths to ripen preparatory to



1.—HIPPEASTRUM SEEDLINGS PRICKED OFF INTO A 5-INCH POT.

cutting them down. A later batch to succeed those just mentioned I am giving occasional applications of liquid manure. The manure water will be stopped when the blossoms open. Bushy growths on Petunias and Heliotropes may be secured by pinching out the points of the shoots; this must not be repeated, however, if really good results are wanted within reasonable time.

Chrysanthemums.—My late-struck plants are now being placed outdoors. The earliest batch are making headway in their sheltered quarters outdoors. We are now giving the plants rather more space, as air must pass freely through them and the sun's beneficent influence must also be experienced if good results are to be obtained next autumn. Pay careful attention to watering. Plants of the early-flowering sorts that have been thoroughly hardened off in the cold frames I am proceeding to plant outdoors in their flowering quarters. Give each plant plenty of room. The Japanese varieties require a space 3 feet square, the singles 2½ feet and the Pompons about 2 feet. Wherever possible, mass a few plants of one colour or one variety together.

The Rose Garden.—Suckers that so often develop should be removed at once, otherwise they may cause serious trouble or inconvenience. Maggots, grubs and caterpillars are sure to cause anxiety as new growth becomes more general. They must be dealt with at the inception of their depredations. Hand-picking is the best remedy, although syringing is often advocated. Syringing is efficacious in the case of aphides and may be followed with advantage. Weakly growths should be rubbed out, thus concentrating all the vigour of the roots on the stronger shoots that are retained. For flowering next year I propose to prune the climbing Roses under glass in the immediate future, by these means encouraging the development of stout and sturdy growths.

The Window Garden.—Plants in the window are benefited by being turned round from time to time; they become drawn and unshapely otherwise. Take advantage of fine days to afford window plants abundant ventilation. Plants that have well filled their present pots with roots should have an occasional application of manure water. Use preferably a well-known and reliable

patent or concentrated manure, as this is less likely to give off unpleasant odours.

The Cold Frame.—Plants raised in heat in the greenhouse should be transferred to the cold frame and gradually inured to hardier conditions. By these means I am able to transfer or plant outdoors later on quite a number of sub-tropical subjects for beautifying the garden through the summer season. Dahlias and other equally tender plants may be inured to hardy conditions of plant life by the aid of the cold frame. On fine days the frame-lights should be removed entirely.

D. B. C.

HIPPEASTRUMS: THEIR PROPAGATION AND CULTURE.

THE varieties of Hippeastrum, or, to give it the more common name in gardens, Amaryllis, have become extremely popular during the last few years. This is not surprising when we consider what a glorious sight they are when in flower. For size and brilliancy of colour they are unsurpassed by any other bulbous plant. Few better examples of the skill displayed by



3.—AN EIGHTEEN MONTHS OLD SEEDLING, SHOWING THE EFFECT OF PLUNGING THE POT TO A DEPTH OF 2 INCHES IN LEAVES ON A HOT-BED.

hybridists can be obtained than a comparison of the many beautiful hybrids, and the wild species, both of which can be seen in flower at Kew in the spring. The crossing and intercrossing of the flowers is a subject which the amateur might very well make a hobby, for few plants are easier to grow and give better results. When once the bulbs flower, with proper treatment they continue to bloom annually, often producing two and occasionally three spikes of flowers.

The question which may confront the beginner is how to start their cultivation, whether to purchase a few bulbs or a packet of seeds. Bulbs of really first-class sorts are expensive. On the other hand seeds of really first-class strains can now be obtained from 1s. per packet upwards. Although this may mean waiting a couple of years for the first flowers, the results will more than justify the time spent in growing the seedlings to the flowering stage. When once flowering



2.—A THREE MONTHS OLD PLANT READY FOR POTTING UP INTO A 3-INCH OR 4-INCH POT.

bulbs are obtained, seeds may be saved from the best blooms and a few plants raised each year. The selection of the flowers from which to save seeds is important, the chief points to consider in the flowers being colour, form, substance and size.

Propagation.—The seeds ripen in autumn, when some growers sow the seeds. When the supply of heat is limited it is better to defer sowing till early spring, as the young plants will then have the whole summer in which to make good growth. Sow the seeds in pots of light sandy soil, just covering them with fine soil, and place them in a propagating frame if available, or cover the pots with sheets of glass and stand them in the warmest available position in the greenhouse. The seeds soon germinate. When large enough to handle they may be potted off singly in small pots or placed several together in a larger size—4-inch or 5-inch, as shown in Fig. 1. In a compost of equal parts loam, leaf-mould and peat, to which plenty of sand is added, the young plants will make rapid progress.

Offsets.—These grow round the sides of the old bulbs (Fig. 5) and should be removed at the time of potting or top-dressing. A typical offset is depicted in Fig. 6. Pot them up singly in small pots, using soil similar to that recommended for seedlings. They are sometimes left to grow in the same pot with the parent bulb, but as a rule the blooms are not so fine as when the bulbs are grown one in a pot. The flowers of the offsets are, of course, identical in colour with those of the parent plant; seedlings, although saved from blooms pollinated with their own pollen, vary in colour.

Growing on the Young Plants.—By giving them plenty of heat, moisture and rich soil it is possible to flower the seedlings in eighteen to twenty months. Amateurs, however, are seldom able to give them these conditions unless the whole greenhouse can be devoted to Amaryllises and plants requiring similar conditions. In the ordinary greenhouse it takes from two to three years to flower the plants from seeds. The next move for the plants potted up singly will be into 5-inch pots, while those growing several together, one of which is illustrated in Fig. 2, should be potted up singly in 4-inch pots. Fig. 3 shows a plant eighteen months from seed lifted out of the plunger bed. This is a method favoured by some



5.—AN OLD BULB WITH NUMEROUS SMALL ONES, OR OFFSETS, SURROUNDING IT.



4.—A WELL-GROWN PLANT, ONE YEAR AND NINE MONTHS OLD, FROM SEED.

growers, others cultivate their plants with equally satisfactory results on the ordinary greenhouse stage.

Treatment of Flowering Bulbs.—In March the drainage of each pot should be carefully examined, the soil thoroughly soaked with water and the bulbs top-dressed or repotted if necessary. Use soil composed of two parts fibrous loam, one part leaf-mould, one part peat and one part well-decayed manure, with a sprinkling of bone-meal and sufficient coarse sand to make the whole porous. Very little water will be necessary till after the plants have flowered, as they obtain sufficient moisture from the syringing morning and evening. Amaryllises make most of their foliage after flowering; this is a very important period, for it is the time to lay a good foundation to obtain good flowers the following year. The plants benefit by liberal feeding when growing vigorously. They should be given all the sunlight possible and be syringed at least twice daily. In autumn, when the season's growth is completed, the supply of water may be gradually reduced. Only sufficient water is necessary during winter to prevent the bulbs shrivelling.

THE DISTANCE BETWEEN PLANTS.

WHEN a collection of plants are put out in a border it is very important that a proper distance from plant to plant be allowed so that each will have sufficient space to develop in, then the plants will form fine specimens and fill up the whole of the border without being unduly crowded. The system of bedding-out which obtains at the present time, viz., of filling flower-beds with a combination of tall and dwarf-growing plants, is a very effective one when rightly carried out. The tall or dot plants, as these are called, are sometimes too numerous in a bed, and so the general effect is marred. In such a case the large plants smother the small ones.

A Good Example.—If Fuchsias are employed as dot plants, specimens which are about 2 feet high should be planted 3 feet apart. Then we will suppose that Violas are used as a groundwork; these should be planted 10 inches asunder, they will thus form a complete carpet of healthy plants, and the Fuchsias will be seen to the best advantage from all points of view.

The Zonal Pelargonium Bed.—As a rule Zonal Pelargoniums fill a bed by themselves and are more successful so grown than when mixed with tall-growing subjects, because air and light must reach them freely. Overcrowding and excessive moisture results in both leaves and flowers damping off badly. Good plants turned out of 3½-inch pots should be planted about 1 foot apart. At the end of June the leaves of the plants will touch each other, but overcrowding will rarely occur, and when cuttings are taken later in the season ugly gaps will not be made, and the removal of the cuttings will prevent any undue crowding.

Tuberous Begonias.—These plants should be put out about 14 inches apart if they are good specimens, as the leaves are large and quickly fill up the space.

Edging Plants.—Naturally dwarf-growing subjects are used for the edging or bordering of a



6.—AN OFFSET CAREFULLY SEVERED FROM FIG. 5 WITH A SHARP KNIFE SO THAT A NUMBER OF ROOTS ARE ATTACHED.

flower bed, and they should be put in more closely than flowering plants which occupy the body of the bed, so that they will form a compact line unbroken at any point. Such plants as Lobelias, Coleuses, Ircsines, Violas, Grasses and Echeverias are so employed, and each one should be put in so as to allow of a few inches of open space between that will be filled soon after the bedding work is completed.

Carpet Beds.—The groundwork plants used in these beds must be arranged close together, so that the design will show up distinctly at once. Afterwards judicious pinching of the plants will be necessary to keep the design distinct. AVON.

THE TOWN GARDEN.

PLANTING DAHLIAS.—These are very satisfactory plants for the town garden whose borders are sufficiently wide for their accommodation, but if they are to yield of their best the soil must be thoroughly prepared by deep digging and generous manuring in the second spit. When the station has been thus prepared, the strong central stake should be put into position, and in planting the plant should be placed close up to it. Healthy young plants from cuttings struck this spring are the most reliable, and if they have not been raised at home they can be bought quite cheaply from hawkers or shops making a speciality of plants. They will be in 3-inch pots and will be finely rooted. When the planting is completed there should be a wide, shallow saucer all round the stem, as this will facilitate watering and the application of liquid manure later on. If the soil is poor and it is impossible to adequately enrich it with natural manure, the show and fancy varieties or the Pompons should be grown and allowed to flower with little or no disbudding, but in good soil Cactus varieties are best.

GERMAN IRISES.—For planting in many positions in the town garden where other plants would either refuse to grow or merely exist, German Irises are exceedingly useful. In narrow forecourts where the soil gets practically no rain naturally and little sun, or beneath trees, they will prove especially satisfactory if they can once be established, but this essential point often causes trouble. The amateur who has planted and failed on more than one occasion and has not tried moving them immediately after flowering is over should do so, and the probabilities are that if the soil is well worked and water is given now and again afterwards, success will reward his efforts. They may not flower very freely for the first and second seasons, but subsequently will not fail the grower in that direction; and if they did they would still be entitled to a place on account of their handsome leafage. As it is not desirable to disturb them any more frequently than is imperative, the amount of food in the soil should be maintained by annual top-dressings of rich soil or sweet manure; the former can be applied after flowering or the latter in autumn. During June and July particularly heavy waterings are very beneficial.

SURFACE STIRRING.—This is one of the routine operations of gardening which must never be overlooked or neglected, as it aids one so materially on the road to success. In the generality of cases Dutch hoeing is the best form of cultivation, for at the same time as it opens up the surface it cuts down the weeds, but it is not always possible of adoption when plants are closely packed in the beds and borders and are making free growth. In this event the most useful tool is a planting fork attached to a long Ash handle. With this one can work in and out among the plants without the remotest chance of doing injury, but it will, of course, be necessary to do the weeding by hand. Such a tool as this comes in handy for several purposes and should always have a place in the set.

VIOLAS.—Those whose gardens are of light soil that dries out quickly are somewhat prone to hesitate whether to grow Violas or not, for it is generally understood that they prefer a stronger, moisture-rooting medium. No matter, however, what the soil may be they should always be grown, for they make a beautiful display, provided that they receive proper attention. Some manure should be worked into the soil and the planting must be done firmly. After that the principal thing is watering, and in well-drained gardens it does not appear to be possible to overdo this; if they have a really good soaking every alternate evening, they grow vigorously and flower with a freedom which other plants may equal, but certainly cannot excel. Favourite varieties of mine are Bullion (rich yellow) and True Blue. HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FRUIT HOUSES.

PEACHES AND NECTARINES that are ripe and ripening should have abundance of air, so that the flavour of the fruits is enriched. Tie in the young growths, especially those that shade the fruit, and the leaves which cover the fruits should be pulled or fastened aside while the fruits are colouring. Give plenty of water, and do not miss damping down several times daily. It is not necessary to stop syringing except for a very few days when the fruit is in the last stages of ripening. Trees in succession houses should be kept tied, and no more wood laid in than is absolutely necessary; the present is a good time to take out any barren growths and fill in with new. Plenty of room should be given for development of the foliage. In dull weather the temperature should be 60° to 65°.

Vines which are rapidly colouring should have abundance of air daily in fine weather, and a little chink, enough to dispel moisture, at all times. See that the borders are in proper condition of moisture, as the Vine takes a lot of water. Continue to stop the laterals till the Grapes are ripe, when they may be allowed to grow as they will shade and help keep the berries in proper condition. Keep Muscats at a good even temperature of about 75° to 80°, and put on a little air every morning at 6.30. Prick over the border when thinning is completed, give a good sprinkling of artificial manure, and follow with a thorough watering of tepid water as near as possible at the temperature of the house. Many a check may, I think, be traced to cold water. Houses containing late varieties should be well thinned, and when long shoulders are liked, these should be carefully tied up.

Figs that are yielding ripe fruits should be kept a trifle drier on the foliage, but not at the roots, or the second crop may suffer. As soon as the crop has been gathered, top-dress with manure and give a thorough watering to help along the second crop. Encourage succession houses in like manner. Tie in the growths and stop the ends of the shoots, except where longer growths are required.

HARDY FRUIT GARDEN.

Peaches that have set a good crop must be thinned early; if any curled or blistered leaves still exist continue to remove and burn them. Proceed with the disbudding as fast as possible, so that there is no undue strain on the tree.

Apricots will now require stopping, except where a tree is forming, then stop only those branches which are not required. Lay in exactly the number of shoots you have room for and no more. Stop the branches before they get hard, as the Apricot does not like the knife. Put the nets over the Strawberry quarters; this will ward off a degree or two of frost should any prevail.

KITCHEN GARDEN.

Turnips and Parsnips.—Thin these as soon as they can be conveniently handled; all crops are better if thinned early. Peas and Runner Beans should again be sown, and Carter's Michaelmas Pea sown the first week in June for latest crops. Sow Carrots every fortnight to have successions of young edible roots, also salading plants little and often.

Vegetable Marrow Beds should be made, and those planted out under hand-lights and in frames may have the lights removed on all bright days. Marrows do well on the flat ground if a hole is taken out and a few spits of good manure

dropped in, with a bit of good soil on the top to plant in. Prick off Celery now in quantity.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

HANGING BASKETS.—When the roof of the stove or conservatory is not overcrowded with climbers the employment of hanging baskets will much improve the general appearance of the structure, and for this purpose some Ferns are most suitable. The old and well-known *Nephrolepis tuberosa* and the smaller-growing *N. pectinata* are both desirable. *Davallia tenuifolia Veitchii* is also excellent, and the beautiful lace-like fronds hanging over and around the baskets have a very attractive appearance.

Pot Roses.—Now that these popular flowers have given their main crop of blooms, we must work among them most assiduously if the best results are to be obtained for a future season, as success depends so much on present treatment and the class of growth secured. However well and carefully one may attend to the plants later on, it will be comparatively useless if they are neglected now.

FRUIT UNDER GLASS.

Grapes.—Second early Hamburgs and other summer Grapes will now be at the stoning stage, and, presuming all lateral growth has been closely pinched just before the process commenced, the work must now be temporarily suspended, or only carried on so as to prevent actual crowding of the foliage. Afternoon closing may likewise be postponed a little beyond the usual hour, as undue pressure in any respect is not advisable at this somewhat critical juncture.

HARDY FRUIT.

Cherries on Walls.—In exposed situations, owing to the prevalence of adverse winds and cutting frosts, the extremities of the new growth of various kinds of Cherries are liable to become infested with black aphid. On the first appearance the trees must be syringed (preferably with a hose) with soap-suds, this application to be followed by a second of clear water the following day.

KITCHEN GARDEN.

Seakale.—The sets inserted some time ago for the main forcing batch now being somewhat advanced in top growth should be gone over, and the new crowns reduced to about a couple on each set. Some growers never thin at all, but this practice is ruinous, as no sun or air can gain admission, and weak, puny produce, utterly unfit for forcing, is the result. After reducing the crowns use the Dutch hoe freely to keep down weeds.

Newly-planted Rhubarb.—Where new plantations were formed this season, and early sorts given a sunny position and warm soil in order to encourage early growth and ripening of the crowns for forcing, a good thick mulch must be given and water supplied to the roots, as many new fibres will now be at work. Upon no account pull any from these plants this season, as this would greatly weaken the crowns.

FLOWER GARDEN.

Lilies.—Newly-planted Lilies of the late flowering types will be all the better for a little protection to the early growths. If this protection can be afforded by growing shrubs or plants of any kind so much the better, but spray tips from Pea sticks answer very well, and they should be high enough to afford some shelter until the end of the month.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe Norwich.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Crown Imperials (Constant Subscriber).

These things are very erratic in their behaviour, and it is not at all improbable that some of the bulbs may still be quite sound and firm, while others may have decayed. Impatient of removal generally, the bulbs, if long out of the soil and much dried, will take a long time to recover. As there is now so little growth apparent, we advise you to wait till July, then lift them for examination, replanting the sound ones at a depth of not less than 6 inches. As your soil is heavy brick earth, it would be well to lighten it with sand or grit before replanting, selecting a warm position when doing so. Only bulbs of the largest size flower; the others may remain without giving evidence of leaf-growth at all or producing but the merest apology for the same.

Belladonna Lilies flowering now (E. O. P.).

—We have never before known Belladonna Lilies to behave in the same way as yours. In our opinion their throwing up spikes in spring is mainly owing to the cold wet summer experienced last year. Owing to the absence of sunshine it is probable that the embryo flowers were only partially formed when growth was arrested, and consequently they did not possess sufficient vigour to make their appearance above ground at the proper time. As the stems are rotted off at the base they will not in any way interfere with the autumn flowering, no more in fact than if they had developed and expanded their blossoms last autumn. Belladonna Lilies need fairly liberal treatment, and it is possible that yours may be somewhat starved. A thorough watering with liquid manure for two or three times at intervals of a fortnight may be helpful. Give the first dose at once.

Bulbs in grass (Ridgeway).—If the bulb growth is good, liquid manure will be of some assistance, and this you may apply to suit your own convenience. If the growth is weak, it is highly probable that lifting and replanting are necessary. The diminished flowering may be due to two causes, viz., weakening growth or the lack of sun-beat in 1907. On the other hand, the Tulips may have descended by means of "droppers" to too great a depth, and in such instances do not flower till lifted and replanted nearer the surface. At the same time, we would point out that all classes of bulbs in sandy soil require more frequent attention in the matter of replanting than do those in cool or moist clay soil. If from this reply you are not clear what to do please lift a bulb and forward for our inspection.

Information about Violets (E. Bates).—Young plants of Violets may be obtained almost anywhere, and many firms advertise these things for sale in our columns. Some of the specialists are Messrs. Cannell and Sons, Swanley, Kent, and Messrs. I. House and Son, Westbury-on-Trym, Bristol. We are not sure to what you refer when you speak of "winter-flowering Begonias," and whether the newer varieties which originated with Messrs. Veitch and Sons, Limited, Chelsea, are intended or the smaller-flowered varieties of the Gloire de Lorraine group are meant. The latter are freely advertised from time to time, and such growers as Messrs. Cannell and Messrs. H. B. May, Edmonton, grow them freely, also Messrs. Peed and Son, West Norwood. Tubers of Gloxinias should have been started before now, but you may still obtain dry roots from the firms last named. A good way to grow Gloxinias is to raise the plants from seeds, and these, if sown in heat in January, would flower in six months if grown on quickly and well. Messrs. Cannell and Sons, Messrs. Peed and Sons and Messrs.

Sutton and Sons, Reading, would supply seeds of these plants and of a reliable strain. The dry cutters if planted now would be in flower about August, and later with ordinary greenhouse treatment.

Garden plan (Norfolk).—Were we desirous of planting a few things for lasting effect we should favour Hybrid Tea Roses, with bulbous plants such as Lilies and Daffodils, among them, and the surface of the beds carpeted with Tufted Pansies. By adopting a method such as this you could edge the beds with mossy Saxifragas or Aubrietias, or both, and plant Hepaticas, Adonis, Anemone blanda, alpine and other Phloxes, Polyanthus and such things freely. The Eucynus as a marginal plant in so small a garden does not appeal to us, and we favour the idea of planting Tea or Hybrid Tea Roses rather thinly, one variety to each bed, then dibbling in a few inches apart at the right season good Narcissus, Lilies, &c., or even Fritillarias, and edging and planting the beds with the above-named subjects. The Roses need not predominate. Or by planting bulbous Irises, single and double Pyrethrums, Columbines, Lilies, Hepaticas, Anemones and other plants the Roses could be left out. Daphne mezereum, Forsythia suspensa, or a big group of Cydonia may occupy the centre of the bed to advantage. There would also be room for Lilies in these beds.

Propagating Kniphofia caulescens and Erica carnea (C. G. O. B.).—The deaths of your plants of Kniphofia caulescens are difficult to account for, as in much colder districts plants of this species stood quite well, even last summer. If your plants are on dry soil, which they should be, the probable cause is a little want of protection in spring, and a few boughs loosely placed about them will be helpful. The plants for propagation should either be hebeaded in late autumn or early spring long before flowering, as shoots cannot mature properly after flowering. The safest method of increase is by the shoots, or rather suckers, which should come from the base of the plants and not from the stems, which, we gather, are those you have used. The former will form a few roots naturally, and they can be taken off and put into a frame or into pots in a greenhouse for the first winter. If you try the shoots from the stems, take a little piece of the old stem with the shoots and strike them in gentle bottom-heat. Do this when they are 3 inches or more in length. The same remarks apply to K. Northia. As soon as Erica carnea has done flowering clip it back, and draw some fine soil about the stems for 2 inches or 3 inches up, working it well among them. Roots will be emitted into this, and the plants can then be divided in autumn, keeping some roots to each division. We are glad you find THE GARDEN useful.

TREES AND SHRUBS.

Information about Almond trees (Wanderer).

—The Almond tree is quite hardy in this country and will thrive in almost any soil, provided it is well cultivated and is not waterlogged. They do not need any special treatment, and a good avenue of them should be a sight worth travelling far to see. The varieties are equally hardy, and any of them would do well in your locality. You could not successfully plant them now; prepare the positions during this summer and plant in the autumn, say, the end of October or early in November.

Holly leaves spotted (Lea).—The Holly leaves you send are attacked by the grubs of the Holly fly, which is known under the scientific name of Phytomyza ilicis. The fly bores a small hole in the leaf, deposits an egg, and leaves the rest to Nature. The eggs produce the grubs and they feed on the leaves below the surface, causing the brown patches. The way to clear out the disease is to pick off affected leaves and burn them, or to syringe the plants once a week during April, May and early June with an insecticide made by dissolving half a pound of soft soap and 2 pints of paraffin together, then adding 12 gallons of water. If steps are not taken to eradicate the pest, other Hollies in the vicinity will be attacked. The pest does not, however, attack other kinds of trees.

Laurel leaves injured (A. E. S.).—Your Laurel leaves have undoubtedly been eaten by some insect, and we have but little doubt that the author of the mischief is the caterpillar of one of the night-feeding moths. Probably it is that known as the silver Y moth (Plusia gamma), the perfect insect of which can be readily distinguished by a peculiar white Y-shaped mark on the brown ground colour of the upper wings. The caterpillar will eat almost anything, but we have never seen them attack the Laurel to the same extent as in the specimens sent by you. Of course the mischief was done long since. As these caterpillars feed during the night they must be sought for at that time. As you purpose clearing away the Laurels and getting rid of the accumulations of rubbish, the pest will in all probability give but little trouble in the future. As much of the rubbish as possible should be burnt, as by this means all insect life will be destroyed.

Treatment for a Wistaria (C. S. P.).—The only way you can induce your Wistaria to push out leaves on that portion of the stem which remains bare is to cut it back, say, to within 8 feet or 10 feet of the base. This will cause the production of new shoots, and as the plant is on a wall they can then be trained as desired till the required space is furnished. It would have been better had the cutting back been done earlier, but it is not too late even now to carry it out. If the plant is young and flexible, it may be bent back in such a manner as to arrest the flow of sap and cause the production of new shoots, but as yours is 40 feet long it is probably too old for this treatment.

Name and information about a flowering tree (J. G. P.).—The flowers you send are those of Prunus Padus (the Bird Cherry). The tree is a native of Britain, and in some districts is found either as a shrub or small tree in copses and hedgerows. It can be increased by means of seeds, which are produced freely and ripen in August. Cuttings can be rooted, but this method of culture is not usually adopted. Half-ripe shoots, 4 inches to 6 inches long, may be inserted in pots of sandy soil and placed in a warm and close case in July or August, or ripe shoots, 1 foot long, may be put in the open ground in October or November, in a similar manner to Currant cuttings. We have never seen it forced and doubt whether it would be a success treated as an indoor plant, its size being very much against it. There are many more Prunuses which are very much better subjects for forcing, P. japonica fl.-pl. and P. triloba fl.-pl. being cases in point. There are many varieties of P. Padus, one with semi-double flowers being specially noteworthy.

ROSE GARDEN.

Rose tree nearly dead (T. S.).—We have little doubt that the trouble has been caused indirectly by the heavy dressings of manure that you mention. These would, as you say, induce the trees to make a strong, vigorous growth, which would not ripen up well last autumn, consequently the severe frosts experienced during the past winter has killed them. There seems to be a tendency now to feed Roses in an altogether unreasonable manner.

Exhibition Roses from cut-back plants (R. E. T.).

—There are some of our best exhibition Roses that are only reliable when budded annually. These are termed "maiden" plants, but the following succeed well from cut-backs, that is, plants that are planted permanently and pruned hard each year. We are not quite sure whether you desire the names of eighteen Hybrid Perpetuals, Hybrid Teas and Teas collectively or eighteen of each group, so have given the latter, and they may be taken as named in the order of merit. Hybrid Perpetuals: Frau Karl Druschki, Mrs. John Laing, Ulrich Brunner, Hugh Dickson, Mrs. Sharmar Crawford, Suzanne M. Rodocanachi, Captain Hayward, Helen Keller, Prince Arthur, François Michelin, Dupuy Jamain, Alfred Colomb, Mme. G. Luizet, General Jacqueminot, Duke of Edinburgh, Etienne Levet, Beauty of Waltham and Margaret Dickson. Hybrid Teas: Dean Hole, Caroline Testout, Mrs. W. J. Grant, La France, Lady Ashtown, Florence Pemberton, Killarney, White Lady, Melanie Souper, Lady Mary Fitzwilliam, Joseph Hill, Richmond, Mrs. Theodore Roosevelt, Gladys Harkness, W. Shean, Pharisaer, Mrs. D. McKee and George L. Paul. Tea-scented: White Maman Cochet, Mrs. E. Mawley, Maman Cochet, Mme. Jules Gravereaux, The Bride, Comtesse de Nadaillac, Souvenir de Pierre Notting, Medea, Catherine Mermet, Mildred Grant, Bridesmaid, Souvenir de S. A. Prince, Boadicea, Innocente Pirola, Mme. Hoste, Souvenir d'un Ami, Marie van Houtte and Mme. Constant Souper. A few varieties that are specially good as "maidens" are: Mildred Grant, Hybrid Tea; Horace Vernet, Hybrid Perpetual; Victor Hugo, Hybrid Perpetual; Marquise Litta, Hybrid Tea; Duchess of Portland, Hybrid Tea; A. K. Williams, Hybrid Perpetual; Ulster, Hybrid Perpetual; and Robert Scott, Hybrid Tea.

Young Rose shoots injured by insect (R. K.).—We believe the injury to the young shoots is caused by woodlice, and the reason you cannot detect them at work is that the mischief is generally done at night. We advise you to examine the plants at night and you may catch the depredators at work. You may destroy the woodlice by placing some small pots about with a little moss inside, which attracts them, and the pots are emptied at intervals into some boiling water. Or some Paris green mixed with sugar placed about in the house

quickly kills the pests. Sometimes the tiny black grub will do immense damage among the young growths if not caught, but they usually work at the extreme ends of the shoots.

Pruning Hiawatha Rambler (C. H. R.).—The wicliurana Roses require but little pruning, and we do not advise you to prune your plants at all this season seeing that their growths are but 3 feet to 4 feet long. They would answer very well partly pegged down, but should not be closer than 1 foot to the grass, or you would find that the grass would choke the young growth. It is always best to give the wicliurana something to run upon, such as an old tree stump or some roots of some sort. A few hoops placed in the lawn and the growths of the Rose tied on to them would answer very well. We have formed a framework of osiers like the handle of a basket and tied the growths thereon, and very beautiful they appear with the sprays of bloom all over the growth. Most of this beautiful group lend themselves to almost endless ways of training, their growths being so pliant. They look very interesting trained as small pillars and dotted among dwarf Tea Roses.

Sulphate of ammonia for Roses (T. A.)—This is an excellent fertiliser for Roses, but it is best to apply it mixed with superphosphate. Give a good dressing at once at the rate of 3lb. of sulphate of ammonia and 1lb. of superphosphate to 40 square yards of surface. One application will be sufficient, but when the small flower-buds are seen some liquid manure should be applied. That made from cow manure and soot is an excellent stimulant. If you place two paraffin casks in an out-of-the-way part of the garden, these could be used for the liquid manure. Put about a bushel of the cow manure into one of the casks and fill it up with water. Into the other put two pecks of soot and fill up with water. Both the manure and soot should be in porous bags, then the liquid can be strained off almost clear. In applying this two parts of the cow manure liquid, one part of the soot liquid and three parts water should be mixed together, giving each plant about 1 gallon of the mixture once a week.

MISCELLANEOUS.

Gloxinia leaves Injured (F. J. F.).—The injury to the Gloxinia leaves is caused by thrips, which can be readily destroyed by vaporising with the XL All Vaporiser. Owing to the state the leaves are in a single vaporising will not be sufficient to clean the plants thoroughly, hence it should be done two or three times at intervals of ten days or a fortnight. The presence of thrips in such numbers suggests that the atmosphere of the house in which the Gloxinias were grown was much too dry.

Road scrapings and clay soil (Anxious).—There is no connexion whatever between what is known as flinger and toe disease and dressings of road scrapings. If the road has been treated with tar or some similar dressing or is much frequented by motor-cars that drop petrol on the roads, the scrapings might be harmful or poisonous. But we assume yours are ordinary country roads, not so affected, and have surfaces of gravel or flint, which, being ground by traffic, forms rather fine grit. This is quite innocuous matter, but it is very poor, adding nothing to the fertility of the soil, but simply making it rather more open or porous. The greater the quantity of horse manure and road-side trimmings that may be in the scrapings the better for the soil, as those add fibre, and also as they decay become plant food. If your soil does produce the flinger and toe fungus, your best course is to give it a dressing of gas-lime (40lb. to the rod) when uncropped in the autumn. Coal ashes do soil more harm than good, but wood or turf ashes make capital stiff soil dressings.

SOCIETIES

ROYAL GARDENERS' ORPHAN FUND.

A RECORD AND MOST INTERESTING GATHERING.

The coming-of-age festival was held in the Victoria Room of the Hotel Cecil on the 12th inst., His Grace the Duke of Bedford, K.G., in the chair. As usual, the tables were most beautifully decorated with flowers sent by various nurserymen who are interested in the fund. The chairman, in giving the toast of "The Royal Gardeners' Orphan Fund," referred in sympathetic tones to the responsibility of those gardeners who are fathers, and mentioned that there seemed to be a general tendency by private employers to secure men "without encumbrances," and, although this might be advantageous from a private standpoint, it had also a serious national aspect. The fund was now maintaining and educating 116 children, and they might do more were the means available, and he appealed to them to see that the institution was always enabled to carry out its objects. Mr. Edward Sherwood, treasurer of the fund, in replying, stated that he hoped the present gathering was a record one. Mr. Sherwood announced that, to celebrate the passing of the coming of age of the fund, his father (Mr. N. N. Sherwood), his elder brother and himself had decided to establish a new section of the fund (1908) in honour of his father's little grand-daughter, Maybnd Campbell, whose name this section would bear. The Mayor of Westminster (Mr. J. W. Dennis, J.P.) proposed the toast of "Gardeners and Gardening," referring in an interesting way to the work that gardeners were called upon to do. In replying, Dr. J. B. Farmer, F.R.S., pleaded most eloquently for Government recognition of

British horticulture. Other excellent speeches were made by Mr. W. Pount, who proposed "The Visitors," and Mr. Arnold White, who responded.

Mr. Wynne, the secretary, announced that the record of last year in attendance and subscriptions had this year been surpassed, the total amount subscribed this year being £1,385, exclusive of the £300 from Messrs. Sherwood. The principal contributions to this sum were as follow: His Grace the Duke of Bedford, £250; Leonard Sutton, £100; George H. Cuthbert, £63 10s.; George Reynolds, £60 10s.; J. F. McLeod, £25 (including £20 from Messrs. Dobbie and Co.); R. B. Leech, £22 12s.; Lord Mountstephen, £20; David W. Thomson, £14 18s. 6d.; R. Hooper Pearson, 14 guineas; Whitpain Nutting, 14 guineas; T. W. Sanders, 11 guineas; W. Allen, James Veitch and Sons and Harry J. Veitch each 10 guineas; W. P. Thomson, £9 8s.; Thames Bank Iron Company, £10; James Douglas and J. Witty each 6 guineas; Cuthbert and Sons, J. W. Dennis, Alfred Watkins, S. Segar, Charles Dixon and George Bunyard each 5 guineas. The Covent Garden friends subscribed £260 13s. 6d. Mr. H. P. May proposed "The Chairman" and His Grace responded, thus terminating a very pleasant gathering.

DAFFODILS AND TULIPS AT VINCENT SQUARE.

A MOST important announcement was made at the meeting of the Narcissus and Tulip committee on the 12th inst., namely, that the council had acted on their recommendation and appointed a sub-committee to draw up such a classification of Daffodils as might be useful for show and catalogue purposes and which the society itself might adopt at all its meetings.

This sub-committee has met and a start has been made, but the task is a big one and will necessarily take time; still, it is thought that the results will be available in time for the 1909 schedules. I fancy the general idea will be found to be the dividing up the whole of what may be called show Daffodils into about eight or ten main groups and then assigning each flower to its special division, much as the Sweet Pea Society do with their list of Peas of each colour. If the scheme can be successfully carried out, it will meet a want which each year's shows seem to emphasise.

An award of merit was given to Mr. Walter Ware for a very fine late Poet called Snowshoe (raiser, Mr. G. H. Engleheart). It has a tall, robust habit, and, being of good substance, its petals are very lasting. It is a little like *Almira* in shape, but the eye has the recurved colouring. No less than eight groups of either Daffodils or Tulips, or both, were in the hall, which was filled to its utmost extent. Unfortunately, the lateness of the season told upon the one and the cold, severe weather on the other, so the quality of bloom was rather below the average. Silver Flora medals were given respectively to Messrs. Barr and Son, Messrs. R. H. Bath, Messrs. R. Wallace and Co. and Mr. A. W. Wilson, and a bronze Flora medal to Miss Spurrell. Looking at the flowers one felt the end of the Daffodil season was not far off.

What a trying time it has been for many of us! Nothing can emphasise this more than to remind readers that neither the Rev. G. H. Engleheart nor Messrs. Pearson and Sons of Chilwell have been able to stage a single exhibit in London, nor the latter for that matter anywhere else. Certainly Mr. Engleheart did bring a box, and I was privileged to look into it. One flower it contained was very striking, a pure white Leedsii, like an immense Princess of Wales, only with a most pronounced citron yellow edge to the cup. It was a vision of what we may expect next year. Mr. Chapman has a remarkable flower called *Canarii*, raised by the Rev. G. P. Haddon. It is an Ornatus with a primrose perianth. To me it was a great novelty, but Mr. H. Backhouse of Eastbourne told me he had seen one such flower once among a lot of wild ones in their native home, and that he now had it in his garden. *Canarii* is not only remarkable, it is beautiful, the softness of its colouring being very pleasing.

There were some good single and double early Tulips. Princess Helen (a splendid white) and Hector (orange red, with soft yellow edge) on Messrs. R. H. Bath's stand were fine. So, too, were *Jaune Aplatie* (a yellow Rose Aplatie) and *Rose Luisante* (large rosy pink) in Messrs. Barr and Son's group. The Darwins were hardly grown enough, but the above two firms, and also Messrs. Wallace and Co. and Mrs. Benson, has some good standard varieties. Mr. Wilson had some well-grown blooms in front of his Daffodils. Stanley (or *Cramoisi Superbe*) is a lovely shade of rosy red and, as I saw it in Holland this year, very effective in a large mass. Sir Thomas Lipton (bright red) was in Messrs. James Veitch and Sons' group. It is excellent for bedding—durable and of good shape. There were but few "cottage" varieties. I hope this is only a pleasure deferred, and that the Temple Show will be found to be just timed this year to suit them.—JOSEPH JACOB.

CROYDON AND DISTRICT HORTICULTURAL MUTUAL IMPROVEMENT SOCIETY.

The eighth annual spring flower show of this society was held at the Horniman Hall, Croydon, on the 6th inst. The committee have in view the fostering of a love of horticulture in the minds of all, and through the generosity of the society's supporters are able each year to give free admission to the general public. In response to such a kind invitation it is needless to say that the number of visitors attending is very great, and from the time the show opens at three o'clock till its close about ten o'clock the hall is full. No prizes are offered to the exhibitors, so that they are to be complimented on the enthusiasm they display in making the affair a success. From the gardens of the president, Mr. J. J. Reid, came a grand exhibit of *Schizanthus*, *Azaleas* and *Mignonette*, reflecting great credit on his head gardener, Mr. F. Oxtoby. Mr. J.

Pascall's gardener (Mr. A. Edwards) had a miscellaneous group of plants, including well-grown *Calceolarias* and double *Cinerarias*, and Mr. C. Lane, gardener to Mr. C. H. Coles, Caterham, put up some good *Hippeastrums* and *Caladiums*. In one corner Mr. J. J. Pittman's gardener (Mr. A. Dyer) staged an effective exhibit of *Cineraria stellata*, *Cyclamen* and white Stocks. Sir Walpole Greenwell sent cut flowers, including double and Regal *Pelargoniums*, *Cypripediums* and two fine sprays of *Cymbidium lowianum*, which his gardener (Mr. W. Smith) very effectively arranged. A very fine *Azalea* came from Mrs. Matthews of Anerley, and her gardener (Mr. C. Trower) evidently knows the cultivation of this class of plant, for it was a mass of flowers and measured 2 feet 6 inches in diameter. A pretty exhibit was made by Mr. Wateredge, gardener to Mr. Otto Hehm, with *Cineraria stellata* in good colours and vigorous plants. Mr. Frank Allen's *Spiraeas* and *Hippeastrums* were also much admired, and the society welcomed a new exhibitor in his gardener, Mr. Beacon. Two cottagers contributed exhibits, Mr. J. R. Tice bringing some well-grown *Auriculas* and Mr. R. Cleveland a collection of Cacti. The trade was well represented. Messrs. J. Peed and Son had a collection of alpinas, these being arranged in boxes and adjoining a few Carnations, making an interesting exhibit. Alpines were also shown by Mr. J. R. Box, while the firm of Messrs. J. R. Box and Co. arranged a miscellaneous group of Tulips and Narcissi. Mr. P. Chaff arranged a miscellaneous group of plants, and the stage was tastefully decorated by Mr. T. Butcher. Messrs. E. W. and S. Rogers had a table of Hyacinths, including the best varieties, all of them having very fine trusses.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

THE usual monthly meeting of this society was held at the Horticultural Hall, Vincent Square, Westminster, on Monday evening, the 11th inst., Mr. Charles H. Curtis in the chair. Five new members were elected and one nominated. The death certificate of a late member was produced and a cheque passed for the amount standing to his credit in the books in favour of his nominee. The amount of sick pay for the past month was £25 12s. The amount of sick pay to May in 1907 was £199 11s., and to the same time this year it was £154 8s., being less by £45 3s. There are five chronic sick and five other members on the sick fund at the present time. The annual report and balance sheet has been posted to all honorary and benefit members. Will any member who has not received a copy please notify the secretary?

ROYAL HORTICULTURAL SOCIETY.

ORCHID COMMITTEE.—MAY 12.

PRESENT: Mr. J. Gurney Fowler (chairman), Messrs. James O'Brien, de B. Crawshaw, H. Little, W. Boxall, R. Thwaites, F. Sander, A. A. McBean, J. Cypher, H. G. Alexander, Arthur Dye, F. J. Thorne, W. H. White, H. Ballantine, Gurney Wilson, W. Bolton, Norman C. Cookson, Harry J. Veitch, Walter Cobb, J. Wilson Potter, Stuart H. Low, F. Mentiess Ogilvie, Frederick J. Hanbury, H. Tracy and C. J. Lencas.

Messrs. J. Veitch and Sons, Limited, Chelsea, staged a very pretty group of Orchids, consisting chiefly of well-grown plants of *Odontoglossum Pescatorei*, *Dendrobium chrysotomum* was also very fine, a grand specimen carrying four good-sized inflorescences of the rich yellow flowers. In the centre of the group was a magnificent plant of *Brasso-Cattleya Veitchii*, this carrying three huge, well-coloured flowers. *Dendrobium thysiflorum* and several fine forms of *Odontoglossum crispum* were also noticeable in this group. Silver Flora medal.

Messrs. Hugh Low and Co., Royal Nurseries, Enfield, staged a nice little group of Orchids, in which we noticed a fine specimen of *Lycaste lanepes*, which had ten large, well developed creamy flowers. *Dendrobium thysiflorum* was also very fine, and a grand plant of *Cattleya Mendelii* was included.

From Messrs. Cypher and Son, Cheltenham, came a most attractive group of well-grown Orchids, these being tastefully arranged and comprising many choice subjects. *Miltonia vexillaria splendens* was very fine, and some grand plants of *Laelia purpurata* were particularly noticeable. *Leptotes bicolor*, *Cochlioda sanguinea*, *Cattleya Mendelii* and some good varieties of *Odontoglossum crispum* were also included. Silver Flora medal.

Sir Trevor Lawrence, Bart., K.C.V.O., Burford, Dorking (gardener, Mr. W. H. White), staged a very choice group of new Orchids, these including *Cattleyas*, *Dendrobiums*, *Odontoglossums* and *Epidendiums*.

Mr. Maurice Mertens, Mont St. Amand, Ghent, put up a very pretty little group of Orchids in good variety. These included some very fine *Odontoglossum* hybrids, a fine plant of *Cattleya Mendelii* and a good *Miltonia*. Silver Banksian medal.

From Mr. H. S. Goodson, Fairlawn, West Hill, Putney, came a very choice and pretty little group containing many kinds in splendid condition. *Cologene pandurata* magnificent, with its green and black flowers; *Brasso-Cattleya Mossie digbyana*, *Masdevallia ignea* and *Cattleya Insseldorffii* undine were some of the best seen. Silver Banksian medal.

ILFORD HORTICULTURAL SOCIETY.

THIS well-known suburban society has just held its second *Auricula* show at the Reading Rooms, High Road, Ilford, under the presidency of the Vice-President Councillor W. O. Sheat. There was a first-class attendance, and the display was of the best. During the evening the Rev. C. H. Vine, the "Nonconformist Bishop of Ilford," gave a much-appreciated lantern lecture on "Wayside Wonders."



NEW SWEET PEA EVELYN HEMUS.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

"COLOUR IN THE GARDEN."

ONE of the most practical and looked-for books that have appeared of recent years is "Colour in the Garden," by Miss Jekyll, who has been for many years working, to quote from the introduction, at these problems in her own garden at Munstead Wood, and "can venture to put them forth with some confidence." This work will, we think, influence the flower gardening of the future. The mixed border is generally "mixed," and it is impossible to cram four seasons into one strip of ground.

"I believe," Miss Jekyll writes, "that the only way in which it can be made successful is to devote certain borders to certain times of the year; each border or garden region to be bright for from one to three months." And at this season when the leaves of the bulbs are yellowing the mixed border is unsatisfactory. One cannot disturb the foliage without weakening the bulbs, and, therefore, one must wait patiently for that dying away which becomes wearisome when the summer-flowering plants are at hand to fill the places of the bulbs. "Nothing seems to me," Miss Jekyll writes—and we are in complete agreement with her remarks—"more unsatisfactory than in spring shows a few patches of flowering bulbs in ground otherwise looking empty, or with tufts of herbaceous plants just coming through. Then the bulbs die down and their place is wanted for something that comes later. Either the ground will then show bare patches or the place of the bulbs will be forgotten and they will be cruelly stabbed by fork or trowel when it is wished to put something in the apparently empty space." One of the pleasantest recollections of Munstead Wood is of the "main hardy flower border," a sumptuous mass of colouring for many weeks, and a revelation of the possibilities of producing brilliant effects. This border is "about 200 feet long and 14 feet wide. It is sheltered from the north by a solid sandstone wall about 11 feet high, clothed for the most part with evergreen shrubs—Bay, Laurustinus, Choisya, Cistus and Loquat. These show as a handsome background to the flowering plants. They are in a 3-foot-wide border at the foot of the wall; then there is a narrow alley, not seen from the front, but convenient for access to the wall shrubs and for working the back of the border." And the following notes on the scheme of colouring are interesting: "The planting of the border is designed to show a distinct scheme of colour-arrangement. At the two ends there is a groundwork of grey and glaucous foliage—Stachys, Santolina, *Cineraria maritima*, Seakale and Lyme Grass, with darker foliage, also of grey quality, of Yucca, *Clematis recta* and Rue. With this, at the near or western end, there are flowers of pure blue, grey-blue, white, palest yellow and palest pink; each colour partly in distinct masses and partly intergrouped. The colouring then passes through stronger yellows to orange and red. By the time

the middle space of the border is reached the colour is strong and gorgeous, but as it is in good harmonies it is never garish. Then the colour-strength recedes in an inverse sequence through orange and deep yellow to pale yellow, white and palest pink, with the blue-grey foliage; but at this, the eastern end, instead of the pure blues we have purples and lilacs.

"Looked at from a little way forward, for a wide space of grass allows this point of view, the whole border can be seen as one picture, the cool colouring at the ends enhancing the brilliant warmth of the middle. Then, passing along the wide path next the border, the value of the colour-arrangement is still more strongly felt. Each portion now becomes a picture in itself, and every one is of such a colouring that it best prepares the eye, in accordance with natural law, with what is to follow. Standing for a few moments before the endmost region of grey and blue, and saturating the eye to its utmost capacity with these colours, it passes with extraordinary avidity to the succeeding yellows. These intermingle in a pleasant harmony with the reds and scarlets, blood-reds and clarets, and then lead again to yellows. Now the eye has again become saturated, this time with the rich colouring, and has therefore, by the law of complementary colour, acquired a strong appetite for the greys and the purples. These therefore assume an appearance of brilliancy that they would not have had without the preparation provided by their recently received complementary colour."

These extracts show the character of this beautiful and most instructive book. It solves the problem of maintaining borders of colour throughout the year, even in winter, when the greys of Rosemary and Lavender give warmth to the garden. The illustrations are numerous, of great teaching value, and there are many plans drawn to scale showing exactly how to place the plants to obtain those beautiful colour effects we have longed to obtain, but are now within our reach.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

June 9.—Royal Horticultural Society's Exhibition of Flowers, Plants, &c., 1—6 p.m. Lecture at 3 p.m. Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

June 11 and 12.—Royal Horticultural Society's Exhibition of Colonial-grown Fruits and Vegetables (Fresh and Preserved), 1—6 p.m. Lecture at 3 p.m. by Mr. H. Hamel Smith on "The Cultivation of Cacao." King's Colonials' Orchestra. Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

"The Garden" Flower Show.—There seems some confusion in the minds of intending exhibitors as to how many coupons are required if more than one entry is contemplated. Only one set of coupons is required for any number of exhibits and in any classes. The object of the coupons is simply to ensure that only readers of THE GARDEN are competing.

Plant importations into Germany.—All plants, shrubs, &c. not belonging to the category of the Grape Vine, which have been grown in nurseries, gardens and plant houses may for the future only be sent via the Grand Ducal Mecklenburg chief Custom house at Rostock.

Rhododendrons in the open.—It may interest your readers to know that we have in flower outside several plants of Lady Skermsdale, Mrs. James Shaw and Duchess of Sutherland. These delightful, white, sweet-scented plants have been planted out several years and generally become well set with buds, which, however, the early autumn frosts often cripple. They need high positions and moderate shade, with a free, well-drained, sweet soil. R. Gibsonii flowered freely last season and quite unprotected. Many species have been charming between the frost this season, and it was no uncommon sight to see the snow on one side and flowers on the other—the same with Camellias; in fact, while we had snow I gathered several from the protected side quite fresh and uninjured.—W. A. COOK, *Leonardslee Gardens*.

A Rose show in Leipzig in 1908. Under the protection of H.M. Friedrich August, King of Saxony, an exhibition of Roses will take place in the Leipzig Palmengarten, from June 27 to July 5, inaugurated by the Gärtner Verrin of that city. Applications should be addressed to Otto Moosdorf, jun., Leipzig, Lindenau. The exhibition will be international in character.

Horticultural fete at Hanley.—The twelfth annual horticultural fête is to be held in Hanley Park, Hauley, Staffs, on July 1 and 2, when many valuable prizes will be competed for. In addition to the gold and silver medals usually awarded to trade exhibits, a silver challenge cup, value £10 10s., will be presented by the committee for the best trade exhibit in the show. Classes are arranged to suit all kinds of growers, and the committee anticipate a record exhibition. Mr. William Poulson, Town Hall, Hanley, Staffs, is the secretary, and he will be pleased to supply full particulars about the show.

PRIZES FOR READERS. JUNE.

THE BEST EIGHTEEN OUTDOOR-GROWN FLOWERS AND GRASSES FOR CUTTING FOR ROOM DECORATION, WITH DIRECTIONS FOR THEIR SUCCESSFUL CULTIVATION.

A First Prize of FOUR GUINEAS,

A Second Prize of TWO GUINEAS,

A Third Prize of ONE GUINEA,

And a Fourth Prize of HALF-A-GUINEA

are offered for the best essays on the above subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Tuesday, June 30. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE

(The Editor is not responsible for the opinion expressed by correspondents.)

Daffodil leaf disease.—I send a few Daffodil leaves to show what looks like a disease of some kind which has appeared upon the foliage of a few of my Narcissi, and I am at a loss to understand its nature or cause. It is not "yellow stripe" as I have scarcely any of that, and am getting less and less of it each year, and the plants that are affected by this were quite free from stripe. It is too soon yet for the foliage to be turning yellow naturally. I wonder if it could in any way be attributed to the terrible frosts the plants were subjected to during the snowstorm in April when they were in full bloom. This may have had a weakening effect upon the foliage, but the fact that only portions of one or two varieties are affected would incline to do away with that idea. I lifted an affected plant and found it apparently perfectly healthy at the roots. You will notice in the case of Sir Watkin and Princeps that it first appears as a small dark brown spot in the foliage, while it seems to develop in Horsfieldi without the preliminary spot, the leaves merely becoming prematurely withered and yellow. Princeps is growing in the grass and the other in cultivated ground, where they have only been two years planted, and the soil is an ideal one, being rich, stiff fibrous, well-drained fresh loam. The ground is a patch enclosed from an old pasture, and cropped for a couple of seasons with Potatoes previous to planting the Daffodils. The Daffodils have had no manure, of course, except a slight dressing of crushed bone last autumn. Up to the present they have grown magnificently with me; indeed, I have never seen finer blooms anywhere. The disease looks like a fungoid one of some kind, and, possibly, a powerful microscope would reveal its nature. I am afraid of it weakening the bulbs by prematurely destroying the foliage, and I am still more afraid of it spreading. I shall be exceedingly grateful if you can throw any light upon it for me and tell me whether it is dangerous or not, and how to deal with it. I should like to hear from you on the matter as soon as possible.—G. L. W.

[We sent our correspondent's letter to Mr. F. J. Chittenden, The Laboratory, Royal Horticultural Society's Gardens, Wisley, who replies as follows: "The browning and death of the Narcissus leaves appears to be due to the presence of the fungus *Botrytis parasitica*. This fungus lives part of its life at least upon dead vegetable matter, and is likely to pass from that to living leaves of certain plants, among them the Narcissus, if the conditions should prove favourable. Exactly what the favourable conditions are does not seem to be known, but speaking generally it may be said that anything that makes for abnormal development, such as the weather conditions mentioned by your correspondent, are likely to lay the leaves open to the attack of this fungus. It grows for a time in the tissues of the plant and may pass down the leaves to the soil and into the bulb, and if this occurs it is probable that in the succeeding year there will be a recurrence of the disease, for the fungus produces masses of mycelium, which are eventually of a blackish colour and which allow it to tide over periods of adverse weather conditions, and when suitable weather again prevails, these sclerotia, as they are called, give rise to mycelium, which spreads through the soil and attacks plants in its neighbourhood. The sclerotia are to be found both in the soil around the plants and on the bulbs as well as in the dead tissues of the leaves. None appear to have been formed at present, but there may be some on the bulbs which I have not seen. It would be as well to remove and destroy all leaves that are attacked to a marked extent, and to spray the remainder with a solution of potassium sulphide, made by dissolving 1 oz. of the substance in 3 gallons of water. If the

attack is only just beginning, this would probably prevent its very rapid spread."—ED.]

The Poeticus section of Narcissus.—I have read "Poetaster's" remarks in THE GARDEN of the 16th inst., page 238, with considerable interest. I should like to ask him through you if he has ever seen a pure white form of it. I mean, of course, one free from all trace of colour in the rim and of the true Poeticus tone of white. I have one, raised from seed, of course, and I am curious as to whether it has any interest or value. I have raised many seedling Daffodils, some of which are very beautiful, but I think the one mentioned above is perhaps the greatest novelty. I may mention incidentally that I am a very old subscriber, having had, I believe, every issue since the paper started, and this is perhaps the main reason why I venture to trouble you with this enquiry. With many thanks for the pleasure and instruction your journal has afforded me.—JOHN W. GAUNT, *Summerfield, Bramley, Leeds*.

THE EDITOR'S TABLE.

"THE LAST OF THE DAFFODILS FOR THE SEASON."

Mr. Peter Barr sends from Kird, N.B., "the last of the Daffodils for the season," and we thank him very much for the interesting series he has gathered for us this season. The last collection included such interesting sorts as Barri Leddington; the true Narcissus Poeticus (a large, beautiful flower of the purest white, with brilliant orange scarlet cup); Burbidgei Agnes Barr, Poeticus Cassandra, Burbidgei Vanessa, Barri Maurice Vilmorin, Poeticus tripodala (the three outer segments forming a tripod), Barri Mrs. C. Bowley, Poeticus Glory (a pretty flower of very refined form), Burbidgei Beatrice Heselton, Poeticus Almira, Leedsi Katharine Spurrell, Leedsi Minnie Hume, the now-popular Daffodil Queen of Spain, Nelsoni Berardii—Mr. Barr as he sends this flower writes, "I have never seen it with so much colour in the cup"—Barri Lady Godiva, Nelsoni Wolley-Dod, Nelsoni minor, Nelsoni major, Leedsi Duchess of Westminster, Nelsoni pulchellus, the famous Barri conspicuus, Incomparabilis Guyther, Leedsi Beatrice, the pretty biflorus hybridus, Incomparabilis Frank Miles, biflorus orientalis, Incomparabilis Stella, Incomparabilis Princess Mary, Leedsi Gem, Poeticus poetarum, Leedsi Mme. de Graaff (the stem sent having two flowers).

MIGNONETTE SUTTON'S RED GIANT.

Mr. J. S. Higgins, The Gardens, Rûg, Corwen, North Wales, sends magnificent spikes of this Mignonette. Although we have previously seen this variety well grown, we have never seen it better than in this instance: "The seed was sown on September 2 last in 6-inch pots, about half-a-dozen seeds in each pot, and placed in a cold frame and grown on as cool as possible and quite close to the glass. The middle of January it was moved to a warmer house (minimum temperature, 45°) to induce active growth, finally thinning at this stage to three plants in a pot. When the flower-spikes began to show the plants were moved to their flowering quarters, no heat being used except in the case of sharp frosts. The stimulant used was one pint of liquid manure to one gallon of clear water, only when the flower-spikes appeared. Watering during the dark, dull days is a point to be well studied, as if the soil becomes sodden and sour failure is certain. The soil used is one-half turfy loam, one part leaf-soil, one part spent Mushroom bed and sand, with old mortar rubble added to the amount of a 10-inch potful to a bushel of soil, and a few small bits among the crocks of the pots. In preparing the pots the soil should be rammed as hard as possible, as herein lies the secret of success. I never pot Mignonette on or stop it, and you see the result.

THE GREENHOUSE.

SALVIA SPLENDENS.

AMATEURS should grow *Salvia splendens* and *S. Bruantii*, which is dwarfier in habit and brighter in colour, for the embellishment of their greenhouses and conservatories in the dull days of autumn and early part of winter.

Two methods may be adopted in the growing of these plants: First, by retaining them in pots throughout the season; and, second, by planting them in the open border in summer and lifting and potting them early in September. By following the latter course larger and more bushy specimens may be obtained, and if they are carefully treated at the time of lifting and repotting the plants will not suffer.

INSERT CUTTINGS

made from young healthy shoots early in the spring. The cuttings should be about 3 inches long and severed immediately below a joint, the leaves from which must be cut off. The most suitable compost is one of rich, sweet loam two parts, leaf-soil two parts, and sufficient coarse sand to make the whole porous. Fill 5-inch pots with this compost, and also put some sand on the surface. Six cuttings may be inserted around the edge of each pot; plunge the latter to the rims in some loose material, such as Coconut fibre, placed on a slight hot-bed and the cuttings will quickly form roots. Directly sufficient roots have been made put the young plants separately in 3½-inch pots and keep them in a warm frame until they are established, then transfer them to a cool frame. Of course, warmer weather will now have come, and it is important that sturdy plants be grown.

PLANTING OUT.

Prepare a border in an open position, digging the soil deeply and enriching it with well-rotted manure. If the soil be of a clayey nature mix some sifted leaf-soil with it at the time of digging. In the meantime harden the plants by placing them on a bed of ashes in a sheltered place, then, when all danger from frost is past, put them out in rows 2 feet apart and 18 inches from plant to plant in the rows.

SUMMER TREATMENT.

This consists of watering, keeping the ground loose and free from weeds, and, early in the summer, pinching the point off the leading shoot to induce a branching habit. When grown in pots those 7 inches in diameter will be large enough for the final potting. Great care is needed in the matter of watering, and some feeding must be done when the pots are full of roots. Soot water in a clear state is a splendid stimulant. In any case it is not advisable to stop the shoots too severely, nor later than the end of July, as such severe pinching lessens considerably the size of the spikes of blooms.

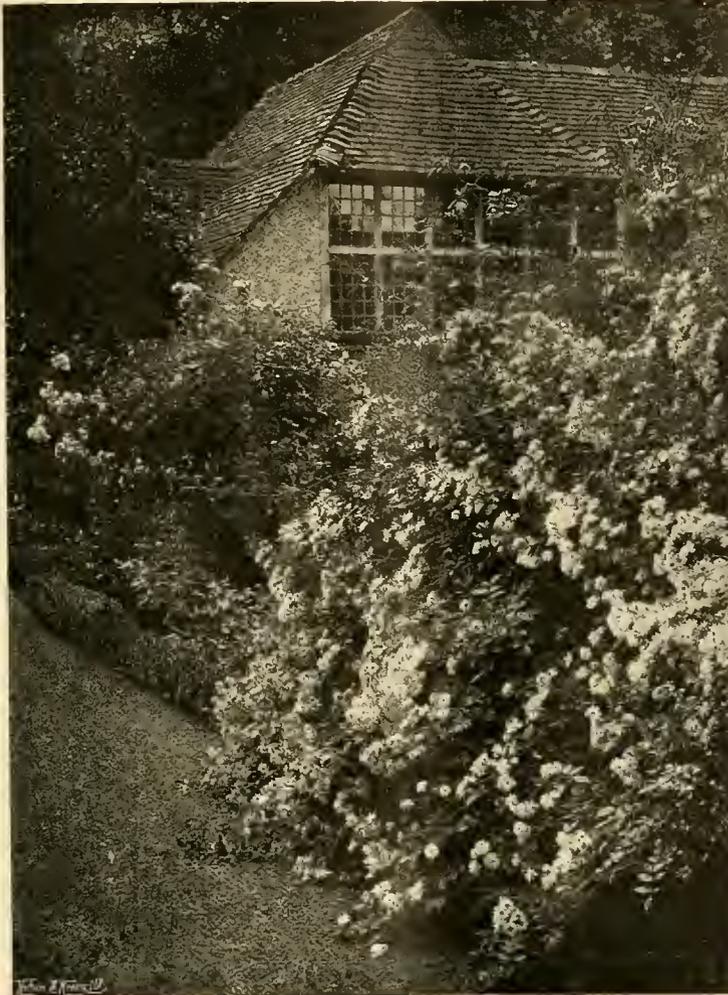
LIFTING PLANTED-OUT SPECIMENS.

Prepare a good compost and suitable pots in readiness for lifting the plants early in September. Carefully preserve all the roots, and when the potting is completed put the plants in a cool frame or house, and keep the structure

rather close and shaded from bright sunshine for about a week afterwards. The plants will quickly get established in the pots, and then air may be admitted more freely. As the colder weather comes place the plants in a temperature of about 55° and give water judiciously at all times. AVON.

MAIDENHAIR FERNS AS WINDOW PLANTS.

AMATEURS generally are very partial to these Ferns as window plants. During a somewhat lengthy experience in judging amateurs' gardens I have found that the owners frequently



THE GARLAND ROSE AT MUNSTEAD WOOD.

(From "Colour in the Flower Garden." See page 261.)

make mistakes in potting and watering these Ferns. The best time to repot a plant which is growing in a window is towards the end of March, when the young fronds commence to grow, but the work may be safely done till the end of May if care is taken.

THE COMPOST.

This should consist of fibrous loam two parts, peat one part and leaf-mould one part, with sufficient coarse sand to make all thoroughly porous. Then to a bushel of the above mixture add a 7-inch potful of charcoal broken into lumps rather smaller than sugar cubes and the same quantity of old mortar. Mix all the ingredients thoroughly and use clean, dry pots and crocks.

HOW TO REPOT THE PLANTS.

Carefully remove the old drainage crocks without injuring the roots and place a few lumpy pieces of the compost on the crocks before putting in the plant. The size of the new pot should allow of the fingers being pressed down between the ball of soil and roots and the side of the pot. Press down the compost with the fingers and leave sufficient space for water. Great care should be taken not to break off the young fronds, and also in watering the plants afterwards. Do not allow the pots to stand in water in saucers, as the stagnant water would cause the soil in the pot to turn sour and kill the roots. This is a mistake often made. But if the ball of soil is allowed to get very dry water passes away down the sides of the pots and does not enter the ball and reach the roots. If, however, a plant becomes very dry place the pot in a pailful of tepid water and let it remain so for a whole day; it is the only way to once more saturate the ball through to its centre. Common garden soil is often used for potting these Ferns in and the result is very unsatisfactory. Tiny slugs and woodlice will eat the young, unfolding fronds, so that close observation is needed to detect them. Old fronds should be cut off and not pulled out, else the young fronds will be destroyed also. AVON.

HOW TO GROW THE SCHIZANTHUS.

DURING the last few years much has been done in the way of improving the *Schizanthus*. By the careful cultivation of plants grown from the fine strains of seed which are now procurable very distinct and elegant specimens are produced. As the plants are half-hardy annuals, they should never be subjected to a high temperature that is loaded with moisture, but should be induced to grow strong and sturdy from the first. Plants which are at their best during April and May were raised from seed in August and September. The young plants are grown on in a light, airy house from which frost is excluded, care being taken during the winter to prevent the plants suffering from overwatering. The most suitable pots for their final shift are 6-inch size, and these should be cleaned and well drained. A few of the strongest plants may be potted into 8½-inch pots; these are very useful in large conservatories where an abundant display of flower is required, also when used as single specimens for the adornment of rooms they are very attractive.

Seed may be sown now for providing a display of flower in late summer and autumn, also for the purpose of supplying plants for growing in the flower garden. The dwarf forms of *Schizanthus* are the most suitable for outdoor culture, viz., the various forms of *S. pinnatus* and *S. retusus*. A sheltered position and a rather firm, well-drained light soil are conditions under which the plants will flourish in the open garden. For pot culture the larger-flowered strains should be selected. The culture advised for the *Cineraria* will be found to suit these admirably. The one thing to aim at is to secure a good sturdy growth from the start, and this is best accomplished by keeping the plants well up to the glass and providing free ventilation whenever possible. C. RUSE.

THE ROSE GARDEN.

SEASONABLE WORK AMONG ROSES.

PLANTING OUT UNDER GLASS.

THE present is a very suitable time to make preparations for planting out Roses under glass. Where a house can be devoted to this beautiful flower the best results follow from careful planting in well-prepared borders, far better than can be accomplished from plants grown in pots. The fine exhibition blooms that

that drainage is good, and trench it two spades deep, working in some quarter-inch bones with the lower spit of soil and some well-decayed farmyard manure with the upper spit. This trenching should be done at once, and then the borders will be ready for the plants by the middle of June. We usually afford plenty of space between the plants; not less than 2 feet apart. Later on, as plants develop, some will need to be cut out. If one were growing for market and anxious for a quick return it would be well to plant about 18 inches apart and tie the plants to Bamboo canes, but in private establishments the greater



FLOWER OF NARCISSUS HORNET. (Exhibited at the Birmingham Daffodil Show.)

are met with at the spring meetings of the Royal Horticultural Society are in a large degree grown from Roses planted out. Of course, this necessitates a structure to be allotted entirely to the Roses; but in these days of cheap horticultural buildings there should be no difficulty on this score, neither are expensive or elaborate houses necessary. In many gardens I know for a fact old vineries are being converted into Rose houses, and very suitable they are as a rule. It is sometimes said that the plants must be near the glass, but I know of one large commercial Rose-growing place where some of the houses are fully 14 feet to the ridge, and these were furnished with small plants from 4½-inch pots. I expressed surprise to the grower at the unusual amount of air space, and he said he was in favour of plenty of freedom for his plants, and certainly the growth they had made in a few months was wonderful.

Where the soil is good it is not necessary to import fresh, but it pays to have first-class soil. A good loam, inclined to be clayey, is best. See

the distance apart is best, for as the plants grow they may be bent slightly outward, which encourages the basal eyes to start, and from these one obtains splendid trusses of blossom.

The plants to purchase are those grafted this season on seedling Briar roots. Being in a growing state they lay hold of the soil at once and make remarkable growth if a moist warm atmosphere is maintained during the summer. A rest is given the plants in the autumn by withholding water for a time and affording plenty of air. In December, or earlier or later, according to when it is desired that the plants shall blossom, they are slightly pruned and started gently into growth. A period of about twelve weeks is allowed from the pruning to the blossoming. The hot-water pipes from the first should be painted with sulphur, which will keep down mildew and to some extent red spider, two pests the Rose grower has every reason to dread. A genial, steady atmosphere is best for Roses rather

than a fierce heat, and the best results always follow where such culture can be afforded.

Varieties are now so numerous that it is difficult to select, but there should be several plants of a sort to allow of a goodly number of blooms being cut at one time for table or other decoration. The following would grow very well together in one house and are really a very select list: Liberty, Antoine Rivoire, Catherine Mermet, Mme. Abel Chatenay, Bridesmaid, Perle des Jardins, Richmond, Kaiserin Augusta Victoria, Joseph Hill, Lady Roberts, Lady Battersea, Pharisæer, Sunrise, *Mrs. W. J. Grant, Joseph Lowe, *Caroline Testont, *La France, *Frau Karl Druschki and Lyon Rose. If a second structure could be given up to Roses I would suggest that this be planted out with those sorts marked with an asterisk, adding Captain Hayward, Mrs. John Laing and Mrs. Sharman Crawford.

For the first two years a few ramblers in pots could be grown in these houses, placing them

where the light was not seriously obstructed from the dwarf plants. The pillars in the house should have a free-flowering sort planted against them. Useful varieties would be Niphetos, Souvenir de S. A. Prince, Crepuscule, Billiard et Barre, &c. A Maréchal Niel or two could be grown on the single rod system so as not to obstruct the light to the plants beneath. P.

EXPERIENCES OF ROSES.

AGLAI.—A plant of this variety, six years after planting and never pruned, measures 15 feet high and the same in width. Last season it was one mass of pale yellow clusters, which, it is to be regretted, turn white as they age. It is on the north-west side of a house in a bleak position—one half of the tree faces due north—yet this was also covered with blooms. Since flowering last year at least eighty new stems were produced from the older shoots 5 feet to 8 feet in length, promising a cloud of colour for the coming season. It is quite useless to plant this Rose where it has not freedom to grow at will.

Beryl.—Three years ago a dwarf of this variety was placed with others of that section, but it is the same to-day as regards size and has only given a few poor "miffy" blooms.

Rêve d'Or.—A yellow Rose, but it opens so quickly from the bud stage to the expanded flower that it is almost useless for any purpose. It soon falls also.

Mme. Bérard.—A slow climber and shy bloomer, but the flowers are very fine when you get them. Makes a good standard, is hardy and blooms more freely in that form.

Frau Karl Druschki.—A splendid white Rose, strong grower, free bloomer, &c., but the moment a Rose of this calibre, but really double, arrives Frau Karl Druschki will be eclipsed; do not fill the garden with it.

J. B. Clarke.—The common experience need hardly be repeated.

Gustave Piganean.—Quite a good grower when established and fine flower.

Duke of Edinburgh.—This Rose gives clear dazzling scarlet flowers at the top of the bushes, but lower down, shaded by the foliage, maroon specimens and shades between these two are gathered. Still one of the best scarlet and crimson Roses.

Caroline Testout.—The best all-round Rose. The climbing form is the best also of the so-called new "climbers."

Climbing K. A. Victoria.—Grows 10 feet in a season, but does not give ten Roses, and the slightest damp rots the flowers.

Perle von Godesberg.—A variety of Kaiserin Augusta Victoria, which, on well-drained, warm soils, gives really fine blooms and freely; stands wet fairly well and is a fair grower.

White Maman Cochet.—This rivals Caroline Testout, but if the roots are allowed to get too dry in a hot spell of weather the buds will split when opening. A beautiful Rose, and we want more of this type. Hardy and free.

Fisher Holmes.—Hard to beat as a dark sweet-scented Rose.

General Jacqueminot is a competitor, but is lighter in shade and smaller. Both are strong growers and free bloomers.

W. A. Richardson.—It is hard to understand the gush over this Rose, as it has colour only to recommend it. It will not give a good flower or grow at all on hot ground, but it will on heavy loam. Its colour is anything in most years, from a dirty greyish white to coppery yellow. When a pure deep-coloured bud is obtained it is good. Its stalk is very short and its growth straggling. Good as a bud in special situations chosen with care and knowledge.

L'Idéal.—A pretty Rose, but so far succeeds only as a standard. It simply will not grow away in the open, yet is described as a "climber."

St. Albans.

W. B.

THE FLOWER GARDEN.

TWO BEAUTIFUL NARCISSI.

FURNACE AND HORNET.

PROBABLY there has never been a more brilliant and more perfectly-formed flower of its type shown than the charmingly distinct variety called Furnace, which was in the centre of Messrs. Barr and Sons' exhibit at the recent Birmingham show. The perianth is flat, firm, of grand substance and of a clear soft shade of yellow, and the crown, which is beautifully frilled and crimped, is of a colour which is most difficult to describe, the name Furnace being the very best that could have been chosen, for it speaks of glowing embers, and the crown or cup of this flower just glows. Unlike so many of the brilliant-crowned flowers, the colour in Furnace, true to its name, is more intense in the centre, where, as one might say, the fire is hottest.

Hornet is another of those flowers that one must go to Birmingham to see or not see at all. It is a seedling raised by Mr. P. D. Williams of St. Keverne, Cornwall, and was shown among the twelve varieties of seedlings with which he won the Bourne Cup. It stood out distinct and strikingly brilliant among all the exquisite blooms surrounding it. The perianth is of pale lemon, flat, very firm, overlapping, and of such grand substance that the flower was as good at the end of the second day of the show as it was when first set up. The flat, spreading crown is of orange red, beautifully crimped and frilled. I cannot help thinking that it was this flower that turned the scale in Mr. Williams's favour in the very close competition between him and Mr. Crossfield for the cup. W. A. WATTS.

DAHLIA NOTES.

DAHLIAS much dislike being planted on the same land two years running; but as this is sometimes inevitable, the only way to ensure a good return is to dig in a quantity of fresh material either in the form of fresh loam or, as already mentioned, decayed refuse or manure. It is often said that the Cactus varieties require no manure if they are to flower freely, and only recently there appeared in print a recommendation from an experimentalist in Dahlia culture to withhold manure and water entirely from varieties which have a tendency to come shallow in the centre, and by this means full-centred flowers will be obtained. This is indeed a novel method, and as likely to succeed in the long run as a starvation diet would be to fatten a pig. On the majority of soils the more manure in reason the better. Although the plants may for a time be somewhat gross, yet the ultimate result will be not only quality, but quantity of bloom. In the case of Pompon Dahlias, if not wanted for exhibition, manure is beneficial, as much larger bushes will grow and a far greater quantity of flowers be obtained. It is surprising that these little Dahlias are not used in far greater numbers for planting in borders and odd places where a showy mass of flowers is seen to effect.

PLANTS IN POTS.

To secure the best results, notably in exhibiting, young plants are now almost always the favourites, and yet there are now and then varieties which succeed best from old roots, and so it is advisable to retain a few and let them form a supplementary force as it were. When the day comes for cutting the flowers, many an unlooked-for bloom will happen to be in its prime on the old roots just when most needed. A common error is to pot up too much of the old tuber when dividing and potting up the old roots. A small portion potted deep enough to cover the crown is far preferable to the usual practice of ramming a lump of root into a pot

and leaving a couple inches of crown and the shoots above the soil.

Much the same thing occurs with young plants. In many instances which have come under my notice the object appears to be to get hard, stunted, pot-bound plants which are doubtless hardy and will stand the change from the comparative shelter of frame or corner to the open ground, but which will at the same time lose much valuable time in getting away into anything like free growth.

After noting the behaviour of many thousands of plants, we have come to the conclusion that a growing plant in a 5-inch pot is the best for transferring to the open. If larger, they feel the check too severely, and if smaller they have a lot to do to get a good foundation.

If plants are placed in 5-inch pots early in May and grown on in a frame, they should make sturdy, healthy stuff by planting time.

INSECTS.

When Dahlias become at all root-bound they are almost sure to be attacked by thrips, and no enemy is more difficult to exterminate. Of course, everyone of experience would know at once that thrips were at work by the appearance of the plants, but we have been surprised at the number of growers who were totally unaware that the unhealthy condition of the very young leaves was caused by thrips, and scarcely believed it possible when shown the actual specimens. Dipping is the best remedy, as by this means it is impossible for the thrips to escape contact with the insecticide, which naturally not only destroys the thrips, but

renders the plant obnoxious by coating the leaves with the destructive fluid. It is a great pity to transfer a lot of plants to the open ground if at all infested with vermin. Should a spell of dry weather set in the plants will be a source of endless trouble before they finally throw off the enemy, and even as late as August it is not unusual to see plants practically ruined by thrips. On sunny mornings the mature insects may be seen jumping about on the petals of the developed blooms, and the bases of such florets are usually semi-transparent and to a great extent spoiled.

P. P.

A FINE NEW PANSY.

THE large-flowered Pansies so beloved by our forefathers seem to be once more coming into general favour, and many improvements have been made in them during the past few years. We have never seen a better variety, however, than the one exhibited by Messrs. R. H. Bath, Limited, of the Floral Farms,

Wisbech, at the Royal Horticultural Society's meeting on the 28th ult. It is named Bath's Bronze Empress, the name fairly indicating the colour. The main, central portions of the petals are almost black with a rich velvety sheen, and this is edged by a band, rather more than one-eighth of an inch wide, of bright reddish bronze, thus giving the flower a rich yet refined appearance. The size of the blooms measured was $3\frac{1}{4}$ inches in diameter, and they have that circular shape so beloved by the exhibitor. Added to these good qualities we have plants of great vigour and flowers that are faintly but pleasantly scented. The variety is said to come quite true from seed.

CHRYSANTHEMUM MAXIMUM MARGARET MARWOOD.

NOT very many years ago it was seldom that one met with the large-flowered Ox-eye Daisy (*Chrysanthemum maximum*) in the majority of gardens; now there are but few where hardy flowers are appreciated in which it is not to be found in one or other of its forms. The facility with which the plant can be cultivated, and the value of the flowers as cut blooms or for border decoration, have rendered it increasingly popular, while the continuous flow of new varieties has maintained the interest in the flower. It is to be feared, however, that there are too many new varieties being sent out, and a search through a dozen or so of catalogues of reliable firms who sell this plant and its varieties, would, I feel certain, rather appal those who desired to make a choice of the best. That figured in the accompanying



NARCISSUS FURNACE. (Exhibited at the Birmingham Daffodil Show.)

photograph, which has been sent out by Messrs. Kent and Brydon of Darlington, is a beautiful variety, the reflexing of the ray petals giving the blooms a pleasing and more informal appearance than is presented by many of the varieties, while the purity of the flowers makes them of additional service as cut blooms. It is of medium height, about 2 feet or a little less, and it is one of the freest bloomers of a class of flowers which are unusually floriferous.

There are many other good varieties of *Chrysanthemum maximum*, some of those with frimbriated petals being very pretty indeed. One of the best of these for some time has been *Robinsoni*, but a still larger and newer variety called *Snowdon* has been raised by Mr. W. Angus of Penicuik, the raiser of *King Edward VII.*, another well known and excellent variety,

by applications of Kilogrub, this being dusted on the soil and lightly scratched in wherever a likely place for alga to harbour in existed. Whether they have been killed or not I cannot say, but the fact remains that seedlings have been untouched since its application.

Insects, too, seem to be coming on in large quantities. Aphidea have already made their appearance, but prompt ayringings with a Quassia and soft soap solution have routed them for the present. H. W. F.

NEW PLANTS.

AURICULA MAY DAY.

A YELLOW self of merit and refinement. In colour it is somewhat paler than "*Daffodil*," and in its



CHRYSANTHEMUM MAXIMUM MARGARET MARWOOD.

with blooms of great size. *Snowdon* is larger than *King Edward VII.*, and in other respects is more graceful. Among other good varieties are *filiformis*, *Earl Roberts*, *G. H. Sage*, *vomerensis* (one of the finest of all), *E. Johnson* (the *Munstead* variety) and *W. H. Gabb*.

The cultural requirements of *Chrysanthemum maximum* are of the simplest kind, and they can be cultivated in any ordinary garden soil well dug and enriched with rotted manure. The flowers are much finer if the plants are broken up and replanted every two years or so, and a bed in the reserve garden will be found most useful in supplying plenty of blooms for house decoration. S. ARNOTT.

SLUGS, INSECTS AND FLOWERS

I do not remember ever before seeing such a plague of slugs so early in the season as I have encountered in my garden this spring, owing probably to the wet weather experienced earlier in the season. Seedlings of many choice flowers have been devoured in a wholesale manner, despite application of soot, lime, asbes, and even the so-called sawdust. The slugs are at present so small that it is impossible to hunt and kill them, an eye with hawk-like keenness being necessary to detect them. During the last fortnight their depredations have been stopped

way it is one of the most pleasing that we know. The central white paste is well defined. Shown by Mr. James Douglas, Great Bookham, Surrey. Award of merit.

AURICULA CORONET.

A green-edged or show variety of sterling worth. The white paste is very finely formed and the centre is yellow. Exhibited by Mr. Douglas, Great Bookham. Award of merit.

ASPARAGUS FILICINUS.

Sir Trevor Lawrence, Burford, Dorking (gardener, Mr. Bain), exhibited this elegant new species from the Himalayas. The plant is of erect habit, the spreading frond-like side branchlets assuming a nearly horizontal position. The species is reputedly one of the hardest of the genus, and, therefore, a welcome addition. Award of merit.

NARCISSUS SNOWSHOES.

A late-flowering *Poeticus* with well-formed blossoms of good substance and a variety whose late flowering will render it of much value. The plant is obviously of good stature. Shown by Walter T. Ware, Limited, Bath. Award of merit.

All the above were exhibited before the Royal Horticultural Society on the 12th inst., when the awards were made.

TREES AND SHRUBS.

UNCOMMON EARLY-FLOWERING TREES AND SHRUBS.

AMONG trees and shrubs which bloom during late winter and early spring are several which stand out conspicuously among the remainder as subjects especially worthy of the attention of the garden enthusiast.

These are for the most part old introductions, but have never become really well known; hence their present scarcity in collections outside those of scientific establishments. This failure in the past to establish themselves among the foremost occupants of the garden does not prove that the plants have no pretensions to beauty or that they are unworthy of attention for ornamental gardening, for they possess many attractive features and are well fitted for garden adornment. One of the March-flowering shrubs to attract attention is

STACHYRUS PRÆCOX, a Japanese deciduous bush 3 feet to 8 feet high with reddish brown bark. Its most attractive period is throughout March and early April, when numerous axillary, pendent racemes of greenish yellow flowers appear. It thrives in light, warm loam into which a little peat has been dug, and should be given a position where it will be shaded from the early morning sun. Very rich soil is not to be recommended, as growth under this condition becomes too vigorous for successful flower production.

PRUNUS SUBHIRTILLA is a Japanese Cherry which blooms during late March and early April; the flowers are small and delicate pink in colour. Rich loamy soil suits it, and planted in such material growth is rapid. Propagation is easily effected by means of cuttings in summer. It is not advisable to plant it in an exposed position, as the early, delicate flowers are sometimes injured by cold east winds. A companion plant to this is *P. pendula*. Its characteristic features are its weeping branches and pretty rose or pink unopened buds, which have been responsible for the common name of *Rose-bud Cherry*. As a lawn specimen for a sheltered position it has much to commend it.

P. TOMENTOSA is a pretty white-flowered species belonging to the *Apricot* section of the genus; it forms a large bush and blooms freely during early April. The flowers are about half an inch across, and are sometimes succeeded by scarlet fruits about the size of a small Cherry, but of *Apricot* appearance. It requires a sheltered position on account of its earliness of blooming and delicate petals.

ERICA AUSTRALIS is one of the brightest of the April-flowering section, the flowers being red, larger than those of most of the hardy set and borne in profusion. It ought not to be planted in cold districts, and should be given soil free from lime.

SPIRÆA THUNBERGII.—Of the various shrubby *Spiræas* this is the earliest to bloom, its tiny white, star-shaped flowers making it conspicuous during March and early April, while later on its dainty light green foliage warrants its cultivation as a foliage plant alone. It thrives in light, loamy soil.

RHODODENDRON NOBLEANUM is one of the earliest of the large-growing *Rhododendrons* to bloom, and it is not uncommon to find it in full flower during February should the weather prove mild. If, however, the weather is severe in February, it makes a good display in March. A good deep red form of this is known under the name of *Handsworth Early Red*, while a companion plant may be obtained in *Handsworth Early White*. Among trees,

PRUNUS DAVIDIANA, the earliest of the *Almonds*, blooms during February and March, while the white variety is also conspicuous during the same period.

THE TEMPLE SHOW.

ONCE again the great Annual Flower Show of the Royal Horticultural Society is taking place, and once again it is an exhibition of rare interest and beauty. It is impossible to individualise, but we must congratulate the Council upon an alteration in the placing of the groups. The same exhibitors were not in exactly the same places, and there was less crowding, we think, in the tents. No exhibition in the world can approach in magnificence and downright interest this great annual gathering in the Temple Gardens, and such an exhibition would not be carried out so smoothly and successfully without Mr. S. T. Wright, superintendent of the Society's Gardens at Wisley, and Mr. Frank Reader. We owe much to these officials, but all work for one object—to make the exhibition a success. There seemed, however, a want of something, and it was the absence of the secretary, the Rev. W. Wilks, who is recovering, we rejoice to hear, from a somewhat serious illness. Her Majesty the Queen and H.R.H. the Princess of Wales spent over an hour in the tents, and the most important exhibits were pointed out by Sir Trevor Lawrence, Bart., the president, and Major Holford.

ROSES.

Charming indeed was the large group of Roses at the end of the long tent on the Embankment. This came from Messrs. Hobbies, Limited, and included many of the delightful climbing and decorative Roses. Among the single Roses we noted Delight, Hiawatha, Kathleen and Paradise, and a beautiful lot of freely-flowered standards of the new Tausendschön.

Messrs. Frank Cant and Co., Braiswick, Colchester, set up a very long and representative group of all types of the Rose. Boxes of good exhibition sorts were superb, and pot Roses in great variety, including new and choice Roses that do so much to make the garden beautiful. Fine specimen climbing Roses were abundant and in excellent form and condition.

A pretty group of Roses was exhibited by Messrs. Benjamin R. Cant and Sons, Colchester, who staged charming forms of the double and single climbing varieties of all up-to-date sorts, also a box of beautiful Maréchal Niel Roses, and two large boxes of exhibition sorts in good condition.

Mr. George Mount, Canterbury, excelled in this department. His mounds of Roses were truly superb. The flowers were quite up to exhibition standard, and were beautifully disposed on long stems. Mrs. John Laing, the new Hybrid Tea Joseph Lowe, Liberty, Frau Karl Druschki, Richmond, Ulrich Brunner, Mrs. Sharman Crawford and Caroline Testout were exhibited in masses.

A large and handsome group of Roses of various types was quite a feature in the large tent. This was exhibited by Messrs. William Paul and Son, Waltham Cross. Hiawatha, Kathleen and Stella were good singles; Minnehaha, Lady and Crimson Rambler were the best of the climbers. Elaine, a creamy white Hybrid Tea that received an award of merit, is a large full flower of good form and very consistent. This was well shown. We had a special liking for Tausendschön, a beautiful climbing Rose.

From Messrs. Paul and Sons, Cheshunt, came a group of Roses that filled the south-east corner of the big tent. Lovely indeed were many of the standard specimens, and the groundwork of

good exhibition Roses borne on healthy plants made a grand display. Hybrid Teas David Harum, George Laing Paul, Rosalind and Old English were noteworthy kinds.

Messrs. Hugh Low and Co., Enfield, staged an outdoor group of beautiful climbing Roses in charming variety. The individual specimens were some of the best in the show, and included the more noteworthy sorts of recent introduction.

Mr. George Prince, Longworth, Berks, had a fine group tastefully disposed. All the better climbing Roses were nicely shown, as were also a box of fine Tea-scented Roses.

The charming display of Roses as made by Messrs. Cannell and Son, Swanley, saw this famous firm in a new light. The dwarf Polyantha Rose Mme. N. Levasseur, a beautiful rosy carmine very free flowering sort, Hiawatha, Lady Gay and other lovely climbers were beautifully represented in a large group.

Mr. Charles Turner, Slough, exhibited a group of Roses in varying forms. Climbers, exhibition kinds and a charming variety of Tea and Hybrid Tea-scented Roses, all well grown, made a very attractive display. The disposition of the plants was commendable.

CARNATIONS.

Messrs. Hugh Low and Co., Enfield, had one of the largest groups of Carnations, all in first-class condition. Their unique system of setting up the flowers was distinctly good, a mirrored background heightening the effect. Britannia, Winsor, White Enchantress, Beacon, Victory and Mrs. Burnett were all in grand condition. A unique group of splendidly-grown flowers.

A very pretty exhibit of Carnations was exhibited by Mr. W. H. Lancashire, Guernsey, White Perfection, Enchantress, Robert Craig, President, Mrs. T. W. Lawson and Mrs. H. Burnett being the best.

Glorious was the display made by Mr. H. Burnett, Guernsey. Very large vases were most artistically filled with flowers of high quality, the base of the stems being interspersed with Asparagus Sprengeri. Enchantress, Mikado, Mrs. H. Burnett, Winsor, Marmion, Aurora and Robert Craig were very fine.

A pretty group of Carnations in long, stately vases made a good exhibit from Mr. A. F. Dutton, Iver, Bucks. There was plenty of colour and the blooms were beautifully fresh. Aristocrat, White Perfection, Robert Craig, Pink Imperial, Winsor and Harlowarden were all good.

Carnations from Mr. S. Mortimer, Rowledge, Farnham, were very fine and were artistically set up in tall vases. Robert Craig, Flamingo, Fair Maid, Jessica and Mrs. T. W. Lawson were among the better specimens. The blooms were very fresh and clean.

Mr. C. Engelmann, Saffron Walden, Essex, staged a very nice series of vases of Carnations. The disposition of the flowers was good, the colours bright and pleasing and the quality good.

Mr. C. F. Waters, Balcombe, Sussex, was well to the fore again with the choicer Carnations. Malmaison Princess of Wales was grand, as were also the perpetual sorts as represented by President, Calypso, Prosperity, Britannia, Harlowarden, Lady Hermione, Nelson Fisher and others.

Mr. W. H. Page, Hampton, had a grand lot of flowers—Beacon, Enchantress, Winsor, Britanua, Mrs. T. W. Lawson, Aristocrat and Governor Roosevelt were all well done. The disposition of the flowers left nothing to be desired.

Messrs. Bell and Sheldon, Guernsey, had some of the finest Carnations in the show. The blooms were large, of good colour and of superb quality,

though lacking arrangement. Evangeline, President and Aristocrat were very fine indeed.

A group of well-grown Malmaison Carnations was exhibited by Mr. Cecil F. Raphael, Shenley, Herts (gardener, Mr. A. Grubb). King Arthur, Princess of Wales and a dark crimson were in the pink of condition and were well disposed in the handsome group.

Messrs. Thomas S. Ware, Limited, Feltham, staged a good group of Carnations; in the vase of one variety, Enchantress, there was associated pleasingly a pale Delphinium for effect.

ORCHIDS.

Sir Jeremiah Colman, Bart., Gatton Park, Surrey (gardener, Mr. W. P. Bound), staged a marvellous bank of choice Orchids, which, for artistic effect, would be very hard to beat. This bank was some 10 feet high, graceful Palms towering over the top. Cattleyas, richly-coloured Masdevallias, Oncidiums, Cymbidiums, Odontoglossums and many other kinds vied with each other for the place of honour, the whole of the plants being in splendid condition and tastefully set in a groundwork of small Palms and Maidenhair Ferns. Among the rarer species we noticed Cirropetalum gamosephalum, C. Cummingii, C. pulchrum, Bulbophyllum Lobbia colossus, B. godseffianum, Octomeria diaphana, Epidendrum fuscum, Liparis corniculata, Oncidium monachium, Masdevallia O'Brientana, M. cuculata (Gatton Park variety), M. muscosa, Spathoglossis soulterianum and Odontoglossum Lindenii. We were pleased to see Mr. Bound well maintaining his high reputation as a grower of these plants.

Messrs. Charlesworth and Co., Bradford, put up a very fine group indeed, containing a vast number of choice species, hybrids and varieties. These were staged in the form of a solid bank, with Palms for a background and Maidenhair Ferns forming a most pleasing setting. Cattleya citrina, Trichopilia crispa marginata, Odontoglossum crispum varieties, Cattleya Fantasia, some magnificent plants of C. Skinneri, Odontioda Charlesworthii (a magnificent bright rich crimson hybrid, the result of crossing Coelioda noetzliana with Odontoglossum harricana), with fine Miltonias were a few of the best in a very beautiful collection.

Messrs. J. and A. A. McBean, Cooksbridge, erected a pretty little group, in which Odontoglossum crispum forms predominated. We noticed one little plant of an Odontoglossum carrying one flower with distinct brownish crimson markings, and this we understand is a newly-imported specimen. Cymbidiums, a few Cattleyas and a Cypripedium or two completed an interesting exhibit.

From Messrs. Moore, Limited, Rawdon, Leeds, came a very prettily-arranged group composed of many interesting subjects. The old Dendrobium Victoria Reginae, which is very rarely met with, was present, and we also noticed some very fine forms of Odontoglossum crispum, Masdevallia harricana exquisita (very rich colour), the green and black-flowered Celogyne pandurata, Odontoglossum Phoebe Queen of Spain (very handsome), Cypripedium bellatulum Queen of Spain, Cattleya Aelandiae and some very fine plants of Miltonia.

Messrs. Armstrong and Brown, Tunbridge Wells, adapted a rather pleasing arrangement with their group, many grand and interesting specimens being most tastefully displayed in two rather acute bays. In one of these Cypripediums in many choice forms were displayed, a superb plant of C. chamberlainianum magnificum being much commented upon. C. rothschildianum, too, with three splendidly shaped and huge

flowers, was also most noticeable. *Odontoglossum wilckeanum uranis*, *Cattleya Skinneri* Temple's variety, and *Odontoglossum crispum virginalis* were very fine indeed.

From Major G. L. Holford, C.V.O., C.I.E., Westonbirt, Tisbury, Gloucestershire (gardener, Mr. H. G. Alexander), came a magnificent group of splendidly-grown plants, in which *Cattleyas* and *Odontoglossums* predominated. The plants were remarkably floriferous, and the arrangement, being in the form of a more or less solid bank, with Ferns and Palms intermixed, was such as to show the plants to their best advantage. *Cattleya Dusseldorfi* Undine, *Lælio-Cattleya Elva* Westonbirt variety, L.-C. *Lustre magnifica*, *Miltonia vexillaria* Empress Augusta Victoria and *Brasso-Lælio* Minerva were a few of the most notable subjects in this charming group.

Messrs. Hugh Low and Co., Royal Nurseries, Enfield, staged a very fine and comprehensive bank of well-grown and choice plants. These were artistically arranged with Palms and Ferns, the whole presenting a most pleasing appearance. We particularly noticed fine plants of *Cattleya Mossiae* The President, very large well-coloured flowers; *Bulbophyllum barbigerrum*, *Cirropetalum Colletti*, *Cattleya Mendelii* varieties, *Ærides Fieldingii*, *Odontoglossum crispum* varieties, very good indeed; *O. Pescatorei* virginalis, *Dendrobium albo-sanguineum*, *D. Bronckhardtii*, *Cypripediums* in variety and *Epidendrum bicoloratum*. A really splendid group.

M. Ch. Vuylsteke, Loochristi, Belgium, staged a few of his wonderful *Odontoglossum* hybrids. These were a centre of attraction, especially to Orchid enthusiasts, the whole day. *O. infusum* is almost a blood red self, *O. laudatum* has deep purple markings, *O. crispum* Blushing Bride is deep blush on a white ground.

Mr. John Robson, Altrincham, put up a nice compact little group of *Odontoglossum* varieties, *Masdevallias*, *Cattleyas*, *Dendrobiums*, *Miltonias* and similar subjects. *Phalaenopsis ramestediiana*, too, was very fine.

From Mrs. Collingwood, Lilburn Tower, Alnwick, came some well-grown and highly floriferous plants of *Vanda teres*.

Messrs. W. Bull and Sons, King's Road, Chelsea, staged a very pretty group of well-grown plants, in which *Lælia purpurea illustris*, *Cattleyas* and *Odontoglossums* predominated. *Cattleya Mendelii* Empress, C. M. Princess of Wales, C. Mossiae Prince of Wales and C. M. Coronet, with some unnamed *Odontoglossums* were particularly noticeable.

From Mr. F. Menteith Ogilvie, The Shrubbery, Oxford, came a very large group of remarkably well-grown plants, these being most tastefully arranged with Palms for a background and Maidenhair Ferns and moss for a groundwork. The *Miltonias* in this group were particularly fine, a beautiful bank of *M. vexillaria gigantea* forming one end of the group. We also noticed a fine plant of *M. v. Chelseensis*, *Cypripedium callosum Sanderæ*, *C. lawrenceanum hyeanum*, *Odontoglossum ordentissimum* (shrubbery var.), a huge plant of *Cattleya Skinneri* in the centre and *Cattleya citrina* carrying enormous blooms. This group was awarded the Veitchian Cup.

The magnificent group staged by Messrs. Cypher and Sons, Cheltenham, was really beautiful. *Miltonias*, *Odontoglossums*, *Masdevallias*, *Phalaenopsis*, *Dendrobiums*, *Cattleyas*, *Brasso-Cattleyas*, *Cypripediums* and many other choice kinds were presented in such a variety of colours, yet so well blended, that the group was continually besieged with a host of admiring visitors. *Miltonia vexillaria* with its varieties *leucoglossum*, *superbissima*, *virginalis*, *splendens* and *Augusta Victoria* made two splendid masses in the bank. Flanking these on either side were splendidly-grown plants of *Odontoglossum Rolfeae*, *Phalaenopsis sanderiana*, *P. grandiflora*, *Cypripedium bellatulum*, *C. Gowerii magnificum*, *C. rothschildianum*, *Cattleya intermedia alba*, *Odontoglossum Pescatorei*, *Epiphronitis Veitchii*,

Cattleya Dusseldorfi and many other very choice subjects too numerous to mention.

In the splendid group erected by Messrs. Sander and Sons, St. Albans, there was quite a host of very choice and beautiful specimens, the whole, as usual, being in the very pink of condition. The arrangement was superb, delicate green Ferns being most judiciously intermixed with the Orchids, *Odontoglossums*, *Cattleyas*, *Miltonias*, *Cypripediums* and many other very choice kinds being displayed in a most lavish manner. *Cypripedium bellatulum* varieties, the green and black-flowered *Cologyne pandurata*, *Cymbidium Sanderæ*, *Diaerum* (*Epidendrum*) *bicoloratum*, the lovely *Dendrobium Bronckhardtii*, *Odontoglossum excellens*, *Cattleya Mendelii formosa*, *Lælio-Cattleya Rowena*, *Odontoglossum crispum Festivus*, *O. c. transcendens* and *O. eximium* were but a few among a host of extra good and interesting things.

MISCELLANEOUS GREENHOUSE PLANTS.

Messrs. W. and J. Brown, Stamford, made an interesting display embracing *Verbenas*, *Roses*, *Heliotrope* and *Zonal Pelargoniums*, all disposed in an artistic manner.

Azalea rosæflora represented by dainty plants were grouped on the table with a background of Palms for effect. This came from Messrs. J. Backhouse and Son, Limited, York.

Messrs. J. Veitch and Sons, Limited, of Chelsea, made one of their fascinating table groups of choice plants for which they are famous. This included such plants as *Lobelia tenuior*, *Gerbera Jamesoni* and choice *Gerbera* hybrids, *Kalanchoe kewensis*, *Streptocarpus*, *Richardias*, *Malvastrum grossulariæfolium* and *Nephrolepis*.

Mr. W. J. Godfrey, Exmouth, exhibited show and fancy *Pelargoniums* in his usual fashion in baskets. The plants were well grown, freely flowered and pleasingly diversified; *Mars*, *Beauty*, *King Manuel* and *Bridesmaid* were conspicuous.

From the Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. E. Beckett), came a long table group of a fine strain of *Streptocarpus*. The well-grown plants were grouped in colours for effect, and the shades were very good. The flowers also were large and handsome, and reflected credit on this good gardener.

The King's Acre Nurseries, Limited, Hereford, made a very excellent table group of *Heliotropes*, *Petunia* Countess of Chesterfield, *Carnations* and *Schizanthuses*. The *Heliotropes* were very fine and the staging of the group excellent.

Prettily disposed among Ferns and *Panicum variegatum* were superb *Gloxinias*, selfs and spotted sorts being conspicuous. This exhibit was staged by Messrs. J. Carter and Co., High Holborn. A very large table group of *Gloxinias* was also set up by Messrs. John Peed and Son, interspersed among which were Ferns, backed by Palms, all very attractive.

From the Horticultural College, Swanley, was a small group of *Gloxinias* interspersed with Ferns and other foliaged plants. *Schizanthus retusus* was also well shown by this college.

A notable feature of the show were the dainty baskets filled so charmingly with the *Schizanthus* in varying form and colour. These were suspended from arches in attractive fashion. There were also numerous pot plants. This exhibit came from Messrs. James Carter and Co., High Holborn. Messrs. James Garaway and Co., Bristol, also staged these plants in excellent form, the colours being very diverse and they were well grown.

A very handsome lot of herbaceous *Calceolarias*, in wonderfully diverse colours and all well grown, was exhibited by Messrs. Webb and Sons, Wordsley, Stourbridge. This was a welcome feature of the show, and showed how fine is the strain represented by this well-known firm.

Messrs. H. Cannell and Sons, Swanley, Kent, well maintained their high reputation with a superb group, which included a representative

collection of *Caeti*, *Bougainvillea* Mand Chettleburgh, well-grown herbaceous *Calceolarias*, *Hydrangeas*, *Fuchsias* triphylla, other *Fuchsias* and a glorious bank of richly-toned *Cannas*.

In the group of Messrs. Richard Smith and Co., Worcester, among other things were *Carnations*, *Liliums* and herbaceous *Calceolarias*, all tending to make a fine show.

Lilacs in variety came from Mr. T. Jannock, Dersingham. This grower also had a grand bank of his superb strain of *Lily of the Valley*, the whole group producing quite a cooling effect in the warm tents.

The large group in the middle tent set up by Messrs. Sander and Sons, St. Albans, was a fine feature and included a large number of very choice plants—*Polypodium Knightiæ*, *Pandanus Sanderii* var. *superba*, *Pereskia godseffiana*, *Vitis atrorubra*, *Furerea watsoniana* and the new *Croton* Fred Sander.

Saracenias, as exhibited by Mr. A. J. A. Bruce, Chorlton-cum-Hardy, are always a pleasing feature of this great show, and if the display was not quite so large as usual the quality of those plants that were staged was very good indeed.

Noble Ferns and other foliage plants made a most effective group as set up by Mr. H. B. May, Upper Edmonton. There were also numerous bunches of the better double and single *Zonal Pelargoniums*. Of the Ferns, *Nephrolepis exaltata superba*, *N. Whitmanii*, *N. Scottii*, *N. Amerpohlii* and *N. elegantissima* were well represented.

At the north end of the large tent, Messrs. Sutton and Sons, Reading, had a series of undulating groups of choice flowering plants. Individual groups of their superb strains of *Cineraria stellata*, *Schizanthus*, herbaceous *Calceolaria*, flanked or fronted with a choice array of tuberous *Begonias*, *Gloxinias* and *Nemesia Suttonii* and the newer forms of *Nicotiana affinis* made at once one of the most comprehensive and interesting displays in the whole show. This exhibit well maintained the high reputation of this firm.

From Mr. Charles Turner came a pretty group of *Azaleas* in pyramidal form. The plants were well flowered, beautifully fresh and the colours were diversified.

Azaleas in beautiful variety were set up in a handsome group by Messrs. R. and G. Cuthbert, Southgate, N. This group is always much sought after, as the display is so choice and the colours so soft and beautiful. *Occidentalis magnifica* is grand; the varieties are so numerous and all good that it is quite invidious to mention them in this short note.

A group from Messrs. Bull and Sons, Chelsea, included many choice plants. *Heliconia illustris* was a central figure of great beauty in the group. This was exclusively confined to foliage plants of a choice nature.

Caladiums from Messrs. John Peed and Son, West Norwood, were not so numerous as usual, although the plants were large and generally of good colour.

The Hon. Vicary Gibbs, Aldenham House, Elstree, had a fine group of scented-leaved *Pelargonium Clorinda*. The plants were fine standard specimens, and were freely flowered. A groundwork of *Spiraea japonica* heightened the effect.

Messrs. James Veitch and Sons, Limited, Chelsea, set up a large and attractive group of flowering and foliage plants. In this exhibit were included *Rhododendrons*, *Clematis*, *Cytisus Beanii*, climbing *Roses*, *Azalea mollis*, *Vitis Thomsonii*, *Ceanothus veitchianus*, *Viburnum* and numerous other flowering plants and shrubs.

Clematis from Messrs. George Jackman and Son, Woking, are always a great feature at these shows, and the present exhibit was even better than usual. Fresh and clean plants of high quality, bearing beautiful flowers in profusion, made a noteworthy display. *Fairy Queen*, *Jackmanni rubra*, *Lord Neville*, *Lady Caroline*

Neville and the bright Ville de Lyon were very good.

Pæonies from Mr. W. James were very fine, and the large flowers, of splendid quality, were the admiration of all. It is a great pity that the varieties were not named.

The group of miscellaneous stove and greenhouse plants in the big tent from Messrs. James Veitch and Sons, Limited, Chelsea, is always a fine achievement, and the present is no exception to the rule. Caladiums, Crotons, Dracænas, Nepenthes, Carnations, Anthuriums, Nephrolepis, Ficus, *Medinilla magnifica* and numerous choice Orchids made a very handsome display.

At one corner of the big tent Messrs. William Cutbush and Sons, Highgate, N., and Barnett, Herts, made one of the most attractive groups. The groundwork was of Carnations and Roses, all grouped in mounds or as a carpeting, with the lovely *Hiawatha* and other climbing Roses in festoons pleasingly disposed.

Very beautiful Clematises made a grand group from Messrs. Richard Smith and Co., Worcester. Excelsior, Sensation, Marie Lefebvre and King Edward VII. were all noteworthy. Roses and Palms made a good background.

A fine group of rare exotic Ferns was staged by Messrs. J. Hill and Son, Lower Edmonton. *Platyceerium grande* was in good form, *Adiantum veitchianum* was in excellent condition, as was also *Polypodium lepidopteris sepultum*, and numerous other choice plants, including a pretty case of Filmy Ferns.

Handsome *Hippeastrums* from Messrs. R. P. Ker and Sons, Liverpool, were exceptionally fine. The flowers were large and of good form, and the colours very diverse and most interesting. Margot, Jasper, Venus, Sunset, Pink Perfection and Nestor were fine specimens.

Messrs. Carter and Co. of High Holborn made one of the charming displays of *Cinerarias* for which they are famous. *C. stellata*, in which were many beautiful new Cactus forms, were beautifully disposed in great diversity of colour. There was also the ordinary *stellata* forms free and branching, and lovely plants and flowers of the large Brilliant prize forms.

TUBEROUS-ROOTED BEGONIAS.

Pleasingly staged were fine samples of the tuberous *Begonias* in variety, all double forms of high quality, which came from Messrs. Carter and Co., High Holborn.

Messrs. Blackmore and Langdon, Twerton Hill, Bath, staged a remarkably handsome group of these plants, the quality being of the highest and best and characterising all the plants and flowers. They were almost exclusively double sorts, except a few superb examples of frilled single varieties.

A fine group was staged by Mr. John R. Box, West Wickham and Croydon. Double sorts preponderated, but a little more variation in the colour was wanted.

A pretty group also came from Messrs. John Laing and Sons, Forest Hill. These were well-grown plants of good quality, but hardly so freely flowered as we are accustomed to see from this firm.

Mr. A. L. Gwillim, New Eltham, Kent, staged a group of *Begonias* of excellent quality. The flowers were large and of grand form and colour, and were growing on plants in good health.

Superb aptly describes the magnificent group staged by Messrs. Thomas S. Ware (1902), Limited, Feltham. The colours in this instance were most diversified and the quality of the flowers all that one could desire. The arrangement of the plants left nothing to be desired.

HARDY PLANTS.

An excellent arrangement of hardy plants on an improvised rockery, from Messrs. William Cutbush and Sons, Highgate, was one of the features in the open. In addition to the

rockery were groups illustrative of the water garden, the bog garden and the border. The latter on this occasion was given the central place, and Tree Pæonies, *Incarvilleas*, *Phlox Laphami*, with Lilies, *Eremuri*, &c., in the background. In the water group were *Aponogeton distachyon* and the Bog Bean (*Menyanthes*) in capital form.

Mr. M. Prichard, Christchurch, Hants, displayed many choice alpine in boxes, among the gems being *Saxifraga aizoon rosea*, *S. A. flavescens*, *Trifolium alpinum*, *Veronica rupestris alba*, *Polygonum sphaerostachyum* (with rosy crimson spikes), *Thalictrum anemonoides rosea* (a charming plant), *Aquilegia Stuarti*, and many more, all very good.

At the opening of No. 1 tent Messrs. Carter and Co. had a rockery arrangement on which were seen *Saxifragas*, *Phloxes*, *Lithospermums*, *Heucheras*, *Anbrietias* and the like.

William Artindale and Son, Nether Green, Sheffield, had a showy group of hardy plants such as *Trollius*, *Primula pulverulenta*, *Gentiana acaulis*, *Gerberas*, hardy *Cypripediums*, *Primula Sieboldi* and many more.

From Mr. R. Farrer, The Craven Nursery, Clapham, Yorks, came a delightfully arranged rockery filled with the choicest of alpine plants, such as *Saxifraga aizoon flavescens*, *Androsace villosa*, *Ramondias*, *Primula farinosa* and *Daphne rupestris*.

Messrs. J. Cheal and Sons, Crawley, set up an arrangement of natural rock pleasingly arranged with choice and suitable subjects. The rockwork itself was admirably done, and the naturally-disposed plants rendered it quite a feature. Ferns, as well as a great variety of alpine, entered into this excellent exhibit.

Messrs. George Bunyard and Co., Maidstone, had an extensive grouping of the most showy subjects, *Irises*, *Pyrethrums*, *Poppies*, *Eremuri*, *May-flowering* and *Darwin Tulips*, *Lupines*, *Saxifraga pyramidalis*, *Trollius* and the like, the whole making a most extensive display.

Mr. Amos Perry, Hardy Plant Farm, Enfield, had an admirable group of hardy flowers in great variety. For example, the Cushion and allied *Irises* and their hybrids formed a most delightful gathering worthy of special study. Again, *Darlingtonias*, *Sarracénias* and *Water Lilies* were interesting in the extreme, and quite naturally arranged. In a third group a collection of *Primulas* was worthy of much study.

Messrs. Bakers, Wolverhampton, had a rich display of Tufted Pansies and *Violas*, the blooms being of remarkable size and freshness.

Mr. B. Ladhams, Southampton, displayed many effective hardy plants, none so good perhaps as the large-flowered and spurless *Columbine Aquilegia Stuarti*, a lovely flower, much larger than is usually seen, and a great gain for the rockery.

The Misses Kipping, Hutton, Essex, had a small yet pleasing rockery arrangement, on which a great variety of alpine were judiciously arranged.

Mr. G. Reuthe, Keston, Kent, displayed a very beautiful lot of alpine and choice hardy flowers and shrubs. Species of *Rhododendrons* were quite a feature, while such things as *Saxifraga brunoniana*, *Campanula Allioni*, *Saxifraga aizoon lutea*, *Lithospermum Gastoni*, *Oenoma tauricum* (with golden flowers) and *Androsaces*, *Ramondias*, hardy *Cypripediums* and *Primula sikkimensis* were among choice things noted.

Mr. Godfrey, Exmouth, Devon, brought a large gathering of *Poppies*, varied in colour and in many ways beautiful and distinct from those usually seen.

Messrs. Gunn and Sons, Olton, Birmingham, had a small group of beautifully-grown *Phloxes*, such as *White Swan* and *Mrs. Hunter* being prominent.

Mr. R. C. Notcutt, Woodbridge, Suffolk, had a group of the more showy hardy flowers, such as *Tulips*, *Trollius*, *Phlox canadense*, *Primulas*, *Pyrethrums*, *Incarvillea grandiflora*, *Viburnum*

macrocephalum, *Berberis Knightii*, a strongly-spined species with golden flowers, and *Azalea latifolia*, presumably one of the Indian section, with white flowers, is said to be quite hardy.

Mr. J. Forbes, Hawick, staged *Polyanthuses*, *Pansies* and *Pentstemons* in considerable variety and beauty.

The Misses Hopkins, Shepperton, displayed a rockery exhibit arranged with hardy plants and alpine in variety, including groups of *Primulas*, *Orchises*, *Phloxes* and *Saxifragas* of many kinds.

Messrs. Barr and Sons, Covent Garden, had a most extensive display of hardy flowers, embracing a very wide range of all that is good in hardy plants. We have no space for an extended enumeration of names, but we take the early *Gladiolus*, the Cushion and allied *Irises*, the showy *Columbines* and *Primulas*, the exquisite and delicately toned *Ixias*, and the gorgeous *Tulips* as indicative of what was included in the display. The *Tulips* alone were a great feature and in perfect form.

A varied group of hardy things from Messrs. James Veitch and Sons, Limited, Chelsea, was arranged in the open, and in addition to *Azaleas*, *Andromedas*, *Bay Laurels*, the newer climbing Vines from China, *Cerasus* and other plants, we noted fine examples of *Primula pulverulenta*, *Meconopsis integrifolia*, *M. puniceus*, towering spikes of *Eremuri*, *Clematis montana rubens*, *Primula cockburniana*, *P. siberica*, *Delphinium nudicaule*, and quite a host of other beautiful and interesting plants.

Messrs. R. Smith and Co., Worcester, had a mixed group of cut flowers in which English, *May-flowering* and *Darwin Tulips*, *Pæonies*, *Spanish Irises*, *Anemones*, *Carnations* and other things were seen in very great numbers.

Messrs. William Bull and Sons, Chelsea, staged a pleasing group of *Spiræa Queen Alexandra*, together with a large and representative gathering of *May-flowering* and *Darwin Tulips* in great variety, the latter being particularly fine.

Messrs. George Jackman and Son, Woking, staged many good hardy flowers and chiefly those of a showy character, such as *Primula japonica* in variety, early *Gladioli*, *Lupines*, *Heucheras*, single and double *Pyrethrums* in great variety, hardy *Cypripediums*, *Saxifraga granulata plena* and a lovely lot of *S. longifolia*, some of which were in bloom.

A particularly interesting and varied group of seedlings of the blue *Poppy Meconopsis racemosa* was exhibited by Lady Northcliffe, Sutton Place, Guildford (gardener, Mr. J. Goatley).

The King's Acre Nurseries, Limited, Hereford, displayed hardy flowers and alpine on a rock-work arrangement. There were many good plants shown, such as *Incarvillea*, *Saxifragas* in variety, alpine and other *Phloxes*, *Arenaria grandiflora*, *Primula cockburniana* and others.

Mr. Howard H. Crane, Woodview Terrace, Highgate, N., had a lovely lot of the Tufted Pansies and *Violettas* displayed in the most natural manner in pans. There were some five dozen pans of these flowers in gold, yellow, sulphur-primrose, lilac and many shades of blue.

Baker's, Wolverhampton, had a remarkable exhibit of herbaceous and alpine plants displayed in imposing groups, such as *Primula pulverulenta*, *Cypripedium spectabile*, *Dianthus neglectus*, *Anbrietias*, *Incarvilleas*, *Aquilegia Stuartii*, *Primula cockburniana* and the like, all in goodly batches.

The Guildford Hardy Plant Company (Mr. A. R. Upton) had a delightful lot of hardy things, alpine, rock shrubs and the like in considerable numbers. Among the more effective were *Daphne Cneorum*, *Lychnis Lagasæ*, *Cobweb Houseleeks*, *Androsace sarmentosa*, *Ramondias*, *Oxalis enneaphylla*, *Geum rivale* and *Tulipa persica*.

Mr. R. Gill, Penryn, Cornwall, had a lovely lot of *Rhododendron Royleii*, *Tricuspidaria lanceolata*, *Chianthus puniceus*, *Embothrium coccineum* and similar things. The exhibit was

among the most interesting and valuable we have seen.

Sweet Peas from Mr. Breadmore, Winchester, were splendidly grown and shown, and such varieties as Helen Lewis, Etta Dyke, Miss Willmott and others merit high praise.

Messrs. Gilbert and Son, Bourne, Lincolnshire, had a pleasing lot of Anemones and Messrs. G. and A. Clark, Dover, a small rockery exhibit, together with a variety of herbaceous plants of the more showy types.

The Tulips from Messrs. Hogg and Robertson, Dublin, were really superb, many of the Darwin and gesneriana forms being in the finest possible condition and giant flowers withal.

Another delightful lot of Tulips was that from Mr. Alexander M. Wilson, East Keal Manor, Spilsby, in which the richly-coloured W. T. Ware, May Queen, Fairie Queen, Mrs. Moon, Clara Butt and Maiden's Blush were seen to perfection.

Messrs. G. Stark and Son, Great Ryburgh, Norfolk, had a pretty group of Sweet Peas, such as the Spencer form of Miss Willmott and Nell Gwynne being noted among many sorts.

Tulips in wonderful variety and in splendid form came from Alex. Dickson and Sons, Belfast. The superb colour of the Darwins and their huge sometimes fully expanded flowers presented a sumptuous feast of these things rarely seen at the end of May.

Some good Anemones were shown by Messrs. Reamsbottom and Co., Geashill, King's County, Ireland, in pink, mauve, violet, scarlet and other shades, the flowers being of remarkable size.

Sweet Peas, Violas and early-flowering Chrysanthemums, each superbly grown and displayed in great variety, came from Messrs. Dobbie and Co., Rothesay, the Chrysanthemums being as good as one might expect in August.

Messrs. Pulham and Son, 71, Newman Street, Oxford Street, London, arranged a rather bold and interesting rock garden, with waterfall and the like. This was exceedingly good and naturally disposed, and, so far as is possible in these circumstances, well planted. In the suggestive character of these arrangements there is much still to be done.

Messrs. R. H. Bath, Wisbech, staged an admirable lot of Tulips and early Gladioli. Of the Tulips, Flamingo, pale pink, and Mauve Clair were among the novelties, Miss Willmott, Edmée (deep pink), Clara Butt, &c.

Messrs. Kelway and Son, Langport, had a beautiful lot of Tree Pæonies and Pyrethrums in single and double forms, and in many delightful colours in both instances. It is a great pleasure to see the lovely exhibits from this well-known firm, and we hope shortly to write more of the Pæonies and other flowers from Langport than is possible in a report such as this.

Mr. Robert Sydenham, Birmingham, staged a delightful lot of Sweet Peas in considerable variety and the best kinds of commerce. White Spencer, Primrose Spencer, Herbert Smith (orange), with many seedlings.

Messrs. R. Wallace and Co., Colchester, in the large tent grouped many beautiful plants, as *Primula japonica* in diverse colours. *Pæonia decora alba*, *Fritillaria sarana*, *Lilium mbellum*, *Dodecatheons*, hardy *Cypripediums* in variety, *Primula sikkimensis* (very fine), *Saxifraga cotyledon pyramidalis*, *Liliums* in variety, such as *Hansonii*, *testaceum*, *monadelphum*, *szovitzianum*, *Ixias*, *Irises*, *Eremuri*, early *Gladioli*, *Habranthus pratense* (very fine), with *Irises* of the *Regelia* and allied sections made a most effective and beautiful group. Messrs. Wallace also set up a fine assortment of Tulips.

ORNAMENTAL SHRUBS.

Mr. L. R. Russell, Richmond, erected a very fine group of various ornamental foliaged and flowering shrubs. These were splendidly grown and contained such things as *Acers*, *Ceanothuses*, *Vitis Coignetiae*, *V. henryana*, *Osmanthus*, *Ehlers*, *Cytisuses*, *Hedera Helix arborea flavescens* and similar subjects.

Messrs. J. Cheal and Son's group from Crawley was a most beautiful, varied and interesting one. Clematises, Aralias, Azaleas, Vitis, Oaks, Beeches, Maples, Rhododendrons and similar subjects were all most tastefully arranged.

Messrs. R. Smith and Co., Worcester, were well maintaining their high reputation with a very fine group of Rhododendrons and other flowering and foliage shrubs. Rhododendron Pink Pearl, *Pinus Montennæ*, *Kalmia glauca*, Aralias, with various Maples and conifers, made up a most imposing collection.

The immense group of Rhododendrons and ornamental foliaged shrubs staged by Messrs. John Waterer and Sons, Bagshot, Surrey, was a very pleasant sight to behold. Rhododendron Pink Pearl was largely in evidence; and we have rarely seen *Kalmia glauca* better grown.

Messrs. Thomas Cripps and Son, Limited, Tunbridge Wells, were exhibiting a comprehensive and well-arranged group of their Maples.

Messrs. William Cutbush and Son, Highgate, were, as usual, making a good display of topiary work, the Box trees and Yews cut into all sorts of fantastic shapes appealing to some people.

Messrs. Barr and Sons, Covent Garden, made a very fine display with their Japanese pigmy trees, these being exhibited in many kinds and in a great diversity of forms.

Messrs. James Carter and Co., High Holborn, made an attractive display of Japanese pigmy trees and shrubs.

FRUIT.

Messrs. T. Rivers and Sons, Sawbridgeworth, were exhibiting a most interesting and comprehensive collection of fruit trees in pots, Peaches, Nectarines, Cherries, Lemons and Oranges being freely represented. Nectarine Cardinal, Peaches Duke of York and Duchess of Cornwall, and Cherries Early Rivers and Frogmore were the varieties displayed. The Grape fruit in the Citrus section attracted much attention.

Messrs. George Bunyard and Co., the Royal Nurseries, Maidstone, staged a wonderful collection of Apples in their usual first-class style. These were in a really splendid state of preservation and amply demonstrated what can be done with our native fruits when properly treated. No less than 100 varieties were staged, these including many varieties that are usually in season during the late winter months. Fruiting Cherry trees were exhibited by this firm.

Messrs. Laxton Brothers of Bedford exhibited a really fine collection of Strawberries, Peaches and Figs. The former were most extensively shown, gathered fruits and also some growing on plants being well represented. Royal Sovereign was naturally well to the fore, Laxton's Epicure, Bedford Champion and Laxton's Pineapple being other fine sorts.

VEGETABLES

Messrs. Watkins and Simpson, Tavistock Street, Covent Garden, staged an interesting little collection, consisting of Cauliflower Early Sixweeks, Cos Lettuce Romaine, Carrot Early Frame, Turnip Early Long White Frame and Cabbage Lettuce Early French.

The exhibit of new Potatoes staged by the well-known firm of Messrs. Sutton and Sons, Reading, was a most interesting and instructive one. The sets of these were planted on February 26th and the tubers exhibited raised on May 20th, so that growth was of a most rapid character. Many of the tubers were considerably larger than hens' eggs, and all presented a most pleasing appearance. The varieties included May Queen, Ringleader, Ninetyfold, Epicure, Windsor Castle, Reliance, Satisfaction, Superlative and Abundance. Gladiator, a white kidney, was exceptionally good.

Mr. A. J. Harwood, Colchester, staged some very fine examples of Asparagus Harwood's Superb Giant. Mr. W. Godfrey of Colchester was also exhibiting good samples of Asparagus.

Mr. Stephenson, Burwell, Cambridge, put up four good bundles of this exquisite vegetable, these being of very fine quality indeed.

OFFICIAL LIST OF AWARDS.

Veitchian Cup.—Mr. F. Mentieth Ogilvie, for Orchids. *Gold Medals*.—Messrs. J. Veitch, for foliage plants, flowers, &c.; Messrs. W. Cutbush, for Roses, Carnations and alpinies; Messrs. Sander, for Orchids and foliage plants; Messrs. Charlesworth, for Orchids; Major G. L. Holford, C.I.E., C.V.O., for Orchids; and Messrs. Hugh Low, for Orchids, Carnations, &c.

Silver Cups.—Messrs. Sutton and Sons, for miscellaneous; Messrs. Barr and Sons, for herbaceous plants; Messrs. Bunyard, for herbaceous plants and fruit; Messrs. J. Waterer and Sons, for Rhododendrons, &c.; Messrs. May and Sons, for Ferns, &c.; Mr. L. R. Russell, for Clematis, shrubs, &c.; Messrs. R. Smith and Co., for Clematis and herbaceous plants; Mr. C. Turner, for Roses and Azaleas; Messrs. Paul and Sons, for Roses, &c.; Messrs. Jackman and Son, for herbaceous plants; Messrs. Pulham and Son, for alpinies, &c.; Messrs. J. Cheal, for trees, shrubs and herbaceous plants; Messrs. W. Paul and Son, for Roses, &c.; Messrs. T. Cripps and Son, for *Acers*, &c.; Messrs. R. P. Ker, for Hippeastrums; Mr. Amos Perry, for herbaceous plants; Mr. R. G. Cuthbert, for Azaleas, &c.; Hon. V. Gibbs, for Pelargoniums and Streptocarpus; Mr. C. F. Raphael, for Carnations, &c.; Messrs. Blackmore and Langdon, for Begonias; Messrs. R. Wallace, for herbaceous plants; Sir J. Colman, for Orchids; Mr. W. James, for Carnations and Peonies; Messrs. Cypher, for Orchids, &c.; and Mr. M. Pritchard, for herbaceous plants.

Silver-gilt Flora Medals.—Messrs. T. S. Ware, Limited, for Begonias and Carnations; Messrs. Cannell and Sons, for Roses, Calceolarias, Camias, &c.; Messrs. Carter and Co., for flowering plants; Mr. G. Mount, for Roses; Hobbies, Limited, for Roses; Mr. G. Reuthe, for herbaceous plants, &c.; Messrs. A. Dickson, for Tulips; Messrs. J. Hill and Son, for Ferns; Mr. A. J. A. Bruce, for Sarracenias; Messrs. Armstrong and Brown, for Orchids; Mr. H. Burnett, for Carnations; Mr. A. F. Dutton, for Carnations; and Mr. R. Ashworth, for Orchids.

Silver-gilt Knightian Medals.—Messrs. Rivers, for fruit trees in pots; and Messrs. Laxton Brothers, for Strawberries.

Silver-gilt Banksian Medals.—Messrs. J. Peed, for Caladiums and Gloxinias; Messrs. Bakers, for herbaceous plants; Mr. J. R. Box, for Begonias; Craven Nursery, for alpinies; Messrs. Fromow and Sons, for trees, shrubs, &c.; and Mr. Notcutt, for herbaceous plants.

Silver Knightian Medals.—Thatcham Fruit Farm, for vegetables; and Mr. Stephenson, for Asparagus.

Silver Flora Medals.—Messrs. F. Cant and Co., for Roses; Messrs. D. Russell and Son, for trees, shrubs, &c.; Messrs. J. Laing, for Begonias, Caladiums, &c.; Mr. C. W. Breadmore, for Sweet Peas; Mr. A. R. Upton, for herbaceous plants; Messrs. Webb and Son, for Calceolarias; Messrs. E. R. Cant, for Roses; Messrs. Dobbie and Co., for Violas, &c.; Messrs. Hogg and Robertson, for Tulips; Messrs. McBean, for Orchids; Messrs. J. W. Moore, for Orchids; and Mr. E. Gill, for Rhododendrons.

Silver Lindley Medal.—Mr. F. Mentieth Ogilvie, for Orchids.

Silver Banksian Medals.—Mr. J. D. Enys, for *Myosotidium*; Mr. W. P. Horton, for alpinies; The King's Acre Nurseries, for herbaceous plants; Mr. A. M. Wilson, for Tulips; Messrs. W. Bull, for Orchids and foliage plants; Mr. H. Crane, for Violas; The Misses Hopkins, for alpinies, &c.; Mr. F. Lilley, for bulbous plants; Mr. G. Prince, for Roses; Messrs. Watkiss and Simpson, for vegetables; Mr. R. B. Bath, for Tulips and Carnations; Mr. A. L. Gwillim, for Begonias; Mr. A. J. Harwood, for Asparagus; Mr. Jannoch, for Lilaes, &c.; Mr. B. Ladhams, for herbaceous plants; Mr. W. H. Page, for Carnations; and Messrs. Bell and Sheldon, for Carnations.

ORCHID COMMITTEE.

First-class Certificates.—*Odontioda Charlesworthii*, Messrs. Charlesworth; *Cypripedium ventricosum*, Messrs. W. Cutbush and Son; *Lælio-Cattleya Elva Westombirt var.*, Major Holford; *Cattleya Mendelii His Majesty*, F. Wellesley, Esq.; *Odontoglossum illustre var. luxuriosum*, Ch. Vuylsteke, Esq., Loochristi; and *Odontoglossum eximium* Queen Alexandra, Ch. Vuylsteke, Esq.

Awards of Merit.—*Odontoglossum Lindenii*, Sir J. Colman; *Cirripetalum pulchrum*, Sir J. Colman; *Odontioda St. Fuscien*, M. H. Graire, Amiens; *Odontoglossum laudatum*, M. Ch. Vuylsteke; *Odontoglossum crispum* Kenneth, N. Cookson, Esq.; *Odontoglossum hibernicum*, Messrs. Charlesworth; and *Cattleya Mossiae Le Président*, Messrs. Hugh Low and Co.

Botanical Certificate.—*Bulbophyllum vibrans*, Sir J. Colman.

Cultural Commendation.—*Mitonia vexillaria*, Major Holford (grower, Mr. Alexander).

FLORAL COMMITTEE.

First-class certificates.—*Dracena Donceetti de Grootel*, Messrs. Veitch; *Tulip Walter T. Ware*, Mr. W. T. Ware.

Awards of Merit.—*Azalea occidentalis graciosa*, Messrs. Cuthbert; *Begonia Empress Marie*, Messrs. Blackmore and Langdon; *Croton Fred Sander*, Messrs. Sander and Sons; *Dimorphotheca aurantiaca*, Messrs. Barr; *Pæonia decora alba*, Messrs. Wallace; *Rose Elaine*, Messrs. W. Paul; *Rose Tausendschön*, Hobbies, Limited and Messrs. W. Paul; *Rose White Dorothy*, Messrs. B. Cant and Messrs. Paul and Son; *Tulip Duchess of Westminster*, Messrs. A. Dickson.

* * * A description of the New Plants exhibited will be given next week.

ACER RUBRUM, a tall-growing tree, is very fine throughout late March and early April, by reason of its small, bright red flowers, which are borne in great profusion from almost every branchlet, while a contrast is gained from *A. opulifolium*, which bears yellow flowers.

In addition to these there are numerous other out-of-the-way trees and shrubs, all of which add beauty and interest to the garden. K.

THE MONKEY PUZZLE IN WALES.

(*ARAUCARIA IMBRICATA*.)

THIS well-known hardy tree of striking aspect, commonly known as the Monkey Puzzle, should be included in every arboretum or shrubbery. It is largely grown in the valleys of Monmouthshire, and seems to be a great favourite, as one meets with it planted in many front gardens. This is a great mistake, as it is quite unsuited for small gardens, being far too large; the branches get very much disfigured with the wind blowing them against the houses or fences, so that the tree generally has a stunted and unhealthy appearance. But planted with other choice conifers in a pinetum or park, where there is plenty of room to develop, it is really a very handsome tree, and well worth cultivating.

While in Ynyoddu some time ago I saw a noble specimen of this tree planted in front of a house, where it had plenty of room to exhibit its great beauty. It measured about 50 feet in height and was well furnished with good healthy branches from top to bottom. This tree was planted by William Thomas, one of the most famous Welsh poets, who was born in Monmouthshire in 1832 and died in 1878. J. KENNEDY.

[Unfortunately, the tree is not a success in gardens, those we have seen, with few exceptions, having lost most of their branches. It is not a tree to be recommended for general planting.—ED.]

AN INTERESTING RHODODENDRON.

(*RHODODENDRON RHOMBICUM*.)

THE deciduous section of the Rhododendron family is usually represented in gardens by the Chinese *R. sinense*, or *Azalea mollis* as it is frequently called, or by a set of the numerous garden varieties raised from the various North American species, such as *calendulaceum*, *nudiflorum*, *occidentale* and the Caucasian *R. flavum*. There are, however, numerous other deciduous species which are well worthy of attention from the gardener, and *R. rhombicum* is one of these. It is a Japanese plant, and has been known under the name of *R. reticulatum* as well as the one which heads this note.

In habit it is looser than the better-known sorts previously mentioned, while the more or less rhomboid foliage stamps it at once as perfectly distinct. It grows quite 4 feet high and forms a spreading bush. The flowers are produced in advance of those of most deciduous Rhododendrons, being at their best during early May. They are upwards of 1½ inches across, rosy purple in colour and borne a few together from terminal buds. When planting this species care should be taken to select a position sheltered from the east, so that in the event of late spring frosts, rapid thawing after a cold night is not brought about by bright sun focussed on the plant, D.

THE KITCHEN GARDEN

A USEFUL SPRING VEGETABLE— CHOU DE BEDFORD.

THE choice of vegetables from October till the spring Cabbages come in is by no means large, and any addition is worth noting. Recently I saw some excellent crops of Chou de Bedford, a plant which, as its name implies, largely partakes of the Cabbage. There is also another very similar variety called Chou de Burghley, raised by the late Mr. Gilbert, and this is a delicious vegetable, but more closely allied to the Broccoli than the first named. Chou de Bedford has a white solid heart which, when cooked, is quite free of the strong flavour that some of the larger Cabbages have. It is quite distinct, and forms a valuable addition to the winter vegetables; it is also most useful for an early spring supply to precede the early Cabbages. The plant is quite hardy and does well in exposed places. For a supply at the season named seeds should be sown in September, or earlier if required in the winter. The plant thrives where the Broccoli fails, and it is a vegetable well worth the attention of the amateur on account of its easy culture and hardiness. Sown in August there will be good plants by October, and these, if planted in rows 2 feet apart and 15 inches in the row, will give good heads for spring cutting.

A NEW KALE—CARTER'S CHOU DE RUSSIE.

IN the early spring there is a dearth of good Greens; but to a great extent the void has been filled by the introduction of Carter's Chou

de Russie, a most valuable acquisition on account of its hardiness and excellent flavour. The new variety has a dwarf habit and a strong leg or stem, with a wide or spreading head, and this is divided into smaller ones of a distinct character. The leafage is deeply cut or lacinated, and the plant produces a large number of sprouts or shoots on the stems.

After a severe trial at Wisley by the Royal Horticultural Society, over fifty stocks of Kale being grown, the new variety was considered a great advance on older sorts, and not only received an award of merit, but the highest possible award and an unusual one for a Kale—a first-class certificate. When cooked this Kale is delicious and the colour is taking, but its hardiness commends it to all growers of vegetables who want those of the best from December to May. For that purpose I would advise two sowings—one in April, and another a month or six weeks later for the spring supply—the plants to be grown on an open quarter and planted out in a small state.

A NEW TOMATO—LYE'S EARLY GEM.

THIS excellent new Tomato is worth a special note on account of its earliness, shape, colour and good quality. It was raised by Mr. R. Lye at Sydmonton Court, Newbury, and put on the market by Messrs. Cutbush, Highgate, having received an award of merit from the Royal Horticultural Society. There are so many Tomatoes at the present day that any new variety must be specially good to gain an award, and I am sure Mr. Lye, who is such a good cultivator of vegetables, has been most fortunate in raising such a distinct Tomato possessing splendid cropping qualities. It is one of the best and most compact growers I have seen. G. WYTHES.



ONE OF THE DECIDUOUS RHODODENDRONS; *R. RHOMBICUM*.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

GREENHOUSE AND CONSERVATORY.—The Azaleas (*A. indica*) that are potbound should be repotted at this period. A suitable soil may be made up of five parts peat and one part sand. These plants I have grown successfully in a mixture of peat and turfy loam in equal quantities, adding



1.—A VIOLET PLANT AFTER FLOWERING LIFTED READY FOR DIVIDING.

thereto coarse silver sand at the rate of about a sixth of the whole. When placed in a temperature of from 60° to 65° the repotted plants do well. Apply water carefully for a time subsequent to the repotting. What the plants like is a spraying overhead pretty frequently with clear water. Should Azaleas be attacked by thrips, place the plants where they may be fumigated with tobacco paper, &c., on two successive days. To prolong the display of other plants in flower I observe the greatest care in shading them from bright sunshine. Tiffany strained across the roof, either outside or inside the glass structure, will answer well, as this may be removed at will. Of course, a roller blind is better than any other means of shading the plants, but everyone cannot afford this. Abundant ventilation is absolutely necessary on warm days, and even at night it is a good plan to slightly open the ventilators of these structures.

The Vegetable Garden.—On every hand there is plenty of work to do in thinning Carrots, Parsnips, Onions, Beet, Turnips and other crops, and this should not be left undone too long, otherwise they will deteriorate. Partially thin out the more crowded seedlings, at a later date completing this important work. I find the plants respond at once to a weekly hoeing between the rows, this aeration of the soil promoting growth of a vigorous character. I make a sowing of both Cos and Cabbage Lettuces at this season to furnish main summer supplies, I

sow in prepared beds outdoors, pricking off the seedlings before they get too long and drawn. The seeds should germinate within a week, and the plants be ready for use in about nine weeks from the date of sowing. I am filling up blanks in the bed of autumn-planted Cabbage with young plants raised from seed sown in the early spring. I am also planting a special bed of these recently-raised plants to succeed the earlier batch. Brussels Sprouts raised from seed sown in early March for late September and October supplies should be planted in their permanent quarters at once. Plant the dwarf varieties in rows 2½ feet apart, and the same distance between the plants in the rows. The taller varieties should be planted in rows 3 feet asunder, and the plants 30 inches apart in the rows.

Chrysanthemums.—The final potting of the more forward plants that are to produce large blooms should be proceeded with forthwith. Make up a compost embracing two parts turfy loam, one part leaf-mould, half a part of well-rotted manure from a spent hot-bed and a sufficient quantity of coarse silver sand or clean road-grit to make the compost porous. This is well mixed before using. To add to the fertility of this mixture I always apply a dusting of guano, crushed charcoal and bone-meal to the heap. Use clean pots and crocks; always wash them and allow them to drain dry. All plants should have been standing outdoors for the last week or two to complete the hardening off process. I accord my plants a sheltered position until they are finally potted in their flowering pots.

The Flower Garden.—Pansies that have been flowering for some time past should have the spent blossoms removed if the plants are to be maintained in health. Break out the flower-stalks low down—really out of the axils of the leaves. The Pyrethrums are developing their buds and blossoms at a great pace, and for this reason they must be staked and tied before the growths become unruly. The Everlasting Peas (*Lathyrus latifolius*) are also developing their vigorous growths, and their staking should be no longer deferred. All the growths should be under control if grown in the form of a clump. If permitted to ramble over a wall, trellis-work or the stump of an old tree the effect is very pretty. In late July and August this is a beautiful plant in the hardy flower garden. The pretty Aubrietias and Arabis may be lifted and divided at this time. I am now planting my earliest batch of Dahlias, beginning with flowering quarters that are well protected. To grow these showy plants well it is a good plan to dig out holes 1 foot deep and of a similar diameter. Place a layer of well-decayed manure at the bottom, covering this with 3 inches to 4 inches of good garden soil. Arrange each plant in position, and then fill in around with good soil, firming this with the hands and finishing off neatly afterwards.

The Fruit Garden.—The matter of layering Strawberries must soon receive attention. For making new beds with the object of planting in August and for forcing, strong, sturdy plants should always be available. At this period it is a good plan to shorten Vine shoots that are developing bunches of Grapes. I stop the shoots at the second leaf beyond the bunch. Continue to thin out young wood on Peach trees. I am planting Tomatoes outdoors against walls and fences with a southern aspect; here they do well. D. B. C.

WAYS OF INCREASING VIOLETS.

ALTHOUGH it is now getting rather late to take in hand old plants of Violets for the purpose of increasing them, it is not too late, because the weather has been so very unseasonable that work of this kind has been deferred in many gardens. Generally speaking, the month of April is the all-important period during which the plants are lifted and divided. The old plants, however, are not lifted until they have ceased flowering, and this may vary considerably, owing to the seasonable influences or to the position in which the frames, &c., have been located.

Dividing Old Plants.—Fig. 1 represents an old plant that has been lifted for division. Observe the character of the growth, which represents a dense mass of foliage, crowns and roots, with one or two spindly runners. Before dividing the plant it is well to consider the future of the divided pieces. Instead of dividing the old plants into individual crowns, it may be considered more advantageous to separate them into pieces representing three crowns. Treated in this fashion, the plants become more quickly established and make fine, healthy specimens that are less likely to fall a prey to red spider or disease. The division of the old plants is a comparatively simple matter, provided care be observed in the operation. By inserting the thumb and fingers well into the mass of growths and roots, the latter will in most cases part asunder quite easily. Should there be any difficulty in this matter, however, a sharp knife will soon release any offending portion. Fig. 2 portrays a piece with three crowns. Observe the sturdy character of the crowns and the vigorous nature of the roots. There is also a runner left on this divided piece for the purpose of illustrating more clearly its character; but before planting this must be detached. This method of planting three crowns is not so often followed as that of dividing the old plants into single



2.—A PORTION OF FIG. 1 REPRESENTING THREE CROWNS.



3.—DIVIDED PORTIONS REPRESENTING INDIVIDUAL CROWNS, EACH WITH ROOTS ADHERING.

crowns, by means of which a greater number of fresh plants are made, and that in most gardens is the chief consideration. It may be well to remember that it is better, even in such cases, to separate from the parent plant only the stronger individual growths, retaining the weaker crowns for the purpose of planting two or three together. Fig. 3 represents two illustrations of individual crowns. These are well developed and give promise of a successful future, provided they are treated properly. It is important to remember when dividing the plants not to allow the roots to become dry before they are planted; for this reason do not expose them to the open or to the sun, but keep them under cover in the cool until they are actually planted, and this should not be delayed.

Planting the Divided Portions.—The Violet may be grown successfully in almost any position, provided the grower is prepared to look well after the plants throughout the summer and keep the soil and surroundings in a moist condition. Quarters in north, east and west borders will grow these plants successfully, but for choice we would rather plant where the Violets can be screened from the sun during the warmest period of the day. Violets are very susceptible to the attacks of red spider, and this must be guarded against at all costs. Red spider is much less likely to cause trouble or inconvenience when the position of the border is a cool one and the soil is maintained in moist condition. The border should be deeply dug or trenched, and plenty of good partially decayed manure incorporated at the time. Previous to the planting it is a good plan, especially in heavy soils, to fork in a good layer of leaf-mould with a light dressing of soot. This should be done carefully and the surface levelled to complete the operation. In planting allow the pieces with three crowns a space of about 18 inches in the rows, and the latter should be the same distance asunder. In the case of individual crowns a foot apart in the rows should suffice. Plant firmly, subsequently giving water should the weather be dry at the time. Throughout the summer copious applications of water must be given when the weather is hot and dry, and frequently during the same period the quarters must be hoed over, using a Dutch hoe for the purpose. As the plants are making free growth the "runners" must be removed, in this way concentrating all the energies of the roots on the development of plants with sturdy crowns. In the event of red spider infesting the plants a dusting with soot and lime will eradicate the pest, but repeat the operation until the trouble is removed.

After Treatment of the Plants.—They should be lifted and planted in cold frames in September, for which purpose leaves should be accumulated in order to make up beds on which the frames are to be placed. Plant in soil composed of light

loam and leaf-soil, keeping the plants well up to the glass of the frame-lights, say, within 6 inches. Plant 10 inches to 12 inches apart each way. "Runners," before referred to, are shoots that issue from the plants during the summer time, and also while the plants are in the frames. They are easily managed during the latter end of the flowering season, as they may be pegged down, when they root very readily. They may be detached subsequently and planted outdoors in similar fashion to the crowns, giving them rather less room, however. Fig. 4 represents an unrooted and a rooted "runner." Good varieties of Violets: Single—Princess of Wales, The Czar, La France and wellsiana. Doubles—Neapolitan, Marie Louise, Lady Hume Campbell and Swanley White.

STAKING COOKING PEAS.

THE proper staking of culinary Peas is a matter that is little understood by the ordinary amateur or beginner in gardening, and as most people have a liking for this toothsome vegetable and usually devote a portion of their garden to this subject, a few hints on staking Peas may, perhaps, be welcomed. The use of brushwood or faggots, that are more generally known as Pea "sticks" or Pea "boughs," for the purpose is probably the most popular of all the methods adopted. Yet how often one sees the stakes or sticks inserted in anything but uniform order and in such a manner that they are of little support to the plants at a crucial period. First of all the grower should consider the height of the variety to be dealt with. It would be useless to insert stakes 3 feet to 4 feet in length for Peas that grow fully 5 feet or 6 feet in height. Do not insert the stakes in upright fashion, as with an experience of boisterous wind they are sure to be blown about and get loose at their base. The only really satisfactory way is to insert the sticks in diagonal fashion on either side of the rows. The illustration gives a very good idea of how this should be done. It will be observed that the stakes cross each other about midway between the ground and the apex of each of them. By staking the Peas in this



HOW TO STAKE A ROW OF PEAS: OBSERVE THE DIAGONAL ARRANGEMENT OF THE STICKS.

fashion they (the stakes) hold each other in position; as a matter of fact, they are locked together at their head and are perfectly steady when the winds are strong and gusty; this is no mean advantage and is worth striving after. Do not insert the stakes too near to the plants or damage to the roots may ensue; observe a reasonable distance, so that the rows of plants do not fall over as they attain a height of a few inches.

INCREASING DOUBLE DAISIES.

THESE charming little spring-flowering plants are not grown so extensively as their merits demand, and it is greatly to be feared that they are decreasing in popularity. This is a great pity, because when properly managed they are capable of producing flowers in abundance during the spring months, and for edging or carpeting beds of taller, thin-growing plants they are excellent. The colours now obtainable range from pure white to rich bright red, and the plants are not at fastidious as to soil.



4.—RUNNERS DETACHED FROM THE OLD PLANT SHOWN IN FIG. 1; THAT ON THE RIGHT IS SLIGHTLY ROOTED.

Division of the old plants is the easiest means of propagation, and this is best done when flowering is just over. If we now lift an old plant, we shall find numerous young offsets of a vigorous character surrounding the central, somewhat worn-out mass, and it is these offsets that are to produce our plants for blooming next spring. After shaking away the soil from among the roots, it will be an easy matter to pull off the offsets so that each has a few roots attached. These must be inserted in a bed of well-dug but not too rich soil of medium texture, planting them in rows 15 inches apart, and the plants 6 inches asunder in the rows. Make the soil rather firm, as a robust, hardy growth is the thing to aim at. If possible, a showery, dull day should be selected for this operation, but, failing this, do the work one evening and well water the young plants afterwards.

If hot weather prevails, shade must be afforded until the offsets are established and water must be given at frequent intervals. If it is possible to select a site that is shaded by a fence or building during the hottest part of the day, this will be most helpful. Keep down all weeds by frequently hoeing the soil between the rows, but do not disturb it close to the plants. By the end of the autumn good vigorous plants will be available for transferring to beds or borders where they are to flower next spring. This treatment will be found far more satisfactory than retaining the old plants from year to year, and, if carried out in a proper manner, these old-fashioned plants will soon regain their former status in our gardens. Double Daisies have such an old-world air about them that it would be a pity if the love for them should dwindle. A charming variety is the tender pink-coloured Alice, which the Misses Hopkins show so well. It would be a delight to have more of such dainty double Daisies as this.

THE TOWN GARDEN.

BEDDING-OUT.—Although fashion tells us that the era of the Geranium, Calceolaria, Marguerite, Lobelia and other kindred plants that are used in summer bedding has passed away never to return, experience teaches that hundreds of thousands are annually planted in the gardens of London and other cities and towns of the British Isles, and whatever one's personal predilections may be candour compels one to admit that there are no plants that will make a more gorgeous display in the small enclosure than these. The central bed filled with splendid Zonals, such as Paul Crampel, white Marguerites and brilliant yellow Calceolarias, with an edging of alternate plants of Golden Feather and blue Lobelia makes a brave display; and the long, narrow borders planted with similar plants, in different varieties as far as possible, will certainly please the popular taste if it is too pronounced for the æsthetic mind. To those who dwell in the country and have pure air and plenty of space one would unhesitatingly say raise your own stock, but to the townsman whose space is rigidly limited one would say buy the plants, for they can be procured cheaply, and the market growers produce such grand stuff that no amateur, without excellent conveniences, could possibly grow its equal. Only four weeks ago I called attention to the dangers and disadvantages of loose rich soil in summer bedding and, at the risk of being accused of needless repetition, I venture to urge the importance of the point again. Procure thrifty plants which are not overburdened with buds or blooms, but are well rooted and hard, and plant them firmly in soil in good heart, and the reward will be beautiful flowers instead of large, handsome leaves. Later on, if it is thought that improvement would follow upon a little special feeding, it can always be afforded by the use of one of the many excellent fertilisers constantly advertised in the columns of THE GARDEN.

WINDOW-BOXES.—The town house without its window-boxes is unfinished, and although they may bring pain and worry at times through youths and men stealing the plants and flowers, I would still urge upon every householder to furnish his window-sills with boxes and plant them with bright summer flowers now. They will involve considerable attention in watering and other details, but they will afford immense satisfaction to the owner as well as to passers-by in the street. The width of the box will necessarily vary with the width of the sill, but it should be at least a foot in depth and have plenty of holes in the bottom, and, further, should stand on treads to keep the bottom clear of the stone. Each hole ought to be covered with a large crock, and over these smaller crocks must be placed; above this place moss or the rougher portions of the compost and then put in the soil. An excellent mixture consists of three parts of loam and one part of leaf-mould, with plenty of sharp sand. In this material the chosen plants should be firmly set, and in no circumstances must they be neglected in the matter of watering, especially if the aspect is a hot one. Or if it is considered more convenient, no soil need be put in the boxes, but plants in pots dropped in and the intervening spaces filled with light soil or Cocoanut fibre refuse. The fronts of the boxes can be painted, tiled or covered with virgin cork according to taste.

HANGING PLANTS.—Here is another direction in which we can adorn our homes and the streets in which we dwell. Procure some strong galvanised wire baskets and line them with moss; this done, put in soil similar to that already recommended for boxes, and they are ready for their occupants. Ivy-leaved Geraniums, with a good Fuchsia in the centre, look charming and make a brave display for a long time if they are regularly watered and occasionally helped with a little liquid manure or a top-dressing of an approved fertiliser. **HORACE J. WRIGHT.**

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FLOWER GARDEN.

BEDDING-OUT will now require attention, and plants that have been well hardened off will now be fit to be planted in the positions allotted to them. Begin by preparing the beds and borders, and, if necessary, add manure and leaf-soil during the process of digging. Good showy masses of Zonal Pelargoniums are very effective. Begonias, Fuchsias and Heliotropes also have much to recommend them. When planted in suitable positions, Dahlias, Gladioli, Marguerites, Streptosolen Jamesoni, Plumbagoes and Cannas are also noble subjects. See in planting that the roots are made firm, and to tall plants place a stake so that it can be supported against wind and rough weather. Hide the supports as much as possible, as these are at all times unsightly.

Half-hardy Annuals, such as Stocks, Asters, Zinnias, Nemesis and Verbenas, should be put now into good rich soil. Thin also the annuals that were sown in the borders. These are more effective when thinned so that each plant can develop fully. Mignonette especially must have ample room, and the main branches may be disbudded if wanted for cutting. Seed may still be sown for a later display if not already done. Sow seeds at once of Wallflowers, Myosotis, Silene, Pansies and Canterbury Bells for spring flowering. Sow in well-tilled soil, and as soon as large enough prick out 6 inches to 9 inches apart on a partially-shaded border and see that they receive sufficient water in dry weather.

HARDY FRUIT.

Peach Blister.—If the leaves of Peaches and Nectarines are attacked with blister, persistently attend to picking every piece off. Disbud the shoots, removing all superfluous growth. Syringe the Peach wall every day when no rain falls; this will help to keep the trees clean and healthy. Examine Plums, Cherries and Apricots for caterpillars. Open the closed leaves, destroy every pest and syringe with XL All Quassia Extract. This if used strong enough will rapidly cause them to disappear.

PLANTS UNDER GLASS.

Winter-flowering Carnations.—If ready, these should now be put into their flowering pots. Use good loam, with a little Mushroom-bed material or dry cow manure, and some Veltha and Carnation fertiliser—about 7lb. to a barrowful of soil. If rust should appear, destroy the plants, and as a preventive syringe with sulphide of potassium, but this must be applied outside and away from paint, as it discolours it. Stand the plants in a frame for a time, after which they may be placed outside entirely, but the best plan is to stand them in frames and take the lights off, as these can be easily put on in wet weather. The successional batch will probably require flowering pots in about a fortnight's time. Give abundance of air to all Carnations flowering and about to flower and manure little and often. Shade all flowering plants during the hottest part or the day, as they quickly fade and lose their colour. **W. A. COOK.**

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

Cyclamen.—Plants from seed sown in August and September will now be ready for moving on into 6-inch pots. These will be found of sufficient size to carry them through their flowering season.

Use a mixture of loam and leaf-soil in equal parts, with plenty of lime rubble and sand added. Where a heated pit with a slight hot-bed is available, this will be found a most suitable quarter for them after potting. Keep the frame rather close for a few days, afterwards admitting a free circulation of air. Shading the plants from the brightest sunshine is most essential.

Chrysanthemums for Small Pots.—The end of May is a good time to strike cuttings of many Chrysanthemums for growing in small pots, to fill vases and to be used in the front of conservatory and other groups. They are of little trouble, and will be found very useful when grown either as single-stemmed dwarf plants with a cluster of flowers on top, or pinched to form neat little bushes a foot or so across. Three cuttings of one variety may be struck in a small pot, and shifted when rooted into 5-inch or 6-inch pots, according to the variety, potting very firmly, and standing them in the full sun and a very light position to ensure dwarf, stocky growth.

THE SHRUBBERY.

Diervillas (Weigelas) are among the most charming shrubs at present in bloom. Too often the plants are crowded together in a way to deprive them entirely of characteristic beauty. *D. Lovysmani aurea* is conspicuous for its golden leaves, a colour retained as a rule through the summer. What is needed as regards these plants is, in planting, not crowding them together, but placing them on turf, so that every shoot with its burden of flowers has free play. They will grow almost anywhere, as well in the suburbs as in the country, but repay for careful attention in the way of good soil, annual thinning out of weakly shoots and top-dressing.

HARDY FRUIT.

Raspberries.—As a rule the spaces between the rows of Raspberry plantations become at this time infested by a superabundance of suckers, emanating from the bases of the old stools. These are not only unsightly, but tend to impoverish the fruiting canes, and should all be removed as soon as they appear above the surface. It is also advisable to reduce at this date the number of young canes which cluster round the base of the plants, as if left until after the fruit is gathered they will have appropriated much of the strength which should have gone into the few which are to bear fruit next year. When the plants in exposed situations are making weakly growths, a little artificial manure sown broadcast in showery weather will aid growth, as also will a mulch of well-decayed manure.

KITCHEN GARDEN.

Salads, such as Mustard and Cress, Lettuces and Radishes, should be sown fortnightly, according to the demand. To assist rapid germination cover the seeds, taking care to remove this as soon as the seedlings push through the ground, giving also ample supplies of water.

Early Leeks.—Plants from seed sown in frames early in the year will now be strong, and will need planting carefully to preserve their tender roots. Lift them with a ball and plant in trenches with a good portion of decayed manure in single rows. Allow quite 12 inches between the plants and 3 feet between the rows.

FLOWER GARDEN.

Wallflowers.—I grow Wallflowers largely for spring bedding, and raise annually some hundreds of plants. The seed is sown towards the end of May on a piece of ground which is not considered good enough for vegetables, but which answers remarkably well for Wallflowers. On this comparatively poor soil, which, I may add, is always reserved for Wallflowers, the plants do not grow very tall after being drawn from the seed drills and transplanted; but they become dwarf and bushy, and cover the ground at once when transferred to the flower beds in the latter end of October.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

AN ENGLISH BULB NURSERY.

A VISIT TO BARR'S.

WE recently had the pleasure of visiting the extensive bulb and hardy plant nurseries of Messrs. Barr and Sons, King Street, Covent Garden, which are situated at Long Ditton, Surbiton. Here Tulips, Narcissi and Hyacinths are cultivated by the acre every year, and in the spring months the display of these flowers provides an optical feast that is worth travelling far to see.

At the time of our visit the Narcissi were nearly over, yet we noted a few excellent varieties that were doing their best to prolong what has been a rather brief and none too favourable season. The famous Peter Barr was still in good form, despite the fact that the flowers had been open several weeks, thus testifying to the excellent lasting properties of this grand flower. Eileen Mitchell is a superb pure white Leedsii that is sure to be a universal favourite when it is better known. The segments are of good substance and the corona is large, both being very pure. Calpurnia and George Phillip Haydon are two large trumpet varieties that are already known to some, the former being a bicolor and the latter a self. In Isolde we have another splendid large-trumpeted variety, but of rather drooping habit. The creamy white perianth segments are somewhat twisted and the trumpet is very large and deep cream in colour. Royal Star is a pleasing flower belonging to the Eagleheartii section, the pure white star-like perianth providing it with its name. The spreading cup is fiery red and contrasts well with the white.

Coming to the Tulips we found these represented by all types, and, notwithstanding the fact that last summer and the present spring have been most unfavourable for these plants, all were in excellent health, and scarcely a blank appeared in their ranks. Double Tulips appear to be increasing in favour, and Messrs. Barr had some splendid varieties in this section. Among others we specially noticed William III., fiery scarlet self; Titian, scarlet and deep yellow, very effective in a mass; President Grant, deep rich crimson, with stiff, erect stems; Murillo, a very pretty rose pink and one of the best; Imperator Rubrorum, rich crimson, very large; Henry Witte, deep rich scarlet, edged deep yellow; Voltaire, rich deep crimson, large and of grand substance; and Salvator Rosa, a mixture of pale and deep rose pink, very fine habit and rather dwarf. Some of the early singles or bedding Tulips were over, but we were able to see some very fine things in this section. Standing out from all others was a fine mass of that magnificent variety Prince of Austria. Were we confined to one single Tulip our choice would at once fall on this. Here we have vigour, superb shape, regularity in growth and, above all, a vivid orange scarlet colour that is almost dazzling to behold. Prince of Austria should find a home in every garden. White Swan is a splendid companion to the former. It is of dwarfer habit, but the pure white flowers possess that regular shape so dear to the heart of the Tulip enthusiast. Sparkler is a fine scarlet variety of medium height and good shape and was most effective in a mass. In La Réve we have a Tulip of rather unique colouring that is difficult to describe. Crushed strawberry or soft rose with orange and chamois glow are, perhaps, as near as one can get to its colour composition. It is a grand Tulip and one that finds much favour with the ladies. Queen of the Netherlands, a large pale pink variety; Rose Luisante, bright rose, good shape; and Bruneilde, very large cup-shaped flowers, white, flushed soft yellow, were other splendid varieties among the early singles.

The Darwin Tulips are those almost globular-shaped flowers with long stems that are so

largely in evidence at the Temple Show. At the time of our visit these were just coming on, and, judging by the enormous quantities grown by Messrs. Barr, there must be a large demand for them. Their excellent lasting qualities and long stems make them splendid subjects for cutting, while the large range of colours available enables all tastes to be satisfied. The Rev. H. Ewbank is a lovely silvery heliotrope variety of large size; Ruby is a rather small but interesting ruby-coloured sort; Admiral Togo, rich crimson; Valentine, heliotrope purple, very large and tall; Von Jehring, very deep maroon, of excellent shape; Seiraad Van Flora, very large, rosy cerise and very handsome in a mass; The Bride, crushed strawberry, pinkish white edges; Rose Queen, rather small but of a most charming rose colour; William Copeland, pale heliotrope purple; Circe, rose, shaded purple, very effective in a mass; Faust, very tall, dark maroon; Anthony Roozen, rose, silvery white towards the edges; Bride of Haarlem, deep cherry red, very large; Glow, brilliant glowing vermilion; Donders, a very good-shaped flower of deep crimson hue, slightly edged white; Loveliness, superb satiny pink of splendid shape; The Sultan, very dark maroon; Zulu, almost black; Farncombe Sandars, rich coral red, white centre; and Mrs. Krelage, soft blush, silvery margins, were a few among many of the best that we noted. All the above-named sorts are good, and among them will be found colours to suit everyone.

Among the species and cottage Tulips we noted acuminata, a curious yellow and red streaked flower, the petals of which are almost thread-like; retroflexa, the graceful canary yellow species with reflexed acute petals; elegans, similar in shape to retroflexa, but deep glowing scarlet in colour; and elegans alba, of the same shape as the type but white, with a very faint edging of crimson. Both in Daffodils and Tulips we were pleased to note the great care that is taken to ensure only the best stocks being put on the market, and the healthy condition of the plants was also a subject for comment. Those of our readers who are specially interested in Tulips would find it well worth their while to visit these nurseries during the next fortnight.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.*

FLOWER GARDEN.

Sowing seeds in holes in walls and pockets for the same (*Wanderer*). Although seeds will frequently grow in crevices in walls without any soil, especially if the mortar is old and crumbling, it is desirable to put a little soil in where this is possible, and the holes and cracks can be deepened by using a chisel or other sharp instrument. The soil can be made moist and pushed in with the end of a thin piece of wood, and the seeds then sown, pressing them in; some put a little wall moss on the top. If the weather be dry and the wall not exposed to much moisture when it rains syringing should be resorted to, but seeds sown in autumn do not

require this as a rule. Where pockets are placed on outside walls they are generally made of stone, and the best plan to follow is to drive a spike partly into the wall, leaving a part projecting on which a flat stone is cemented and also cemented to the wall. On this other pieces of stone are cemented so as to form a little pocket for soil. Pieces of slate are sometimes driven into the cracks to form the base of the pocket, but these are more artificial-looking and not so satisfactory.

Sweet Peas with browned leaves (*F. P.*).—We have carefully examined the seedlings sent, and have come to the conclusion that the leaves have been burned or scorched by some substance. What this is we cannot, of course, say. Has any artificial manure been given to the plants? Many manures if allowed to rest on the leaves would produce a similar result. Dogs, too, will often cause such mischief. The root system and also the stems appear to be quite healthy. Remove the injured leaves, and then we think new growths will soon be formed.

Moving Pheasant's Eye Narcissi (*M.*).—It would certainly be harmful to remove the Narcissi as soon as they have done flowering, and we advise you to wait till the leaves have died down before doing so. You speak as an alternative of waiting till the autumn, but the bulbs may be safely lifted in the month of August. The production of seed has certainly a weakening effect upon the crowns of the Lily of the Valley, and there is no objection to gathering the flowers the first season after the bed is made; indeed, it can be regarded as helpful rather than otherwise.

Daffodil for inspection (*T. H. D.*).—The Daffodil is a very remarkable case of fasciation or the growing together of two more stems. In the example sent four stems had evidently grown together and thus formed one broad, flattened specimen. Cases of fasciation are rather common, but we do not often see so many stems united. It is a freak of plant life that is little understood. The cause of the injury to the Peach leaves we think is due to fumigating with too strong a mixture of some insecticide, or to an application of a wash in too strong solution. Plants of *Humea elegans* growing in close proximity to Peach trees have been known to produce similar results.

Darwin Tulips for forcing (*Nurseryman*).—Darwin Tulips may be treated for forcing very much in the same way as the ordinary early-flowering varieties are, the main difference being that they must not be brought into heat too soon. To begin with, we would introduce the first batch about the second week in February and watch the result, then the second batch a fortnight later. If you are successful with these the first year, you might try for them a little earlier another time. They do very well in boxes or pans, but as they make a good deal of leaf they should not be planted too thickly. The following are a few good sorts which do well under glass: Rev. Ewbank, lavender; Glow, brilliant crimson; Zanzibar, deep claret; Professor Rawenhoff, fine red; Margaret, blush; Clara Butt, pink; Laudelle, rose, with a pink edge; La Candeur, white; Harry Veitch, deep crimson; Philip de Comminet, very dark; Pride of Haarlem, rose, very large flower; and Farncombe Sandars, immense scarlet. Of these some are much more expensive than others, and the price will probably be prohibitive unless they can command a high figure as cut flowers. Of the above dozen we should advise Rev. Ewbank, Glow, Margaret, La Candeur (White Queen) and Harry Veitch as good ones to start with. Do you mean Spanish Iris in your note?

THE GREENHOUSE.

Achimenes and Tydaas (*T. K.*).—In Achimenes the flowers as a rule have a slender tube and a very widely-expanded mouth, usually of some shade of white, blue, purple or scarlet. Generally speaking, the flowers are but slightly if at all veined. On the other hand, the flowers of Tydaas have a much stouter tube, and, though spreading, the lobes of the flower do not extend to anything like the same extent as most of the varieties of Achimenes. Tydaas, too, whether the ground colour be whitish, yellow, or red, are mostly veined in a very pronounced manner. In the red flowers the veining or netting is almost black. Lastly, the small underground rhizomes of the Tydaas are stouter than those of the Achimenes, and this extends to the entire plant, leaves, stems, flower-stalks, as well as the flowers themselves. There is no work as far as we are aware that deals with Gesneraceous plants alone. In such comprehensive publications as "Nicholson's Dictionary of Gardening" all the genera are in turn dealt with, and, of

course, such a work would be of great assistance to you. In the last part of the "Journal of the Royal Horticultural Society," published January, 1908, there is a paper by Colonel R. H. Beddome, F.L.S., which contains an annotated list of the genera and species of the Gesneraceous plants which have been introduced into cultivation. The price of this number is 7s. 6d. to non-Fellows. Your little seedlings would certainly be greatly benefited by being pricked off into pots or pans. There is very little risk if this is carefully done. A mixture of equal parts of loam and leaf-mould or peat and half a part of silver sand will suit them well. If the soil is passed through a sieve with a quarter of an inch mesh the operation of pricking them out will be much simplified. One thing to be noted in connexion with Gesneraceous plants in general is that the names used in gardens are very seldom followed by botanists.

Cyclamen with crinkled leaves (*S. L.*).—There were marked traces of thrips on the two Cyclamen leaves, and these pests are no doubt suswerable for much of the trouble. At the same time, their presence would indicate that the atmosphere of the structure in which the plants had been growing was too dry, as thrips readily increase under such conditions. Probably the roots are also in a bad state, and if so the trouble would be intensified thereby. Thrips can be readily destroyed by vaporising with the XL All Vaporiser, which is the safest material for the destruction of insect pests in the greenhouse. As the flowering season of the Cyclamen is now over, your aim will be to get them ready for another season. They may now be stood in a cold frame, and care taken not to overwater them. Under this treatment they will gradually go to rest, and soon after midsummer will be ready for repotting. In doing this the corms must be shaken quite clear of the old soil, and repotted in a mixture of loam, leaf-mould and sand, with a little brick rubble. Pots 5 inches to 6 inches in diameter will be a very suitable size for the corms. After potting, they may be again returned to the frame and stood on a hard ash bottom. When potted, watering must at first be very carefully done, but it may be increased as the roots take possession of the new soil and the leaves develop. They may be allowed to remain in the frame till the end of August, by which time they should be good shapely plants. After this they are better in the greenhouse.

FRUIT GARDEN.

Making new range of vineries and Peach houses (*O. Oakley*).—We think that the disposition and the amount of 4-inch piping suggested by you for heating the new range will meet the case very well; but as you are proposing to grow fruit trees in pots in the late Peach house, we should have a return pipe under the ridge. It will help to dry, and give greater circulation and buoyancy to the air in early spring in the body of the house while the trees are in bloom, thus helping materially in securing a better set of fruit. We advocate the same arrangement for the early Peach house. Means, of course, must be taken of making provision that each house may be heated separately or all together, as desired, by an ample provision of bent valves in the flow and return pipes in each division. The front wall of the range should, we think, be built on arches, so that the roots of the Vines and Peach trees may have access to an outside as well as an inside border. The permanent success of both will be much better assured in this way than would be the case if the roots were confined to an inside border. In this case you could not have your pits fixed against the front wall of the range. We suggest it would be much better to build the pits 14 feet distant and parallel with the front of the range, thus allowing space for a 10-foot border and a 4-foot walk at the back of the pits. The expense would be a little more in building a back wall to the pits, but the advantage in time to come as regards the healthy growth and fruitfulness of the Vines and Peach trees would be so great that this trifling extra expense should not be considered. The heating of the pits a little distance away from the boiler would present no difficulty; a flow and return pipe could be taken in a channel underground from the east end of the vinery.

Peach foliage diseased (*C. O.*).—Your tree is suffering from a bad attack of the Peach blister disease caused by a fungus named *Exoascus deformans*. The foliage

appears attenuated and thin, giving one the impression that the tree was not in robust health to start with, and, therefore, the more likely to invite an attack from this disease. Nothing can be done to save the affected foliage; indeed, it had better be picked off and burnt to prevent the further spreading of the disease, afterwards dredging the whole of the tree thickly with flowers of sulphur, leaving it on for a couple of days, when it may be syringed off, shading the tree in the meantime. The sulphur will fall on the border, as will also possibly much of the fungus; it should be cleared away as soon as it is dry along with an inch of the surface soil, substituting for it a dressing 2 inches deep of best loam and fresh horse manure in equal quantities, with a little lime and bone-dust added to encourage better growth later on. Unfortunately, this disease has a tendency to reappear every year. The only way of preventing this is by infusing greater vigour into the tree, and to do this we advise you to replant the tree early in autumn, using the best turfy loam you can find, with a liberal mixture of lime rubble and a little bone-dust; also dressing the tree in winter with "Medial," a preparation of Messrs. George Bunyard and Co., and for which they claim that it is a complete cure for this disease.

KITCHEN GARDEN.

Putting out Cauliflower plants (*Mullingar*).—When your now dibbled out Cauliflower plants are strong and from 5 inches to 6 inches in height, it should be quite safe to plant them out on to a warm border, especially the Snowball. These you may plant out in rows 18 inches apart and 12 inches apart in the rows, as they do not grow to any appreciable size. Transplant with a trowel, so as to preserve all the roots, and with them as much soil as possible. Make the soil about each plant quite firm. With respect to the Michaelmas Market variety, which is, no doubt, Autumn Giant under another name, plant these out with a dibber in rows 2 feet apart, and the plants in the rows 15 inches apart. Give these deeply-dug and well-manured soil to encourage good leaf-growth and fine white heads. If the ground has been dressed with manure and that dug in a month before planting, it is best for the crop, as then it is becoming soluble. A top-dressing put on when planting is done or soon after is of much less value.

Vegetables absorbing fumes of Vaporite (*Reader*).—We have used Vaporite and have never been troubled with vegetables absorbing the fumes, nor do we think they are at all likely to do so; certainly it is quite harmless to consumers when used on vegetable plots.

Diseased Celeriac (*Forth Bridge*).—If your Celeriac plants suffered from a severe attack of maggot last year, no doubt that conducted greatly to stunted growth, yet it is evident the roots sent are affected with a fungus which not only has caused decay in the rind of the roots in places, but has speckled the flesh also. Primarily the ground seems to have been sour or fungus-infested and needs a good dressing of finely-ground lime before any other crop is grown on it. Were it the autumn we should advise a dressing of gas-lime at the rate of two bushels to three rods of ground, well spread, left for a month, then dug in. If you put out Celeriac plants this year, dust lime freely along the drills or trenches when you plant, also give occasional dustings with fresh slaked lime about the plants during the summer and autumn. All the same give a liberal dressing of manure well dug in a couple of weeks before planting.

MISCELLANEOUS.

White worms for inspection (*H. Backhouse*). The white worms that you found in the soil of your garden are the grubs of a two-winged fly belonging to the genus *Thersava*. I do not know that the insect has any English name. There is not much known about these grubs, but they are said to be carnivorous, and if so they are in no way injurious to plants.—G. S. S.

Worms for inspection (*H. Wright*).—The creature you enclosed is one of the snake millipedes (*Julus londinensis*). These are very injurious to the roots of many, if not most, plants, and they are very difficult to destroy, as they have such hard, horny skins that no liquid insecticides applied in the ordinary way has any effect on them. If you have many in the soil, I advise you to try Vaporite, a compound which, when mixed with the soil, gives off gases which, it is said, kill all insects, millipedes, &c., which they reach.—G. S. S.

Worms infesting Strawberries (*Clanville*).—The worms that you sent are nearly allied to the common earthworms and belong to the family Enchytraeidae. They are very injurious to the roots of plants. Thoroughly soaking the soil in which they are with lime water will kill them. I expect your Strawberries and Beans were attacked by one of the snake millipedes and not by these worms, judging by what you say. The spotted snake millipede is of a very pale colour, and may easily have been mistaken for them. If they attack your Strawberries again, send a few up and I will tell you what

they are. I should have thought Vaporite would have killed both these creatures if it had been properly mixed with the soil.—G. S. S.

Scum in pond water (*P. S.*).—Any application sufficiently strong to kill the scum will probably kill or injure the Lilies. The scum is virtually inseparable from the water, and during the early months of the year makes its growth. If the pond water is stagnant it will be more troublesome in this respect. If you have a supply running in you might try a system of filtration through sand or gravel, and where this is not possible you had best have recourse to a net for clearing it out.

Turf stacked in the open (*O. S. M.*).—How long turf that is stacked in the open will remain good depends on what it has to be used for. Generally speaking, for potting large plants it is at its best when it has been stacked from six to twelve months, as the fibre then is in a partial state of decay. During the second year it would do for smaller plants, where coarse fibre is not needed. After two years the fibre will be practically gone and the loam will then only be suitable for seed-sowing or for small seedlings.

Using coal ashes and road scrapings (*Anxious*).—We do not advise you to use sifted coal ashes in your soil for the purpose of lightening it or loosening it in any way. Coal ashes very often do considerable harm to many crops, especially those which are grown for their roots, such as Beetroot, Carrots, Potatoes and Parsnips. You need not have the slightest fear in using road scrapings in your garden. They will do heavy soil a great deal of good, especially if you collect them from roads made up with gravel, and providing the roads do not have a great amount of motor traffic over them. Certainly they will not fill the ground with wireworms.

Plants for June exhibition (*Constant Reader*). It is quite impossible for us to advise you in the middle of May as to what flowers you could bring on "for exhibiting in the beginning of June," and that without a greenhouse. You say nothing as to what plants you possess or the class of exhibition you refer to. There are many things, such as Primulas and alpine Phloxes, that could be flowered well with frame protection, but these require previous thought and preparation. If you have any special exhibition in mind and will give us the particulars we will help you. The size given for the *Polyanthus* is good, but mere size counts for little unless the quality of the strain is good also.

Transplanting Roses (*W.*).—Considering that this is a very late season you could safely transplant your Roses now if the work is taken in hand at once. Of course, the summer bloom would be all the better if the plants were not disturbed, but if it is a case of necessity we say move them. It will be well to dip their roots into some thin mud before replanting, and give each plant a shovelful of some nice compost. Tread them in very firmly, but in about a week from the planting go over the bushes and set the heel against them on each side. A little water may be given if the weather is hot and dry after the plants have been moved about a week.

Affiliated gardeners' societies (*W. L.*).—Provincial gardeners' associations can be affiliated to the National Sweet Pea Society, to the National Chrysanthemum Society and to the Royal Horticultural Society by payment of a small fee. We advise you to write to the secretaries of the various societies for full particulars. Mr. C. H. Curtis, Adelaide Road, Brentford, is the secretary of the National Sweet Pea Society; Mr. E. A. Whitty, St. James's Villa, Swain's Lane, Highgate, N., is the secretary of the National Chrysanthemum Society; and for the Royal Horticultural Society address your letter to the secretary, Royal Horticultural Society's Hall, Vincent Square, Westminster, S.W.

Blood as manure (*J. E. C.*).—Animal blood is a manure that chiefly promotes leaf-growth, as it is eminently of a nitrogenous nature, and, if considerably applied, might create too much leaf-growth and soft, sappy wood rather than firm, stout wood that should bear hard pruning and wintry weather. But if you wish to use blood, do so mixed with soil, also adding to it soot freely and bone-flour to give phosphates. A soil-bag might be made, say, 2 feet across, with a soil bottom of 6 inches to 9 inches deep, to soak up the liquid, and each time blood was added cast in soot and bone-flour also, and over it a thin covering of the outer soil. When what seems to be enough liquid and artificials have been added, cast over all the ridges of outer soil and well mix the whole. Let it lie for a couple of weeks, then turn and mix again, and by that time, the soil having well absorbed the liquid, the whole should make good manure dressing for Roses. The blood may also be mixed with moss litter or any other rather dry manure.

Using a garden frame (*E.*).—If you have ample room to grow vegetables, you could use your small frame to raise some seeds in shallow boxes, such as Cauliflower, Cabbage, Lettuce, Endive, Celery, Mustard and Cress or Broccoli. All such seeds raised under glass quickly would give you a good supply of plants to put out in the summer for autumn and winter purposes; or you may put a small quantity of well-decayed manure into the centre of the frame in a hole, and thus with soil heaped over it making a mound, and put out into it a couple of Vegetable Marrow plants if you purchase them at once. Later, you can lift off the frame and allow the Marrows to grow freely. If you prefer flowers, it is really not too late to sow in shallow pans or boxes filled with good fine soil seeds of Stocks, Asters, Wallflowers, Auriculas, Polyanthuses, Snapdragons, Pentstemons, African Marigolds or any flowers that grow quickly, and when, later, they have become strong they can be planted outdoors, where they will flower in the autumn or next spring.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NEW ORCHIDS AT THE TEMPLE SHOW.

IT is to the above-named exhibition that we look for some of the best novelties of the year and usually we are not disappointed. Besides those that receive the coveted first-class certificates or awards of merit there are always a number of interesting things that the judges do not consider worthy of such honour, but which are nevertheless interesting. This year the Orchid committee granted first-class certificates to six plants, awards of merit to seven and a botanical certificate to one. The floral committee awarded the higher honour to two specimens and awards of merit to nine. In the Orchid novelties some very beautiful flowers were to be seen.

Odontioda Charlesworthii is the very richest-coloured member of this bigeneric race that we have ever seen, and it was a centre of attraction during the whole time the exhibition was open. The flowers are of the characteristic size and shape, but the colour is a very rich glowing scarlet, the effect being heightened by the rich yellow blotch at the base of the rather large reflexing labellum. The plant exhibited was not a large one, but the inflorescence was composed of four fully opened flowers and two buds. Messrs. Charlesworth and Co., Bradford, exhibited this charming plant.

Lælio-Cattleya Elva, Westonbirt variety, shown by Major Holford, is an Orchid of a most rich and refined appearance. The sepals and petals are of a rich rosy purple hue, the latter being rather a deeper colour than the former, and also reflexed in a curious manner. It is the labellum, however, which most appeals to one. This is of the richest velvety crimson imaginable, it broad, spreading character with frilled edges making it very striking. Added to this we have a deep yellow blotch on each side of the throat.

F. Wellesley, Esq., Westfield, Woking (gardener, Mr. W. Hopkin) staged a lovely form of the popular *Cattleya Mendelii*, named *His Majesty*. The flowers of this are very large indeed, especially the petals, which are nearly 3 inches wide and beautifully recurved. The colour of these and the lanceolate sepals is pale lilac. The large, grandly-shaped labellum is white, with purple and deep yellow markings in the throat, the margins being crenated in a most pleasing manner.

Odontoglossum eximium Queen Alexandra is an Orchid worthy of the illustrious name that it bears. The very rich bright purple colouring is most regularly placed on a white ground, the labellum having a blotch of dull crimson conspicuously placed upon it. Added to this we have flowers of exquisite form and a plant of great vigour.

Another beautiful *Odontoglossum* was *Illustre luxuriosum*. The flowers of this are of perfect shape, the predominating colour being rich reddish purple. All the segments are daintily edged pale white. Both these plants came from

M. Ch. Vuylsteke, Loochristi. Each of the above received a first-class certificate.

In Messrs. Hugh Low and Co.'s group was *Cattleya Mossie Le President*, a very beautiful variety of a well-known Orchid. The flower is very large, the sepals being long, lanceolate and reflexed at the tips. The petals are very broad and beautifully crenated. The colour of both is a deep rosy lilac, and this colour also predominates in the labellum. The latter is very large, broad, beautifully waved at the edges, with a broad band of very rich yellow at the top of the throat. In the centre of the lip the colour is very rich velvety purple.

Odontioda St. Fuscien, as shown by M. Henri Graire, St. Fuscien, Amiens, is a very pretty member of the bigeneric race. The ground colour of the flowers is dull yellow, and this is almost obliterated with orange scarlet spots. The sepals and petals all have a distinct edging of crimson. The medium-sized labellum is a mixture of old rose, yellow and dull orange. The flowers are about the usual size. This plant is the result of a cross between *Cochlioda noetzliana* and *Odontoglossum Adrianae*.

Messrs. Charlesworth and Co. of Bradford staged a very handsome *Odontoglossum* named *O. hibernicum*. The sepals and petals are of a uniform lanceolate shape with reflexed tips, the canary yellow ground colour being thickly covered with large, dull brownish crimson blotches, except at the tips, which are left pure yellow. The labellum is large, roughly heart-shaped and of a pale cream colour except at the base, which is dull crimson.

In *Odontoglossum laudatum* we have a very handsome member of this genus, the good-sized, well-formed flowers having their white ground almost covered with large, dull, purplish blotches, the markings being of a very regular order. This came from M. Ch. Vuylsteke.

Odontoglossum crispum Kenaeth was exhibited by Norman Cookson, Esq., Oakwood, Wylam (gardener, Mr. Chapman). It is a lovely flower, the white ground being very heavily blotched with rich orange purple. The markings, however, are none too regular. The flowers are of good shape, and are well placed on a somewhat arching stem.

Cirrhopetalum pulchrum was in the large group staged by Sir J. Colman, Bart. (gardener, Mr. W. P. Bound). This is a large-flowered plant of these interesting and curious Orchids, the dull cream ground colours of the curiously-shaped blossoms being very heavily besprinkled with very dull carmine blotches. The fac-like inflorescence was composed of eleven fully-developed flowers. The same exhibitor was also displaying a splendidly-grown plant of *Odontoglossum Lindenii*. This plant had a long arching inflorescence composed of rather small canary yellow flowers, the petals of which were very much crimped at the edges.

Cypripedium ventricosum from Messrs. William Cutbush and Son, Highgate, is a very handsome plant, most closely resembling the better-known *C. macranthos*, and the twain are natives of Siberia. The plant now under notice differs from *C. macranthos* in having shorter petals and a handsomely inflated pouch much deeper in colour.

The predominant colour tone is purplish red, varying in degree in the individual examples.

An award of merit was granted to each of the above-named plants.

Bulbophyllum vibrans, as staged by Sir J. Colman, Bart., is a little plant that is more curious than beautiful. It had two tiny curiously-shaped flowers of a creamy brown and spotted character, and was awarded a botanical certificate.

* * Owing to the demands on our space we have been compelled to hold over the descriptions of new plants honoured by the floral committee until next week.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

June 9.—Royal Horticultural Society's Exhibition of Flowers, Plants, &c., 1—6 p.m. Lecture at 3 p.m. Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

June 11 and 12.—Royal Horticultural Society's Exhibition of Colonial-grown Fruits and Vegetables (Fresh and Preserved), 1—6 p.m. Lecture at 3 p.m. by Mr. H. Hamel Smith on "The Cultivation of Cacao." King's Colonial Orchestra. Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

The Gardeners' Royal Benevolent Institution.—Sir Frank Crisp, LL.B., J.P., has kindly sent the sum of £31 6s. 5d. in aid of the funds of the above institution, this being a proportion of the proceeds of admission fees received for opening Friar Park, Henley-on-Thames, to visitors.

Kew Guild annual meeting and dinner.—The annual general meeting, followed by the usual dinner, was held at the Holborn Restaurant on Monday, the 25th ult. About fifty members attended the meeting, and the proceedings were of an enthusiastic character. In the discussion on a change of policy of the Guild, the old Kewites were firmly opposed to any change. The annual report and balance sheet are of a favourable character. We are sorry to learn that Mr. Bean, the assistant curator of the Royal Gardens, has retired from the editorship of the *Journal* and that in future the committee as a whole will assume that office. Mr. W. W. Pettigrew occupied the chair at the dinner, and, in the absence of Mr. Hemsley, Mr. Daydon Jackson responded to the toast of the Guild. Mr. R. Hooper Pearson proposed, in eulogistic terms, "The Chairman." The enjoyment of the evening was greatly enhanced by the splendid vocal music supplied by Miss A. Walter, Miss I. Watson and Mr. T. W. Briscoe.

National Rose Society's arrangements for 1908.—We have received a copy of the publication containing details of the arrangements for the coming season, together with a list of members, schedules of prizes and bye-laws and regulations. The metropolitan exhibition is to be held as usual in the Royal Botanic Gardens, Regent's Park, on Friday, July 3. The provincial show is this year to be held at Manchester, in the Royal Botanic Gardens (White City), on Tuesday, July 21, and the autumn show is fixed for Thursday, September 17, at the Royal Horticultural Society's Hall, Vincent Square. As usual the committee are offering prizes in a sumptuous manner, and we fully anticipate record displays, providing the weather proves favourable for the development of the flowers. Full particulars can be obtained by applying to the hon. secretary, Mr. E. Mawley, V.M.H., Rosebank, Berkhamsted, Herts.

M. Abel Chatenay.—Wandering round the Paris Salon a few days ago we had our attention arrested by a finely-executed portrait of a gentleman we have had the pleasure of

knowing for some years past. Although no name is given in the Salon catalogue, but merely the No. 864, followed by the words "Portrait de M. A. C.," it is easy to recognise the features of the well-known French horticulturist and able secretary of the National Horticultural Society of France.

Royal Lancashire Agricultural Society.—The annual exhibition in connexion with this flourishing society is to be held at Platt Fields, Manchester, on July 30 and 31 and August 1 and 2. We have received a copy of the schedule of the horticultural section, and notice that many valuable cash prizes are offered for groups of plants, collections of alpine and hardy perennials, stove and greenhouse plants, Ferns, Caladiums, Fuchsias, Tuberosus Begonias, Orchids, cut flowers, bouquets, Roses and Carnations. Sweet Peas are specially catered for, numerous classes with good prizes being arranged for these. Ten official large silver medals will also be at the disposal of the judges for awarding to trade exhibits. In some classes the cash prizes are supplemented by silver cups. Copies of the schedule can be obtained from Mr. Edward Bohane, Derby House, Preston.

A Rhododendron show.—Messrs. John Waterer's annual exhibition of Rhododendrons will be opened on Wednesday next and remain on view throughout the month.

Herbaceous Calceolarias at Farnham Royal.—A beautiful display of Calceolarias may be seen now in the nurseries of Messrs. James and Son, Farnham Royal, Slough. The plants are admirably grown, and the colours remarkable for the variety of shades, the pink and salmon pink tints displaying a great contrast to the spotted types. It is the pink shades that attract us most, and in the future will probably undergo further development.

Amaryllises and Chrysanthemums at St. Petersburg.—In an interesting letter appearing in a German contemporary from the pen of Mr. H. M. K. Kühn, head gardener at Lewaschowa, near St. Petersburg, we note the prevailing taste for English varieties of Chrysanthemums with exclusively large blooms, while the pretty varieties of single-flowered Chrysanthemums are entirely neglected with the one exception of the Imperial Gardens. In other countries these small-flowered varieties are largely employed in making funeral wreaths; but in Russia only metal wreaths are the fashion, and it is not unusual to see, especially at funerals of important persons, magnificent hearses loaded with metal wreaths, on which expensive ribbons are fastened, drawn by snow white horses. The number of varieties of Chrysanthemums grown for sale is very small, although the plants are cultivated in large numbers. The principal varieties are Princess Alice de Monaco, the chief variety; then come Mme. Paolo Radaelli, W. Duckham, Souvenir de Mme. Buron, Any Ensol (very fine as a pot plant), Souvenir de Lombez and N.C.S. Jubilee. One which is likely to become a great favourite is Dolly Glide, an English variety. One great point in this variety is that the flower is not injured by rain. Dolly Glide begins with Mme. Paolo Radaelli to flower in the middle of October, and can still be had in fine condition at the end of December. Large-flowered varieties begin to flower at St. Petersburg early in the month of August; the late flowerers not so soon. As regards Amaryllises, scarcely any were grown there previously to Messrs. Ker and Son of Liverpool showing a large group of these plants at an international exhibition held in 1899. Now there is scarcely a garden in which thousands are not grown. So far is the cultivation of these bulbs extended that flowering plants are obtainable from September onwards to the spring. In conclusion, the writer of the article remarks that large-flowered Amaryllises and Chrysanthemums are eagerly purchased, but not so those of medium quality.—OBSERVER.

PRIZES FOR READERS. JUNE.

THE BEST EIGHTEEN OUTDOOR-GROWN FLOWERS AND GRASSES FOR CUTTING FOR ROOM DECORATION, WITH DIRECTIONS FOR THEIR SUCCESSFUL CULTIVATION.

A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF-A-GUINEA
are offered for the best essays on the above subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Tuesday, June 30. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

"The Garden" Flower Show.—Will you allow me as a reader of your excellent paper to add my plea to that of "F. G. S.," which appears in THE GARDEN for May 16, for a class in your forthcoming show for town gardeners? I should be very pleased for one to enter as a competitor, and I have made up my mind to send some flowers, if possible, whether we have a class to ourselves or not. I have no doubt a class limited to town gardeners will be a matter of some difficulty to arrange; but I do not think it should be impossible, and I hope, sir, that you will give our suggestions consideration and see your way clear to adopt it.—RUS IN URBE, *Parson's Green, London, S. W.*

Anemones naturalised in grass. The note in THE GARDEN of the 9th ult. reminds me that *Anemone blanda*, with several allied species, are easily naturalised in grass and soon sow themselves thickly, forming groups which have a beautiful effect at this season. *A. apennina* is a beautiful hardy plant for the purpose, so is *A. ranunculoides*. *A. nemorosa* fl.-pl. is also a beautiful white one. All these will do quite well. A few years ago we planted some in beds. A few roots were left over, and these were planted under Beech trees. These have formed large masses and are seeding freely in the grass. Strange to say, these were bought for the ordinary *A. apennina*, and for the first year or two they came quite true. Now, however, there are a great many more white than blue, and I fear that in a short time the blue will have vanished entirely. I do not know whether it is the soil (limestone) which has influenced the colour; it certainly suits them very well indeed. Wherever the seed is scattered there will the plants grow and increase rapidly. *A. blanda* does not increase so quickly, but is a beautiful hardy and early plant.—T. ARNOLD.

Destroying earwigs.—In the article on "Earwigs" in your issue of the 9th ult., your able correspondent Mr. G. S. Saunders states "That it is difficult to suggest any method for destroying this insect except by trapping,"

which is, as we all know to our cost, a very slow and uncertain one. Now, might I suggest that among your many readers, a few with ample leisure and patience to record their results, should write to me, expressing their willingness to experiment with a new preparation and also with a beetle poison which is not yet introduced, being only in the experimental stage. If they will do so, free samples will be forwarded, and I venture to think that some wonderful results will be achieved by way of destroying pests which hitherto have been considered unexterminable.—*JOSEPH LYTLE, Freshfield Road, Formby.*

A snow scene in April.—You will doubtless remember that about two months ago you very kindly answered several questions which I sent to you. I have thought more than once that I should like in some way or other to acknowledge your kindness. On April 25 we had a heavy snowstorm here, and when awaking in the morning the snow lay to the depth of several inches on the ground in one vast white mantle. Being an amateur photographer, the thought struck me that I would try to take a snapshot of it in our local park. I had not wandered very far before I saw a very pretty nook, in which the trees blended beautifully with the surrounding scenery. This I took, and am forwarding to you the first print I have taken from the negative. I ask you to kindly accept it as a very small acknowledgment of your kindness to me. I wish you every success with your nicely-printed and very valuable paper.—*VICTOR R. RICHARDSON, Frome, Somerset.*

Free-flowering Daffodils.—Your correspondents' notes in THE GARDEN of April 4 and the 9th ult. concerning free-flowering Daffodils have been specially interesting to me. I have grown Daffodils for more than twenty years, and have now a large collection. So far as my experience goes, the largest return I have ever had in flowers from a single bulb occurred two years ago. This was from a single bulb of Weardale Perfection; it was a very fine bulb when planted in 1905, and the following year I had four grand flowers. Last year I fully expected that I should have had five or more. But history repeated itself; there were only four. This year there were five. I think that this seems to point to the fact that if one wants as large an increase as possible in flowers, the plan to adopt is to take up the bulbs as soon as possible after growth for the season is over and divide them, not, however, to divide them too hard and in too greedy a way to obtain as many offsets as possible, but only to part asunder those bulbs that will readily separate and those only that have the brown covering that surrounds every thoroughly-matured bulb. One assists Nature in this way. The contest for supremacy, as it were, and the struggle for existence is less keen, and every bulb has a better chance of giving proof by itself what it can do. Until I read your correspondent's note in THE GARDEN of the 9th ult. I almost imagined that my bulb of Weardale Perfection two years ago with its four blooms held the record for free flowering among trumpet Daffodils; but I was truly amazed to read that a single bulb of Emperor threw six blooms. This is a greater return than any I have ever read of or heard of before.—(Rev.) *WILLIAM W. FLEMYNG, Coolfin, Portlaw, County Waterford.*

The Poeticus section of Narcissus.—Kindly allow me space to inform "Poetaster" (page 238) that Aeme is certainly an absolutely pure Poeticus and bred between

two absolutely pure Poeticus varieties. To my eye—which, I suppose, has looked on a very great many more seedling Poeticus flowers in the past twenty-five years than anyone else can have seen—there is no suggestion in the form or colour of Aeme of any influence whatever outside true Poeticus. I could show "Poetaster" a score of seedlings with precisely the same red, which is a rare tone, but, nevertheless, occurs in a certain line of Poeticus descent. As to its white, no two varieties of pure Poeticus have precisely the same white, a thing which can at once be seen by a trained eye if the flowers are set against a dead white background. Broadly speaking, the earlier Poets are less white than the later; but no two are quite alike in this respect, whether early or late.—*G. H. ENGLEHEART.*

Town gardening and cats.—With reference to your correspondent's ("F. G. S.") criticism of "The Town Garden" column, as it was, I believe, at my suggestion that you adopted it, perhaps a few words from me will not be out of place. I am sorry he thinks so little of it. I cannot agree with very much that he says. My garden is a proper town garden, about 24 feet by 18 feet, and consists of a 3 feet border round three sides and a bed 5 feet in diameter in the

cure for the ant pest, with which insect I am overrun; they run and swarm over everything and are very distasteful on the grass, &c. If, as your correspondent says, he knows something about practical gardening, he should have no difficulty in making a selection for his garden. I know very little about gardening, except what I have learnt through your paper, and I find my greatest difficulty is in deciding what I shall grow. However, a bit of what I have made a start with in my "back yard" may not be amiss; possibly I have planted some with more hope than wisdom. My soil is light, very dark in colour, and I believe, inclined to be sour (any way it smells rather disagreeable when turned over). I have used no manure of any kind. The following is the list: Lilies in variety, good; Gladiolus brechenleyensis, good; Pinks, eighteen varieties, good; Michaelmas Daisies, very good; Carnations, sixteen varieties, moderate, the birds got at them; Campanulas, very good; Phlox, moderate; Doronicums, in full bloom; Harpalium, good; Persian Ranunculus, good; Iris, in full bloom; Chrysanthemums, not yet planted; Antirrhinums, not planted yet; and some others, the names of which I do not know, having had them given to me, and in addition the following annuals all grown from seed: Stocks, Mignonette, Cupid Sweet Peas, Nasturtiums and Canary Creeper. What do you think of my list, Mr. Editor; surely not a bad one for a back yard? I may mention also that I have had a fine show of bulbs, such as Crocuses, Scillas, Hyacinths and Daffodils. I quite agree with "F. G. S." that gardening is somewhat expensive. I hope later to let you know what success I have and also some hints for "F. G. S." as to my method of cultivating the above.—*RUS IN URBE, Parson's Green, London, S.W.*



SCENE IN A SOMERSET PARK ON APRIL 25.

centre. It is situated well within the four mile radius of Charing Cross, and within about five minutes' walk of the Electric Railway generating station (with its four great shafts always belching forth great volumes of smoke), a gas works and a large brewery, so "F. G. S." will recognise that it gets its share of smoke. He says people in towns do not grow Lettuces, but if he lives in London he cannot go about and use his eyes much. What about all the little allotments filled with vegetables that the railway men cultivate? In this part of London every spare bit of land is cultivated, mostly for vegetables. He must remember that it is also for those that Mr. Wright has to write and advise. If he does know of any device for keeping away cats I will shower all the gratitude I can on him if he will tell us what it is; I have heard of nothing more practical than Mr. Wright's device yet. I grow no vegetables of any kind, and the only criticism I shall make of "The Town Garden" column is that there is so few varieties given for planting. I have tried Mr. Wright's remedy for worms in grass and it is capital. I, too, have a lawn; whether my grass will prove an annual remains to be seen; I have only just raised it from seed; I have hopes that it will prove perennial. By-the-by can Mr. Wright or anyone give me a

assisted this clearance of the feline race by chemical means. But to guard my small garden I put up round portions of it most accessible to cats wire netting standing 2 feet above the usual fence and in other parts fixed up two and three strands of barbed wire. Cats have ever since fought shy of my enclosure. It is folly to be tender-hearted to these pests. In so small a space I grow on the fences Ampelopsis, Clematis montana (a splendid town climber), Ivies, seedling Vines, Brambles, &c.; and in the borders hardy Ferns, Daffodils, Anriculas, Creeping Jennys or other hardy things that will give little trouble and really grow well. It is useless to plant things which in such environment refuse to grow.—*A. D.*

Sycamore seedling with four cotyledons.—An uncommon seedling Sycamore has been sent to us by Mr. A. C. Onslow, Hill House, Bembridge, Isle of Wight. Instead of the cotyledons being two in number, as is usual with the Sycamore, four distinct cotyledons have been produced. They are rather smaller than the average size for the species, but are similar in shape and character. We have never observed this multiplicity of seed leaves in the Sycamore before, though it is not an uncommon occurrence with seedlings of some plants.

TREES AND SHRUBS.

THE WHITE SPANISH BROOM.

(CYTISUS ALBUS.)

THE numerous members of the Broom family compose a very important group of flowering shrubs, as nearly every one is of a most floriferous character and very ornamental. The white Spanish Broom (*Cytisus albus*) is found wild in both Spain and Portugal, where it has as a companion the yellow Spanish Broom, a plant that is not a *Cytisus* at all, but belongs to the allied genus *Spartium*. The shrub under notice is of graceful appearance, with thin, green, twiggy branches and three-parted leaves; the latter, however, are not borne in very great profusion. The flowers are produced during April and May, and are white and small. The illustration well defines the floriferous character of the plant. A variety is in commerce called *incarnatus*; in this the wing petals are reddish in colour.

Like most of the other *Cytisuses*, this one is at its best from three to ten years of age, and although plants will live for fifteen or twenty years, it is not advisable to keep them so long, as they become leggy and unsightly. With some shrubs it would be possible to cut the branches back when they became leggy, and so obtain a new foundation, but with Brooms this is out of the question. So long as cutting back is restricted to one year old wood it answers well, but is quite a failure when applied to old wood. Seeds are borne freely, and from these very nice plants may be obtained in two years. Stopping of the shoots is essential while the plants are young, so that a good foundation is formed. When planting out it is advisable to stake each plant, as the roots are usually out of proportion to the head and will not keep the plant firm until established. The plant thrives in almost any kind of soil.

W. D.

AN UNCOMMON SHRUB FOR FORCING.

(XANTHOCERAS SORBIFOLIA.)

WE have within the last few years seen many subjects forced into bloom whose adaptability to

that mode of treatment had not previously been considered. One of these (*Xanthoceras sorbifolia*) bids fair to become ere long very popular for the purpose, as it readily lends itself to this mode of treatment, flowers freely, and is not only decidedly showy but also quite distinct from its associates. The *Xanthoceras* (a native of Eastern Asia) is a sturdy growing shrub or tree with stout ascending branches, clothed with pinnate leaves of a bright glossy green tint. These leaves consist of seven to nine leaflets with serrated margins, bearing in general appearance a certain resemblance to those of the *Sorbus*, hence its specific name. The flowers, which make their appearance simultaneously with the leaves, are densely packed in shortish racemes, produced from the terminal buds of the preceding year's growth. Individually the flowers are about an inch in diameter, and are white with a coppery red centre, caused by the base of the petals being of that hue. In the open ground it is perfectly hardy as far as the winter's frost is concerned, but the young unfolding leaves and blossoms are quickly injured by harsh winds. For this reason its spring display out of doors is often a meagre one. Under glass, however, where the blossoms open well, it is very effective.

H. P.

A BEAUTIFUL TREE.

(PYRUS FLORIBUNDA ATROSANGUINEA.)

FEW flowering trees or shrubs can excel the well-known *Pyrus floribunda* for its wealth of bloom and beautiful appearance in the spring season of the year. At the same time, it is somewhat surprising that the excellent variety *atrosanguinea* should be very little known, as it possesses all the good qualities of the type, with a much more striking colour. The unexpanded buds are very showy, being so richly coloured, and when fully open are well described by the varietal name. This *Pyrus* is a fast grower when well established and soon forms itself into a handsome, small tree, well suited for a prominent position in the shrubbery, or, better still, in an open position on the lawn, where its long, pendulous branches have ample room to expand and reveal their natural grace. I do not know whether it is general, but the habit of the variety is naturally more pendulous with us than is the case with *Pyrus floribunda*.

A. E. THATCHER.

THE FLOWER GARDEN

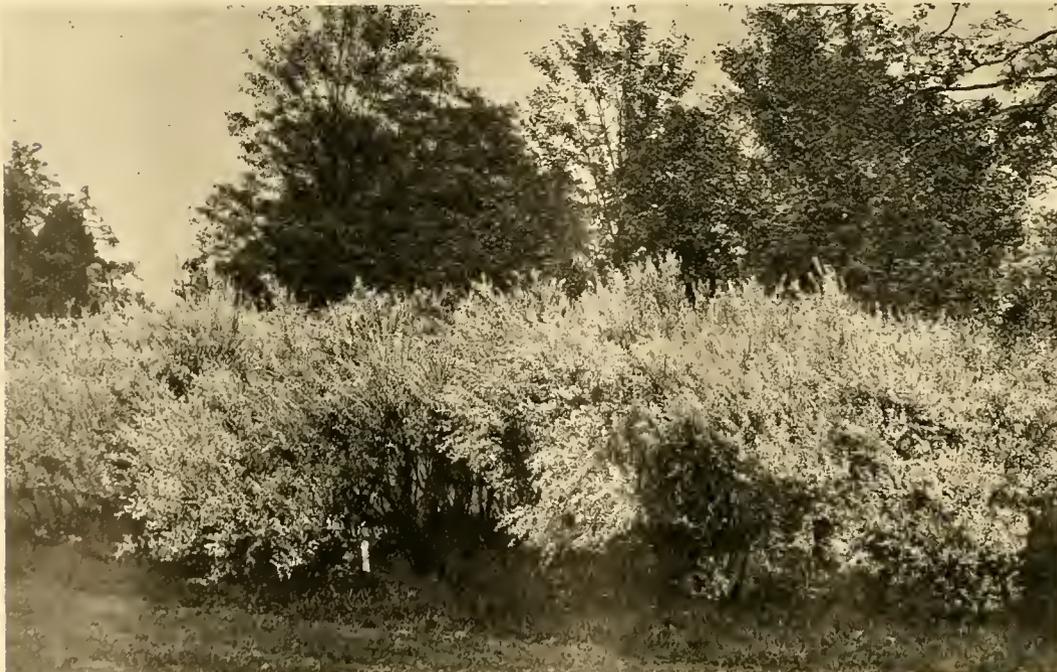
WORK AMONG THE SWEET PEAS.

ON page 165 the treatment of the young plants up to the time of permanent staking was dealt with. The plants will by now have almost reached the tops of the short twiggy sticks that were placed in position to afford them temporary support, and it will be necessary to at once see about the permanent supports. What these shall consist of will depend, to a great extent, upon circumstances. Personally, I prefer good bushy sticks, but these are not always available. They are, however, more easily obtained in towns now than they were a few years ago, most seed or corn merchants stocking them.

It will be necessary in preparing the sticks to remove any branches that radiate at an awkward angle, and also to cut them so that they are as straight as possible. This, with the sharpening of the thick end and removing straggling tips will be all the preparation necessary. The length or height of the sticks must of course be taken into consideration. Six feet is a good average height; in many gardens the plants never grow so tall, and in others they grow much higher. The insertion of the sticks will need some care. Where the plants are grown in rows, the best way is to place the sticks about 3 inches away from the plants on either side, the distance apart of the sticks varying according to their width. Crowding must, however, be avoided. A point where amateurs often go wrong is in sloping the sticks so that the tops form a sort of ridge. The appearance for the time being is neat, but when the plants reach the top they have but little area of supports to cling to, and, consequently, suffer much from strong winds. The double row of sticks, when properly inserted, should be as wide at the top as at the base. Where clumps are concerned some growers prefer to place the sticks inside the circle of plants, but there is not any advantage in this. If placed outside, the plants quickly grow through the supports and cover them. Where a large stick of symmetrical form, such as a young Birch tree, can be obtained, this may be pushed into the middle of the circle and

allowed to form the sole support for the clump. The effect thus obtained is very pretty. Failing sticks, wire netting of large mesh (4-inch) makes an excellent substitute, and will last for years. It should be securely fixed to stout stakes firmly driven into the ground.

With the advent of hot weather will come the question of mulching, and where fine flowers are desired over a long period this is almost essential, especially if the soil is of rather a light nature. What the mulching shall consist of is a question that may be asked by some. Personally, I prefer rather long stable manure that has fermented well. This is excellent for preserving moisture and gradually yields up a small amount of food for the plants. Dwellers in towns will frequently find this difficult to obtain, and, as a substitute, Wakeley's Hop Manure is excellent. If it is mixed with an equal amount of soil and placed 2 inches or 3 inches thick along each side of the row it will be found to preserve the moisture and at the same time supply valuable food to the plants. Mulching of any kind should not be put on until the soil has had time to get thoroughly warmed by the sun, and it should be applied soon after a good soaking of rain, then heat and



THE WHITE SPANISH BROOM (CYTISUS ALBUS) AT KEW.

moisture will both be conserved. Feeding is another point that will soon need attention. Many good growers never feed at all, but rely upon thorough preparation and manuring of the soil to supply all the food the plants require. Where such work was properly done little feeding will be required, but should the plants appear to need extra help much good may be done by applying superphosphate at the rate of 1oz. to each yard run of row. This may be given just when the buds begin to appear. When a few flowers are open an excellent manure is made up of two parts superphosphate, one part sulphate of ammonia and one part nitrate of potash (saltpetre), using this mixture at the rate of 1oz. to each yard run of row. Weak soot water or weak liquid manure made from cow manure are both excellent. The artificial manures advised above may be applied in solution if desired, using half an ounce to a gallon of water. Where applied in a dry state they should be well watered in. Liquid manure must not be given when the soil is dry; water well with clear water, then apply the liquid manure a few hours afterwards.

Those flowers that have orange in their colour composition will need shading from the direct rays of the sun; tiffany blinds on rollers fixed over a wooden framework are the best, but anything that will afford shade without unduly excluding light will answer.

Green fly is sure to appear, and this pest must be promptly checked by syringing the plants with a solution of soft soap and quassia solution, or any of the excellent insecticides now advertised. Spot is a fungoid disease that causes much trouble in wet seasons; as soon as seen the plants must be sprayed with Bordeaux mixture or a solution of potassium sulphide (liver of sulphur), half an ounce to a gallon of water, repeating the operation if necessary. H.

AURICULA MILDRED JAY.

ONE of the most shapely alpine Auriculas we have seen; the blossoms, too, are of the largest size, of perfect outline and the colour shading well defined. The predominant colour is purple to a bluish shade, with well-formed cream-coloured centre. It was exhibited by the famous Auricula specialist, Mr. James Douglas, Great Bookham, Surrey, before the Royal Horticultural Society on the 12th ult., when it received an award of merit.

HISTORY OF THE PRIMROSE, COWSLIP AND AURICULA.

(Continued from page 251.)
THE AURICULA.

THOUGH comparatively not an old garden plant, the Auricula ranks among the most important

It became not only highly esteemed among florists, but gardeners cultivated it with great care. It may at once be said that the early Auricula had little in common with the plant of to-day, but it is one of the few things in the history of gardening concerning which no doubt exists that from the first it was cultivated with the greatest care, with also progress towards the perfect flower of the florist. Gerard's Auriculas may be passed over, but when we arrive at the time of Parkinson (1629) there was a great variety of these "outlandish" flowers, which he tells us "encrease much

many florists being active—Bobart and Austen of Oxford, "Mistris Buggs" of London, Ricketts of Hogsdon and a dozen others whom Rea names. The varieties were now named, such as The Fair Virgin, The Matron, The Alderman, The Cow, The Red Bull and The Black Imperial. Two striped sorts are mentioned, a class which afterwards obtained great popularity. Rea, it may be mentioned, noted details of the method of cultivation pursued at that time, and alludes to the fact that the best sorts were set in pots. By 1683, when Gilbert's Vade Mecum appeared, the

striped varieties had largely increased, and to them was added a new section—that of doubles, which, as well as self coloured, were produced too in striped varieties, which, judging by the prices quoted (£4 to £5 each) were considered the cream.

Gilbert falls into rhyme over the Auricula, as follows: See how the Bear's ears in their several Dresses, (That yet no Poet's Pen too high expresses.)

Each Head adorned with such rich attire
Which Poole and Clowns may slight, whilst skill'd admire
Their Gold, their Purples, Scarlets
Crimson dies,
Their dark and lighter hair'd Diversities.
With all their pretty shades and Ornaments
Their parti-colour'd Coats and pleasing Scents.
Gold laid on Scarlet, Silver on the blue
With sparkling Eyes to take the Eyes of you.
Mixt Colours, many more to please that sense,
Other with rich and great magnificence;
In double Ruffs with Gold and Silver laced,
On purple crimson, and so neatly placed,
Ransack Flora's Wardrobes, none can bring,
More taking Ornaments t' adorn the Spring.

Bradley, writing on the Auricula in 1717, remarks that a few years previously he had "known a root sold for 20 guineas, but that was indeed when they first began to appear in our climates," from which it may be inferred that a new strain had been introduced, probably from Holland. Bradley, moreover, is the first writer to give the "excellencies" of a good flower. "A good Auricula ought to have the following excellencies: First, that the flower-stem be strong and substantial; secondly, the footstalk of the flower must be short and capable of supporting the blossom upright; thirdly, that the Pipe or neck of each Flower be short; fourthly, that the Flowers be large and of a regular form; fifth, their colour should be bright and well mixt; sixthly, that the eye be large, round and

of a good white; and, lastly, that the flowers spread themselves flat and be no way inclinable to cup."

The above is repeated almost word for word in "Miller's Gardeners' and Florists' Dictionary" of 1724, while in that of 1733 it is noted additionally that "the Tube of the Neck be not too wide." It was at the latter date, according to Justice, a Scottish amateur, that the Auricula originated. Maddock in 1792 dates from about



A NEW ALPINE AURICULA: MILDRED JAY. (Natural size.)

delight in all sorts of the Gentry of the Land." The flowers at this time were all selfs, some with white centres, others with yellow, but as figured none of merit. Some of the colours mentioned are purple, blood red, violet, scarlet, rose, yellow, bluish and the inevitable green. At this time Tradescent and Master Tuggie of Westminster were the leading Auricula growers. The period between this and the date when Rea's book appeared was fruitful in good gardening work—



A FREE-FLOWERING ROCK PLANT: HUTCHINSIA ALPINA.

fifty years previously, while in a "Monthly Calendar" (1738), it is stated that "Plain flowers brought from Holland were sold for a great price." There is no reason to doubt that from one of these the seed was obtained which produced the plant from which the succeeding florists' varieties were raised. In 1738, however, the striped forms were still pre-eminent. They were "richly cover'd with a dusty meal"; perhaps Thomson's "Auriculas enrich'd with shining meal o'er all their velvet leaves." These were called "Painted Ladies," and later the stage Auricula was designated variegated to distinguish it from the self or "plain Auricula."

GARDEN OR OLD AURICULAS.

The statement in "Hill's Eden" (1757) that the cultivated forms originated from a purple variety of the yellow-flowered *Primula Auricula* cannot, therefore, be entertained. Probably that versatile person was thinking of what we now term the alpine Auricula, for he remarks: "Their colour is a deep but glowing purple and the eye is yellow." From about the year 1740 to 1790 there is a break in the history of the flower, but at the latter date it had developed varieties which were still in cultivation at a recent period. Coloured illustrations of such varieties occur in Curtis's *Botanical Magazine*, Maddock's "Florists' Directory," and in "The Temple of Flora." Maddock's properties of the Auricula and Polyanthus form the basis of later standards of these flowers, and to him we are indebted for one of the technical words used to designate the umbel of flowers—a "truss." "Bunch" is a term previously in use, and this author uses both. Truss has survived and bunch is, perhaps, never used. Truss is obviously a colloquial corruption of thyrsis or thyrsus.

During the first half of the nineteenth century Auriculas were popular not only with florists but also with gardeners. Here and there, too, throughout the country, collections were kept together by some humble enthusiasts whose love for the flower was not eclipsed by the introduction of gayer flowers into our gardens, but Yorkshire, where a collection of Auriculas was called a "stud," and Lancashire were the chief homes of the plant.

Flower societies, which, by the way, can be traced back to the seventeenth century, main-

tained a spirit of rivalry and were important aids in keeping up the standard of flower form.

In Lancashire the Auricula went by the name of Baziers (Bear's Ears), and one of the songs

sang by Mayers in the end of April had as a refrain the line "The Baziers are sweet in the morning of May." It may be interesting to repeat here a list of twelve varieties given in 1833.

These are: *Green edged*—Booth's Freedom, Stretche's Alexander and Howard's Lord Nelson. *Grey edged*—Waterhouse's Conqueror of Europe, Grime's Privateer and Kenyon's Ringleader. *White edged*—Hughes's Pillar of Beauty, Lee's Bright Venus and Taylor's Glory. *Selfs*—Grime's Flora's Flag, Redman's Metropolitan and Schole's Ned Lud. Most of these are named in a larger selection given a decade later, when Page's Champion, Oliver's Lovely Ann, Syke's Complete and Metcalfe's Lancashire Hero are also named. Alpines, though perhaps always in cultivation, were not grown by florists until about thirty years ago.

The old florists were partial to a rich compost, some using as much as two-thirds of cow manure to one-third of soil; others dispensed with soil altogether. Night soil, sugar boiler's refuse, blood and Willow earth are other materials used, but it is fair to say that those of a manurial nature were completely decomposed, and, indeed, reduced to soil before they were used. Hogg of Paddington was perhaps the first to employ a simple compost, and this was improved upon by Dr. Horner of Hull, father of the Rev. Francis Horner, who used one of two parts loam, one of decayed cow manure with the addition of a little sand.

R. P. BROTHERSTON.

(To be continued.)

NARCISSUS BARCAROLLE.

AMONG the many fine varieties of *Narcissus Poeticus* there is probably none finer than Barcarolle. The flower is well rounded and the eye is margined with red. Having grown this variety, I can say that it is of remarkably vigorous habit and quick to increase, so it will, no doubt, soon take a prominent place among *Narcissi*. Mr. Chapman of Rye holds the stock. W. A. WATTS.

HUTCHINSIA ALPINA.

THIS delightful alpine was one of those mentioned in the prize essay "How to Make a Small Rock Garden," and therefore this brief description may be of interest. The plant was named after Miss Hutchins, a distinguished botanist. It grows to a height of from 4 inches to 6 inches altogether, and the flowers are in clusters on a stalk about 2 inches long. The season of flowering is from March to June, and when grown in large pieces in suitable soil and position it makes a magnificent display during these months. H. BUCKTON.



A NEW NARCISSUS (BARCAROLLE) EXHIBITED AT THE BIRMINGHAM DAFFODIL SHOW.

COLOURED PLATE.

PLATE 1349.

SINGLE AND DOUBLE VIOLETS.

OF recent years, through the introduction of the large-flowered single Violet, the love for this beautiful and fragrant flower has deepened greatly, and it is not unusual at the leading exhibitions to find delightful exhibits which, I am sure, have helped towards popularising the plant. At one time California, a large single flower of deep blue colouring, was largely grown; but all the single sorts have been superseded by Princess of Wales, which is in many gardens, except for a few double sorts, the only Violet accounted worthy of attention. These notes are appropriate, as a beginning may be made at this season. The way to obtain a plentiful supply of flowers is to select strong, healthy single crowns at this time, and plant them 1 foot apart on ground which has been liberally manured and deeply dug. Trench it in winter, giving at the same time any manure that may be available, or fresh manure will suffice. In March give a further dressing of short, decomposed hot-bed manure, forking it in. Early in April rake over the ground and set out the plants, pressing the roots firmly in the soil. Keep them free from weeds and runners, and, if the season is dry, mulch between the plants with any old potting soil. Old Mushroom beds broken up fine and spread evenly between the plants provide excellent material. This saves watering and encourages growth. The Czar variety grown in this way and planted at the end of September in a sheltered position at the foot of a wall or warm hedge will flower all the winter. Marie Louise, Princess of Wales, or any other variety, double or single, grown thus, and either potted up in September or planted in frames, will flower throughout the winter, the blooms produced under glass being clearer and finer than those from outside. The Russian varieties are frequently, however, very fine in sheltered borders. Plants under glass—that is, in cold frames—will need little water in winter, and they must be near the glass. Remove the lights in warm, dry weather, as anything like coddling treatment is fatal to success, and pick off dead or decaying leaves. With regard to

Violet growing in the open air, it is a good plan to leave a bed or two undisturbed the second season, because this produces a wealth of flowers, but after the second year Violets deteriorate unless they have a change of soil. Red spider is troublesome in hot years, but mulching and an occasional soaking of water will generally vanquish the pest. Much has been written recently on the growing of Violets in THE GARDEN, and the prize essay I read with interest and profit. The variety Princess of Wales is the most valuable to me. **VIOLET GROWER.**

[The varieties represented in the plate are Baron Rothschild, single purple; Mrs. J. J. Astor, pinkish mauve; Comte Brazza, white; Lady Hume Campbell, mauve; Marie Louise, pale purple; Neapolitan, pale mauve, and the flowers were kindly sent by Mr. Weeks of Bodmin; they show excellent culture.—Ed.]

THE ROSE GARDEN.

SEASONABLE WORK AMONG THE ROSES.

I DO not remember seeing the growth in a better condition for the time of year. The shoots must be carefully thinned now, so that the best we retain may have the main support from the roots. It is a great mistake to encourage a lot of very small spray growth on the what may be termed better-class Roses. Of course, on ramblers and the old-fashioned summer Roses this is not so material, but even with Roses of the Camoens type they are inclined to produce a superabundance of growth, so that a moderate thinning of the shoots from the centres of the plants

been heavily manured with farmyard manure this will not be necessary. A good general manure can be prepared as follows: Three parts superphosphate of lime, one part sulphate of potash and one part nitrate of soda. Apply about 4oz. to each square yard of surface. In country districts, where it is possible to obtain night soil and sewage, this is a splendid stimulant to well-established Roses. Draw drills between the plants and pour on the manure in a fairly diluted form, then cover in the drills, and the rains will take down the nutriment to the plants. The drainings from a heap of cow manure, with some soot added, is a splendid fertiliser, and to vigorous plants this may be applied, diluted with an equal quantity of water, once a week, until the buds show colour.

The hoe should be kept busy among the Roses now. Where the surface soil is fairly loose the push hoe is the best tool, then we do not tread on the soil. A good tilth to our Rose beds is the best cultivation we can give them now. Do not wait for weeds to come. Keep the hoe going frequently.

Wild suckers must be suppressed as soon as they appear. As a rule they are easily distinguished, especially the wild Briar, but the Manetti stock is not so readily identified. It has a pale grass green foliage and reddish wood and prickles. Sometimes these suckers predominate on a plant, and if not cut away will kill it.

The flowering dates of various Roses should be noted with a view to future use in the arrangement. This is very useful where ramblers are planted, as we might frequently so arrange their positions that they will harmonise the better for it.

Potting compost should be prepared for repotting Tea and other forced Roses as soon as the second crop of bloom has finished. The best soil is three parts good fibrous loam, one part well-rotted manure, preferably one year old, and about a 6-inch potful of bone-meal to each barrowful of compost. Throw this well up in an airy rain-proof shed in readiness for the repotting. After the repotting the plants are grown on for a time in the greenhouse, keeping them well syringed, and in July they may be plunged outdoors in a sunny position. P.

ROSE MRS. EDWARD MAWLEY IN AUSTRALIA.

This lovely Rose is a great favourite in Australia and very often secures the much-coveted award of "best Rose in the show," especially in the Victorian associations. The bloom illustrated was grown by Dr. A. W. Marwood of Geelong, Victoria, and was one of the champions of 1907. Perhaps it will be information to some readers to know that all our Roses are grown in the open, and a glance at the form of this specimen, which is characteristic of a champion twelve or twenty-four, will, I think, prove that Roses thrive well in Australia. The Teas and Hybrid Teas do well in Victoria, and the growth of the bushes would, I think, surprise some of the English growers.

The Hybrid Perpetuals, I understand, thrive better in England, but I am looking forward with great interest to see the champions at your forthcoming shows and to judge how they compare with ours.

HOWARD HITCHCOCK.
Geelong, Victoria, Australia.



ROSE MRS. EDWARD MAWLEY AS GROWN IN AUSTRALIA.

becomes advisable. This, of course, may be done by simply rubbing them off. Often three or four small growths cluster together. Thin these down to one growth.

Plants may be considerably aided now if the hard growths are slightly bent outward where such plants have a tendency to grow too upright. This applies more to old bushes and standards than to those recently planted, but where, even in old plants, the old wood has been severely discarded no trouble will arise on this score. Soft sucker-like shoots springing from the base of the plants should have their points pinched out. They are robbers and practically useless in producing bloom this year, but if pinched the growth hardens and comes in useful another season. A sprinkling of some good reliable artificial manure may be applied now, hoeing it in immediately. Where Roses have

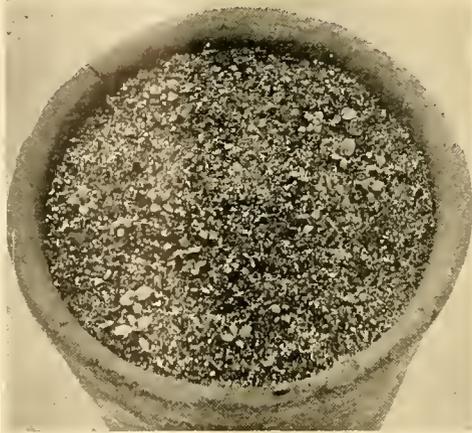
GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

ORCHIDS.—Periodically I look over my plants to remove spent blossoms before they begin to overtax them. For some time past I have been repotting *Odontoglossums* that needed this attention. There are still some plants, however, that need repotting, and this I propose to do without delay. *Odontoglossums* do well in small pots that are half filled with crocks. The remaining half of these small pots I fill with a compost made up of two-thirds peat and one-third sphagnum moss, with some charcoal and sand. It is important to remember to keep the plants raised above the surface and to finish off with a layer of nice fresh live moss. These plants must be watered liberally throughout the summer, taking care, however, to use only rain water, but not rain water from glass houses where the roofs have been limewashed for shading purposes.

Lawns.—The warmer weather of late has made it imperative to give close attention to newly-turfed lawns. It is my rule to give an occasional soaking with water. The evening is an excellent time to apply the water, as the grass has the whole of the night and early morning to take advantage of it. Plantains and Dandelions are an eyesore. I get rid of them by cutting them off well into the soil and by subsequently placing a small quantity of salt on the stump left in the ground. Daisies are less troublesome, unless they are very numerous. Individual roots may be removed with a stout old knife. Lawn sand may be used with great advantage. If applied at the rate of 4oz. to the square yard the Daisies may be got rid of, but it may be necessary to give repeated doses.

The Window Garden.—The fresh, pale green fronds of Ferns in the window should be shaded



1.—A POT OF SEEDLING AURICULAS. THESE ARE VERY SMALL AT FIRST, BUT GROW QUICKLY.

from the direct rays of the sun. Fuchsias that may be regarded as ideal plants for the window prefer partial shade. As they commence to flower the well-rooted plants derive considerable benefit from periodical applications of weak manure water. Once a week is often enough, however. Several of the more interesting species of Cacti are coming into flower and others are giving the promise of flowering in the near future. These plants prefer a window in a sunny aspect while in blossom. After flowering I stand the plants outdoors in the sun to ripen the growths. Arum Lilies, Heaths, Azaleas and Genistas that are so highly valued in the spring and early summer are placed outdoors in a warm position. The Arum Lilies I plant in the open in a sunny quarter, and the other plants are stood on a bed of sifted ashea.

The Flower Garden.—Hyacinths and Tulips should be lifted from the beds and borders when the latter have finished flowering, in this way making room for other subjects. That good use may be made of the bulbs another season I lay them out in the sun for a few hours to dry. When quite dry they are placed in boxes and stored in some cool place until the planting season in the autumn. These same beds may be planted with some of the choicer and more tender subjects, such as the tuberous-rooted *Begonia*, *Heliotropea*, *Fuchsias*, *Cannas*, *Celosias* and *Zonal Pelargoniums* (*Geraniums*), besides many other bright though short-lived plants of a tender kind. To maintain the Pansies in good health I am removing spent blossoms and seed-pods. By these means the flowering period is extended and the blossoming of the plants made continuous. Wallflowers and Brompton Stocks to flower next spring I am sowing now on a warm border outdoors. Flowering plants that should be raised from seed on a shady border are the *Polyanthus*, *Primrose* and the *Hollyhock*. Plant *Dahlias* forthwith, giving each plant plenty of room, digging out a good hole first and filling this with prepared soil.

The Vegetable Garden.—The more forward *Cos Lettuce* need attention; the plants should be tied up forthwith. For successional supplies make another sowing. *French Beans* may be sown outdoors. Sow the seeds 2 inches deep in single rows 18 inches apart. I am just planting my first batch of *Leeks* in specially-prepared

trenches. They may be grown very successfully, however, in any good, rich soil, if planted 9 inches apart in rows 15 inches asunder. The hoe must be kept busy at this period, otherwise the weeds will soon get the upper hand. I am planting an early batch of *Brussels Sprouts*, leaving a distance between the plants of about 2 feet and 3 feet between the rows. Make a good hole for each plant and press the soil firmly to the roots by the aid of a good dibber. These plants should provide supplies in the autumn. For late summer and autumn supplies a sowing of *Turnips* should now be made. This crop matures in from eight to ten weeks. D. B. C.

BORDER AURICULAS.

The culture of these plants is comparatively easy. They are equally suitable for the town and suburban or the country garden. Years ago they were more popular than at present, especially among the working classes in the North. In smoke-laden districts, in the shade of factory chimneys, the Auricula enthusiast who had no garden grew them on the window-sills in pots or boxes. The Auriculas are divided into two sections, the show and the alpine. It is to the latter section the border Auriculas belong; they differ from the former in having no meal or paste-like substance surrounding the tube in the centre of the flower. As this comes away on



3.—AN OLD PLANT AFTER FLOWERING. NOTE THE NUMEROUS OFFSETS.

the finger when touched, it shows at once that the show varieties are not suitable for culture in the open air.

The border Auricula is perfectly hardy; in fact, it thrives better in cold localities than in warm ones, the moist climate of the North of England and Scotland suiting the plant admirably. When planting border Auriculas avoid giving them a dry, sunny position. A north border sheltered by a fence or wall, but not shaded by trees, is very suitable. The ideal place for the border Auricula is in the rock garden fairly low down, thus securing a moist position and sheltered from the heat of the sun. In such a position they will grow and increase for several years without being



2.—A SEEDLING AURICULA TWELVE MONTHS OLD.



4.—OFFSETS TAKEN FROM FIG. 3, EACH HAVING SOME GOOD ROOTS.

disturbed. They are also very pretty grown in clumps or groups along the mixed border, or in the case of the commoner sorts as an edging to beds and borders.

SOIL.

Although Auriculas will grow in ordinary garden soil, they prefer a fairly heavy loamy compost. If the natural soil is light and sandy, it will pay to remove a few spadefuls and replace with heavy, almost clayey soil, thoroughly stirring it with that already in the garden.

PROPAGATION BY OFFSETS OR DIVISION.

Young shoots are produced freely round the base of most border Auriculas. Propagation is best done after the plants have flowered or in early autumn. The illustrations of a clump lifted for division (Fig. 3) and the offsets severed apart ready for replanting (Fig. 4) should convey to the beginner a good idea of how to proceed. Unless a larger stock of Auriculas is required, the plants should not be disturbed for several years. Cleaning the plants in early spring and top-dressing with loam and a little well-decayed manure (cow manure for preference) is all that is necessary. Having divided the clumps, plant them where they are to flower, or, failing this, they may be grown on a border shaded from the midday sun. Small offsets with few or no roots should be dibbled in pots or boxes of sandy soil and placed in the garden frame for a time.

SEED SOWING.

Raising Auriculas from seeds is very interesting work if the seeds are obtained from a reliable source or saved from good flowers in one's own garden. The seed ripens about the end of June or during July. It may be sown forthwith, or kept till the following spring. Sow thinly in well-drained pots or pans of light sandy soil, placing a layer of finely-sifted compost on the surface. Place in the garden frame or on the shelf in a cool greenhouse. Cover with a pane of glass and sheet of paper till the seedlings begin to appear, and at all times see that the soil does not become dry. Fig. 1 illustrates a pot of seedling Auriculas almost ready for pricking off in shallow pans or boxes. As the seeds germinate very irregularly do not throw the seed-pans away as soon as the first batch is pricked off, but return them to the house or frame, and others will most likely germinate in due course. Fig. 2 is a seedling plant one year old. Small beds of border Auriculas similar to the one illustrated in Fig. 5 are very effective in May. Anyone desirous of starting a collection of named varieties should try the following sorts: Celtic King, lemon yellow; Dean Hole, maroon-crimson; Firefly, crimson, darker shadings; Mrs. H. Turner, purple;

Mrs. P. Campbell, red; Queen Alexandra, yellow; Queen of the East, rosy red; and Uranie, red, paler shading.

MULCHES AND MULCHING.

THERE is no other operation in connexion with gardening that is capable of doing so much good or harm, according to whether it is rightly or wrongly carried out, as mulching, yet it is an operation that the beginner is apt to regard with a certain amount of awe, hence a little explanation as to its uses and misuses may be of assistance. In the first place we may with benefit consider what is a mulch. In garden phraseology a mulch simply means a top-dressing of some material applied with one or two ends in view. Often a mulch is given to prevent rapid evaporation of moisture from the soil, or it may be used solely as a means of supplying food to the plants, but usually it is intended to serve the double function. Mulching is also resorted to in a few instances for the protection of plants from severe frost in the winter months.

Naturally the character of the mulch will depend upon the duties it is expected to fulfil. Where it is solely intended for the preservation of moisture in the soil during hot weather it may well consist of short straw, lawn mowings, Coconut fibre refuse, or even dry dust or ashes, all these substances tending to check evaporation. Where, however, it is needed to supply food to the plants the above substances will be of little use. In this case partially-decayed stable manure is excellent, although it is apt to become rather untidy during dry weather. Very wet close manure is not advised, as, owing to its texture, air is excluded from the soil. Those who have small gardens, especially in towns, usually experience some difficulty in obtaining stable manure suitable for mulching, and all such should give Wakeley's Hop Manure a trial for this purpose. Used according to the directions it answers splendidly, the spent Hops which form its base rendering it porous.

Having thus considered the question of mulches we must now turn our attention to those subjects that are specially benefited by it, and also the time when it should be applied. Generally speaking all recently planted trees, whether fruit or otherwise, are greatly assisted by a mulching placed on the soil over their roots. The same applies to newly-planted herbaceous subjects and all established plants, such as Roses, Sweet Peas and Asparagus that delight in a comparatively cool, moist root run. On light soils practically all crops are greatly

benefited by mulchings applied at the proper time. It is in the time of application that many amateurs go wrong when mulching, a few well-defined principles needing consideration if the full benefit is to be derived from the material used. At the present time we need not consider the mulching of plants for the purpose of affording protection from frosts, the checking of rapid evaporation and the supplying of food being the most important now. It is a common but entirely wrong practice to mulch trees, shrubs and other plants in the spring before the soil has had an opportunity of becoming warmed by the sun, consequently the soil is retained cold for a long time, much to the detriment of the plants. Others again put on a mulch after a long period of drought, consequently when rain does come it is diverted from the roots of the plants that are dying for the want of it. To derive the full benefit from a mulch it ought not to be put on until the soil has become thoroughly warmed, then it should be applied as soon after a heavy soaking with rain as possible. If the soil is dry and rain is not likely to fall for some time thoroughly water it and apply the mulch soon afterwards. The thickness of the coating given will vary according to the condition of the material used. Fairly short stuff may be spread on 3 inches thick; long, strawy material twice that thickness. Trees are frequently given a thick mulching of short manure in the autumn as soon as planted, consequently the soil is kept sodden, air is excluded and the trees either succumb or make a miserable attempt at growing. The present is an excellent time for mulching, and if carried out now the operation will result in much good. Young trees and shrubs in pots, where the roots are necessarily cramped, derive great benefit from a mulch placed on the top of the soil in the pot. Many cultivators of pot fruit trees use a tin band several inches deep for placing round the top of the pot, thus forming a sort of receptacle for the mulching material. Frequently this consists of thoroughly decayed manure or rather rough fibrous loam, with some suitable artificial manure added. Besides mulching proper the good effects produced by frequently hoeing the soil should not be overlooked. Such work produces a tilth of fine soil on the surface, several inches thick, that is most valuable for the prevention of rapid evaporation of soil moisture. Besides this air is allowed free access to the roots of the plants, insects are exposed to birds that are always watching for them, and weeds are destroyed in a young state before they have had time to rob the soil of much nourishment.



5.—A BED OF AURICULAS IN FLOWER.

THE TOWN GARDEN.

THE LAWN.—The grass plot, which we all prefer to dignify by the name of "lawn," will demand incessant attention on the part of the owner during the summer. It is always a matter of great difficulty to keep the Grasses in first-rate condition in limited areas, but where constant treading in distinct tracks can be avoided the trouble is considerably lessened. There are three operations which go far to ensure thick, permanent turf, and these are regular mowing, persistent rolling and generous watering. In respect of the first named it is well to cut closely up to about the third week of this month, and then raise the knives a little so as to reduce the danger of exposing the bases of the plants to the fiercest rays of the sun. Mowing will have to be done about once a week, but the precise intervals are governed by the weather. Rolling can scarcely be done too frequently, provided that the ground is not too wet, while watering with one of the excellent sprinklers advertised in **THE GARDEN** does an immense amount of good. The man who keeps up with these details will find his grass plot a great pleasure throughout the season, but he must not spare the water.

PETUNIAS FOR A HOT BORDER.—Those who have a hot, dry border on which plants are apt to run out too rapidly and have not tried Petunias should do so. On a narrow border of rather poor soil in my garden they thrive magnificently and make a display which cannot be excelled by any other plant as easily grown. Fine plants are procurable from vendors, and they should be planted at once and watered well in. After this the principal attention will lie in occasional watering, pegging down or tying up, according to circumstances, and the persistent removal of the blooms as they pass the zenith of their beauty. I have tried both single and double varieties, but find the former by far the more satisfactory. Last season was rather too damp for the most brilliant results, but the effects of the constant wet were militated against by keeping the soil very firm. As soon as possible after rain or watering the surface between the plants was trodden hard down, and then pricked over to a depth of half an inch or an inch with a bluntly-pointed stick. This kept the plants thrifty and floriferous, and created one of the best features of the garden.

STAKING PLANTS.—This is an operation to which the average amateur gardener does not attach sufficient importance, and the manner in which it is done in many cases completely destroys the charm of the small town garden, in which defects are far more conspicuous than in places of large extent. To put in one central stake and bunch all the shoots up to it entirely destroys the natural charm of the plant. By all means limit the supports to one at a plant if it can be made efficient, but sling each growth up to it separately and securely, and use strands of tying material that are as thin as is possible consistent with strength. If this work is done well, the garden looks tidier and the plants retain the native grace of habit to a considerable extent which they cannot do when the hideous bunching style is adopted. In all instances the stake should be placed as inconspicuously as possible, and green tying material should be utilised in preference to white or straw-coloured.

ROOM PLANTS.—During the summer these are apt to be neglected for the fuller charms of the garden, and they do not get the weekly wash that is the rule in the winter. It is certainly not as necessary, for the air now is purer than when we have November's special fogs; but on no account should they be allowed to become coated with dirt. Stand them out of doors during every warm shower, as this will cleanse and revivify them at one and the same time, but in addition sponge them over carefully now and again. Ferns which cannot be

sponged should be laid on their sides and vigorously syringed through the fronds from above. If they get dirty with insects, they should be dipped head downwards in weak insecticide.
HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FRUITS UNDER GLASS.

EARLY VINES, with ripe and ripening fruit, should have ample ventilation, and take care that the borders do not get dry, otherwise red spider will make its appearance, and it is then difficult to eradicate when the fruit is ripe without disfiguring the berries. The Muscat house should be attended to regularly in the matter of damping down, and with a good syringing in the morning and at closing time. Shut up with a good sun-heat of about 90° and give plenty of liquid manure. Young Vines should not carry too much fruit at the expense of poor berries and small wood for next year's crop.

Vines planted this season should be tied up neat and straight and allowed to ramble freely in order that they may make plenty of roots. All late Grapes should by this time be well thinned, and as soon as the thinning process is complete give a good sprinkling of *Le Fruitier* on the border and water in. Keep all lateral growths pinched in regularly, so that too much has not to be cut away at one time.

Figs.—Where these have been gathered the house should be treated as for the first crop, as the second crop will now be swelling. Keep the growths tied in and pinched. Give frequent heavy waterings in bright weather. The house in which

Melons are ripening should have air left on at night, the fruits cut as soon as ripe and placed in a cool fruit-room. Successions should be treated as recommended for early crops, but no difficulty should be experienced in setting a good crop quickly. Seed should now be sown for the latest crop.

Cherries should have plenty of air all night, and nets be run around the ventilators to keep out predators, or the fruit may be missing.

Cucumbers.—Carter's Model is a fine summer variety. Cucumbers should be sown often, so that they can always be had fresh, and old plants are apt to get red spider and produce distorted specimens.

PLANT HOUSES AND FRAMES.

Winter-flowering Carnations will now require to be placed in flowering pots. In all cases they should be protected, after the final potting, from heavy rains and extreme exposure to sunshine. Stop the shoots so that they break and make bushy plants. Stake the plants as soon as it becomes necessary.

Malmaison Carnations.—The main batch is fast opening its flowers. Neat rubber bands should be placed over the buds, and all the lateral ones and growths kept pinched off, so that all the strength is directed to the one flower. This also applies to borders, and, in fact, all Carnations. Keep the house cool and damped occasionally. Pot Cyclamen. Sow more Primulas and Cinerarias.

W. A. Cook.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

In the stove house very little artificial heat will now be necessary, but, while more air

than was formerly given will be required in hot weather, the evaporation will be consequently increased, and, therefore, additional precaution must be taken to keep the air of the house sufficiently moist. The plants should be syringed overhead early in the morning and in the afternoon. On hot sunny days water should also be thrown along the paths. Shading from the more direct rays of the sun will prove beneficial, and for Orchids it is especially necessary.

FRUIT UNDER GLASS.

Thinning Grapes.—This operation is by some performed all at once, and by others at two different periods; that is to say, the bunches are partially thinned out as soon as the berries are the size of small shot, a secondary and final touch being given a week later. In the case of early and midseason Hamburgs, Foster's Seedling and similar Grapes I think one thinning is sufficient, as it is no drawback, but rather the reverse, especially where Grapes are used in quantity, if the berries do wedge each other slightly, as with a dry, airy atmosphere and a gentle warmth in the hot-water pipes damping off, and consequently gaps in the bunches, rarely occur. With later varieties, however, intended for hanging well into the new year, the case is totally different, and a second thinning is, I think, advantageous, inasmuch as it allows of a more correct judgment being formed of the exact space to allow between the berries to admit of a free current of air passing through them.

HARDY FRUITS.

Trees against Walls.—Where the borders are occupied with vegetables it is astonishing the amount of nourishment required to keep both going, for as the succulent crops take all the moisture out of the upper portion, there is nothing left for the roots of the trees to feed upon. In such cases mulching is impossible, and the only plan that can possibly be adopted is to feed the trees with liquid manure. Pears should now receive their final thinning, reserving only one at each cluster, and this the largest and best placed.

KITCHEN GARDEN.

Tomatoes.—Where the plants have been thoroughly hardened off, there should be no further delay in planting, provided the weather is genial. Each plant should have the lowest bunch of blossom showing. I do not care to have them more forward than this at planting time, for I have not found the desired freedom of swelling with fruits that have set in small pots, and think that more is lost than gained by getting them so forward.

General Work.—Thinning of main-crop Carrots, Beet, Salsify, Scorzonera and Chicory should follow close on those things taken in hand earlier, as growth will now be rapid.

FLOWER GARDEN.

Bedding-out is the principal business now. Take the plants in the order of their relative hardiness, so as to keep back to the last moment all the more tender subjects such as Coleus and Alternanthera. Keep the lawns in the best order possible, and in the event of prolonged dry weather flood them with water at least once a week. Stake and mulch Dahlias. Look over mixed borders and provide supports for plants that are likely to be blown over.

Hardy Annuals.—Those sown early in May will now need thinning, first singling them out, and then, when danger from slugs has passed, reducing to the required distance apart, which is generally about double the distance usually afforded. The room taken by a well-developed plant should be the guide to this at all times. There is nothing in the culture of annuals that repays so well as early and systematic thinning.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

SWEET PEAS AT THE TEMPLE SHOW.

AT the Temple show the lover of Sweet Peas usually expects to get his or her first view of the flowers in any quantity, and one may safely prophecy that, in addition to standard varieties, a few novelties will also be found. This year the display of flowers was hardly so lavish as usual, but this lack of quantity was compensated by the general good quality of the blooms staged.

Mr. Breadmore's magnificent group was a great surprise to most people. I have rarely seen Helen Lewis staged in better condition, even at the summer shows, than it was on this occasion, and Mrs. Collier was also put up in first-class condition. Some inflorescences of the first-named were composed of five large flowers, and this without any signs of fasciation. Elsie Herbert and Etta Dyke were also in grand form. Of novelties shown here, Kathleen MacGowan will probably become a universal favourite. It may well be described as a large sky blue Spencer, the standard shading off to lavender at the edge. Mrs. C. W. Breadmore is a dull cream or buff, slightly suffused and edged with pink.

Mr. R. Sydenham, as usual, had some very interesting things in his tastefully-arranged group. Primrose Spencer was here, and I noticed that it was labelled as synonymous with Clara Curtis. As exhibited, it is not so good as the last-named, but flowers grown under glass so early are not good for comparison. Mrs. F. R. Castle is a nice Pea. It somewhat resembles King Edward, but belongs to the Spencer section. The standard is also brighter, and the wings rather more highly coloured. Miss Millie Maslin is a lovely thing, the rich glowing crimson colour of the large flowers appealing to all. Paradise on this stand was superb, the colour of the flowers being well developed.

Messrs. Dobbie and Co. maintained their high reputation with a most interesting group. The King is a novelty that should become popular. It is a large flower, with a waved scarlet standard and rich rose carmine wings. White Spencer as shown here appears to be no better than, if as good as, Etta Dyke. Mid-Blue is a pleasing variety of the grandiflora type, the clear deep blue of the standards and the lighter blue of the wings producing a fine effect. Menie Christie was shown in good condition, and will no doubt give a good account of itself this summer. Mrs. A. Ireland is a bright-coloured variety that should be popular for decorative purposes. The highly-waved standards are of a distinct bright rose pink colour, the large wings being somewhat paler.

Messrs. G. Stark and Sons had two novelties in their group. Olive Ruffel is a Spencer, the colour of which may be described as a mixture of buff and pink, the wings containing more of the latter colour than the standard. Maggie Stark is a large Spencer, the pink standard containing a trace of orange when young. The wings are almost deep rose-coloured. H.

MAY-FLOWERING TULIPS AT COLCHESTER.

TWO ACRES OF BLOOMS.

THE various Tulips that come under the above heading have much to commend them to the flower-loving public, and the rapidly increasing demand for bulbs of this class may well be taken as a sign that growers are at last beginning to realise the many charms that they possess. It is impossible to visit such a collection as that grown by Messrs. R. Wallace and Co., Kilnfield Gardens, Colchester, without being greatly impressed with the immense wealth

of variety found among them, the unique colouring, form and huge stems rendering them valuable for many purposes. Compared with the early bedding Tulips, these late-flowering types score many points. Besides refinement in colouring and form, we have here flowers of grand lasting qualities, both in a natural and a cut state, the long, stout stems being specially suitable for arranging in vases and other receptacles. Another point that we fear is too often overlooked in connexion with these Tulips is that many of them are most delicately scented, a feature without which the most lovely flower is of little value to many people.

About two acres of these Tulips are cultivated by Messrs. Wallace at Colchester, and it speaks well for their robust growth when we remember that, only three weeks previously, they had been covered with about 10 inches of snow and subjected to 10° of frost, and only a few days before a severe hailstorm had tried its best to wreck the beautiful blooms, yet they had all come through it almost unscathed and presented a most vivid yet refined spectacle. The question of soil for Tulips is one that, perhaps, may trouble some. That at Colchester is a rather heavy loam, well and deeply cultivated; and here we measured many leaves that were 6 inches wide and of a corresponding length, while the stems in many instances were almost as thick as one's little finger, thus manifesting the excellent treatment accorded them by Messrs. Wallace.

As the term "May-flowering" may be rather mysterious to some, it may be well to mention that it includes all the late-flowering types, these being represented by the cottage, Darwin and gesneriana varieties. In the cottage section we have usually large flowers of somewhat irregular shape and pointed petals; the Darwins are of regular shape, have blunt-pointed petals and include many rare colours, such as violet, lavender, heliotrope and maroon, as well as the usual hues; while the gesneriana varieties have rather long, sharply-pointed flowers of bright colours. The Darwins are a comparatively new race, having been introduced to this country from Holland about twenty years ago. Mystery surrounds their origin, but we may safely assume that the old Dutch breeder Tulips were used in their production.

In the Darwin section we were very pleased to see a huge new one appropriately named Giant. Besides its immense size it has a beautiful rich violet colour and great vigour, so that it may be regarded as one of the Tulips of the near future. Those who like a dark-coloured Tulip will find a grand variety in Zulu, a beautifully shaped purple-black flower with a delicate waxlike bloom on the outer surfaces of the petals. Millet is another of the dark-flowered varieties, the deep crimson-maroon flowers being of perfect shape, and the plants of great vigour. Professor Rowenhoff is one that we particularly admire in spite of its somewhat unwieldy name. It is one of the strongest growing of all the Darwins, and many of the sturdy stems were 3 feet high. The cherry-red flowers are of immense size, grand substance, the base being a blue star resting on a white disc. Either individually or in a mass this Tulip is superb. Somewhat similar to the foregoing is Van Poortvleit, a beautiful deep rose-coloured variety. Whistler is a Tulip that at once attracts the eye, the fiery scarlet colouring toned down somewhat with reddish bronze on the outside of the segments rendering it excellent for massing. Clara Butt is, perhaps, the best known of all the Darwins, and Messrs. Wallace's strain is an excellent one, the salmon, rose and pink colouring being well blended, and the form splendid. The stock of King Harold noted here was a very good one indeed; the glowing crimson colouring, superb shape and immense vigour of this variety should make it a universal favourite. In Farncombe Sandars we have another dark crimson flower that is specially good when massed; a large bed of this is a sight not soon

forgotten. Antony Roozen is an early-flowering Darwin that we were just in time to catch. The deep rose colour shading to blush is most effective, and when massed is delightful to behold. Those who like the beautiful lilac-coloured sorts will find a grand flower in Melicette, a tall vigorous Tulip with beautifully-shaped blooms of a soft lilac hue.

In the cottage section so many good things were seen that it were an impossible task to note them all. A few, however, specially appealed to us, and these were noted for the benefit of readers. Walter T. Ware is the new deep yellow Tulip that created such a sensation when exhibited before the Royal Horticultural Society in 1906. It is quite the richest of the yellows and the shape leaves nothing to be desired. Flame is aptly described by its name. It was introduced to commerce by Messrs. Wallace, and the flame-coloured scarlet coupled with immense vigour and exquisite shape have quickly made it a general favourite. Inglescombe Pink, I. Scarlet and I. Yellow are three fine varieties, the colours of which, with the exception of the first, are described by their names. I. Pink is really a most delightful blending of pink, buff and salmon, with a green base. It is a grand flower and should find a home in every garden. Mrs. Moon is a fine rich yellow variety of most elegant shape, the long petals tapering beautifully at the points. So vigorous is this Tulip that it frequently produces large bulbils in the axils of the leaves. In Afterglow we have a lovely new variety that is splendidly described by its name, the golden yellow and scarlet flowers being of a most elegant and pleasing shape. Zomerschoon is a Tulip that will find favour with many, its striking markings at once commanding attention. The flowers are rosy red marked with sulphur. Those who like Tulips with Chameleon-like propensities should invest in Primrose Beauty and Nydia. The former is a pale primrose colour when the flowers open, this eventually passing off to almost pure white. Nydia opens a cream colour, changes to deep yellow, then turns pure white and finishes its existence adorned with well-defined deep pink markings on the outside of the flower. Both are dwarf and excellent for table decoration. Glancopis is also a dwarf variety, the pale rose-coloured flowers with a vivid blue spot at the base being quite unique.

Among the gesneriana varieties we must mention *g. aurantiaca*, beautiful bright orange red; *g. a. maculata* (Orange Globe), very rich scarlet flowers with a black base; *g. Intea*, a well-known beautifully-shaped yellow Tulip; *g. l. pallida*, paler yellow than the former; and *g. rosea*, rich carmine with black centre. A Tulip that will appeal to those who like flowers with unusual traits is *viridiflora*, the green-flowered Tulip, of which we saw a good stock.

Besides Tulips Messrs. Wallace devote many acres to choice hardy rock and border plants, Lilies and water plants, so that a visit to their nurseries at any time during the summer is sure to be well repaid.

THE EDITOR'S TABLE.

FLOWERS FROM KNAP HILL.

Mr. Anthony Waterer sends from the Knap Hill Nursery, Woking, several interesting flowers for our table. One is the beautiful variety of the Japanese Quince (*Cydonia japonica*) Knap Hill Scarlet; the flowers are a pure scarlet and cluster thickly on the shoots. Then there is the variety of *Pyrus Malus* named *neidwitziana*, which should be more frequently seen in our gardens; its rosy purple colouring is unusually distinct, and the fruit is the same colouring as the bark of the wood. *Cerasus Padus* Knap Hill variety is remarkably fine, the racemes of flowers being of great length. This, Mr. Waterer informs us, was cut from a tree about 30 feet high and

much through. Also comes the double variety of the Bird Cherry, a tree of much beauty in May; the flowers are like little white rosettes.

A RARE SHRUB FROM IRELAND.

Mr. H. Armytage Moore of Rowallene, Saintfield, County Down, sends flowers of the beautiful and rare Exochorda or Pearl Bush called *Alberti macrantha*, which is one of the most beautiful of the flowering shrubs. Our correspondent says: "I send you a few flowering sprays of this shrub, which is as yet rarely met with. The snowy whiteness of the flowers, the freedom with which they are borne and its vigorous growth entitles it to rank among the most attractive of shrubs that are flowering now."

SPRING FLOWERS.

Mr. T. Arnold, The Gardens, Cirencester House, Cirencester, sends many interesting flowers, comprising *Rehmannia angulata*, *Tulipa retroflexa*, *Anemone Pulsatilla*, *Iris stylosa*, *Tulipa President Perrier* (very fine scarlet), the double Marsh Marigold, a very fine form of *Primula obconica* called *gigantea*, a delightful gathering of Primroses of good colours, the yellow *Fritillaria pallidiflora*, the white Snake's-head (*F. Meleagris alba*) and many other most interesting spring flowers. We must not forget the blue *Anemone robinsoniana*, which was in this spring gathering.

VIOLAS FROM SURREY.

We have received from Mr. A. Young, Oxted Nursery, Oxted, Surrey, some very fine Violas, comprising the following: *Virgin White*, one of the most lovely pure white rayless varieties we have seen for a long time; it is very free flowering, and has a sweet scent; another advantage which this also enjoys is its fine long stem; *Red Braes*, a delightful shade of golden yellow, also very free flowering, when massed together it must make a splendid show; *Royal Scott*, a beautiful rich purple, slightly rayed; *Marchioness Compact*, white, with slightly yellow rays; *Maggie Mott*, a beautiful shade of lavender, the flowers being of splendid form and size and sweetly scented, with strong stems; and *Primrose Dame*, as the name implies, is of a beautiful primrose colour. We understand from Mr. Young that the two first-mentioned received respectively a certificate and silver medal from the Scottish Horticultural Society.

LARGE AND FRAGRANT PANSIES FROM SUSSEX.

Miss G. B. Glanville, Sunnyside, Anstye, Cuckfield, Sussex, sends very fine flowers of Pansies, these being of good size, excellent form and of very pleasing colours. These were accompanied by the following note: "I am sending you some of my Pansies, as I thought I should like to have your opinion of them. The seed I got from Bath's, three sorts, viz., *Monarch*, *Empress* and *Lord Beaconsfield*. I sowed it the end of last June, but it came up very slowly owing to the cold July we had, and thereby made my plants rather backward for planting and early flowering. I sowed the seed in boxes, covered them with glass and placed in the shade; and when the seedlings were large enough, pricked them out again in boxes in a rather rougher soil containing new leaf-mould, to which the roots adhered, and when transplanting into the open ground, having some soil with them, they received no check. This final planting was, some in August, some September and the last in the first half of October. They have grown into magnificent plants, all the better, I think, for being raised entirely out of doors, and have been flowering for the last two months, and are now covered with blooms, which, unfortunately, the last week seem diminishing considerably in size. *Monarch* I have found the largest Pansy, in *Empress* the greatest variety of colour and *Lord Beaconsfield* the greatest length of stem."

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Sweet Pea plant for inspection (*J. N. H. G.*).—We cannot say what it is that has eaten the seeds at the bases of your Sweet Pea seedlings, but it is undoubtedly the work of some ground pest, possibly woodlice. Yes, you must replant the seedlings as soon as they are large enough; in the meantime keep the boxes in which you have placed them in as open a position as possible so that sturdy growth results. Before replanting we advise you to dress the soil with either Kilogrub or Vaporite; these substances, if used according to the directions supplied with them, are excellent for killing ground pests, and are harmless to the plants. Had you written to us before lifting your seedlings we should have advised you to dress the soil with these substances without lifting the plants.

Decayed Daffodil bulbs (*Poppyland*). It is difficult to assign any cause for the one clump of bulbs having rotted if the other clumps in the garden contained the same variety and were planted at the same time. The bulbs sent look as if they had never made any roots since they were planted. The question then arises: When were they planted, and what was their condition when they were put into the soil? If they were sound, they were probably planted late and got caught by frost before they had time to produce roots. Probably, however, the bulbs were bad when planted, and the wet winter has naturally helped them to decay. It would be interesting to have fuller particulars as to variety, date of planting, condition when planted, and state of ground before and at the time of planting.

Names and colours of early-flowering Chrysanthemums (*G. Hurst*).—We are pleased to reply to your questions respecting the names, &c., of the early-flowering outdoor Chrysanthemums in the list submitted to us. The following varieties are Pompons: *Anastasio*, light purple; *Crimson Precocité*, bright crimson; and *Flora*, golden yellow. There are two single-flowered sorts, viz., *Pretty Polly*, orange and gold; and *Daisy Bell*, a pretty blush. The others are Japanese: *George Wermig*, yellow; *O. J. Quintus*, rosy pink; and *Evelyn*, crimson bronze with gold points. *Martinmas* was once classified as a Pompon, but recently the National Chrysanthemum Society took the variety out of that section and placed it in a new one known as "decorative," most of which are like hybrid Pompons or enlarged forms of the smaller Pompon sorts.

Polyanthuses and Auriculas for inspection (*Yew Tree*).—The laced Polyanthuses are worthless from a florist's point of view, as both varieties are "plysed"—that is, the stigma is even with the mouth of the tube; except for this fatal defect the red ground variety has good properties. The Auriculas are nondescript things, neither alpinas nor show varieties. They are the worst lot imaginable. Nothing in the way of the florist's type could be obtained from them. As border flowers, and if they please the owner, well and good, but they are

of no use whatsoever as exhibition flowers; better to purchase a few plants from a reliable source or obtain seed. The best seed is in small packets and often fails in the hands of the inexperienced.

Semper Augustus Tulip (*Florinet*).—This very famous Tulip was a "Rose," with broad atripea of bright colour and pointed leaves.

Many-flowered Tulips (*C. M. A. Peake*).—It is not unusual for Tulips to have secondary flowers, which branch from the main stem. *La Tulipe Noir* and *Coronation Scarlet* among the May-flowering varieties often exhibit this peculiarity. It is generally supposed that the reason for this is that they have "done themselves well" the previous season, and so stored up some extra energy, which they get rid of in this way. It should not be forgotten that there are one or two species where more than one flower on the main stem is the rule and not the exception.

Agapanthus not doing well (*M.*).—Apparently your plants of the blue *Agapanthus* were too small for the large tubs in which they were planted. *Agapanthus*, in common with practically all other cultivated plants, make far more satisfactory progress if they are shifted on into larger pots when necessary and allowed to become strong before they are put in the tubs. The soil and general treatment mentioned by you could not have been improved upon, and as you say the roots have increased, which shows that the plants are taking hold of the new soil, it is very possible that you will find a considerable increase of vigour during the coming summer. It is quite true that *Agapanthus* make a far better floral display when the plants are pot-bound than at any other time; still, good foliage and flowers may be reasonably anticipated before that takes place.

THE GREENHOUSE.

Propagating Eupatoriums (*J. F. P.*).—*Eupatoriums* are very readily propagated by means of cuttings. This is a good time of the year to take the cuttings, which should be formed of the tops of the young growing shoots. A length of about 4 inches forms a very suitable cutting. It should be cut clean off just below a joint and the bottom pair of leaves removed when it is fit for insertion. Pots 4 inches to 5 inches in diameter are very suitable for the reception of the cuttings. These pots must be quite clean and well drained by means of a few broken crocks in the bottom. Ordinary potting compost, with the addition of a little silver sand, will suit the cuttings well. A 4-inch pot will hold about half-a-dozen, and the larger size a proportionately greater number. The pots being filled with cuttings, they must be watered thoroughly through a fine rose, enough being then given to settle the soil completely in its place. If you have no other glass accommodation but the conservatory, the cuttings may be readily rooted therein provided they are kept in a close case. A home-made one may be readily formed from a box about 8 inches or 9 inches deep with a square or squares of glass laid over the top. It must, of course, be shaded from the sun. Directly the cuttings are rooted the glass should be taken off. The young plants must then be potted singly into pots 3 inches in diameter in a mixture of loam, leaf-mould and sand. As soon as the roots take possession of the new soil the tops of the young plants must be pinched out to make them bushy. After a time the plants may be put in a cold frame, and throughout the summer they can be stood out of doors and given much the same treatment as a *Chrysanthemum*. Care must be taken to remove them under glass before the nights get too cold in the autumn. Violet plants can be obtained from the many advertisers in THE GARDEN who make a feature of hardy herbaceous plants.

Fowl manure for pot plants (*Bates*).—Fowl manure is not a good material to use for pot plant compost, but if it is old, as you say, it will be less hot than fresh poultry manure usually is. We advise you to spread your fowl manure out a few inches thick, to give it a heavy dusting with soot, then spread on to it the best potting soil you have, in bulk six times that of the manure, and then throw the whole into a heap, well mixing it. In a month from then, if kept dry, it should work freely through a coarse sieve and be suitable for potting. Still, for any plants, especially for large-leaved ones like *Cinerarias*, use rather small than large pots, as such a compost should be rather rich than poor. If you can use a soil unmixed good turfy loam, do so, also if the compost seems to be rather close or adhesive add to it one-tenth its proportion of sharp white sand.



SINGLE AND DOUBLE VIOLETS.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

THE BEST FLOWERS AND SHRUBS FOR TOWN GARDENS.

(First Prize Essay.)

DESPITE the many difficulties to be contended with, there is no reason why, with good cultivation and a selection of suitable plants, town gardens should not be kept bright and interesting through the greater part of the year. Even in the heart of large towns and in the most smoky atmosphere and confined position there is a fair number of plants which may be depended upon to thrive and bloom freely, while under the improved conditions and comparatively pure air to be found in the outskirts a great variety of hardy shrubs, perennials, bulbs and annual flowers may be grown.

One great difficulty to be encountered in the cultivation of town gardens is the poor nature of the soil, and, before commencing to plant such a garden, it would certainly be good policy to lay in a quantity of short stable manure and as much mellow fibrous loam as is procurable, then, by deeply trenching the soil, adding manure freely to the lower spit and placing a few spadefuls of loam round the roots of each plant when placing in position, a good start is ensured. The subsequent cultivation consists mainly in keeping the surface soil loose and open by hoeing, in giving plentiful supplies of water in dry weather and in the frequent use of the hose or syringe, so that the foliage may be kept fresh and clean.

SELECTION OF SUITABLE PLANTS FOR TOWN GARDENS.

Hardy Shrubs.—These should be planted thinly, bearing in mind that after two or three years' growth they will occupy considerable space and that they are always more effective when so planted that the natural outline of each can be seen from all points. Evergreen shrubs in particular are, I think, often used to excess in small gardens, and, although useful for forming a background of green foliage, they should not be employed to the exclusion of the many beautiful deciduous species. Those I would recommend are Euonymus (both green and variegated), Hollies in many varieties, Laurustinus, Berberis Darwinii with orange and B. atrophylla with golden yellow flowers, common Box and Aucubas, taking care to include a plant or two of the male variety of this latter in order to obtain a profusion of the beautiful berries on the female plants. In addition to these, Cratægus Pyracantha, C. P. Lalandi and Cotoneaster Simonsii may be used as wall plants.

Of deciduous shrubs Forsythia suspensa is one of the best town plants, the slender shoots being covered with golden yellow flowers in March.

Daphne Mezereum, with fragrant pink flowers, usually blooms in February and will succeed in fairly open situations; it is a slender-growing dwarf shrub and should be planted in small groups to produce the best effect. Pyrus (Cydonia) japonica bears crimson flowers in April, and may be used either for training on a wall or grown as a bush in the open; the white variety should also be grown. P. Maulei is a dwarfier variety with brick-red flowers. Prunus Pissardi is very effective with its white flowers and deep maroon-purple leaves, as is also P. triloba fl.-pl. with double rose pink flowers. A succession of bloom may be maintained by growing, besides the ordinary Lilacs, the Persian Lilac, a small-growing shrub very suitable for town gardens, the Diervillas or Weigelas, with crimson, rose or white flowers, and the Mock Oranges (Philadelphus). Other valuable shrubs for town gardens are the white Portugal Broom (Cytisus albus), Cytisus scoparius andreanus, with crimson and yellow flowers, and the double variety of the Jew's Mallow (Kerria japonica fl.-pl.). Azaleas of the mollia type will succeed if grown in peat or a mixture of peat and loam free from lime. To enumerate the many plants other than shrubs which may be successfully grown in towns would occupy so much space that I must content myself with mentioning a few which will grow and flower well in almost any situation, provided they are given good soil and cultivation.

For spring flowering there is a large choice of bulbous plants. Snowdrops, Scillas and Crocuses should be massed in clumps towards the front of borders or used as edgings for beds of other bulbs. Narcissi in great variety may be planted between shrubs or hardy perennials; Hyacinths and early Tulips are useful for beds, while the tall late-flowering cottage and Darwin Tulips produce a brilliant effect in herbaceous borders, and are valued as cut flowers. Of other plants Wall-flowers are indispensable, mauve and purple Aubrietias and yellow Alyssum can be used for edgings and the double Arabis will produce sheets of white Stock-like flowers in April and May. The Doronicums are vigorous-growing perennials, with large yellow flowers, and are useful for planting between shrubs. In shaded positions Primroses, alpine Auriculas and Polyanthuses may be planted in light soil composed of loam and leaf-mould.

Summer and Autumn-flowering Perennials.—From May to the end of October the garden may be kept bright with many hardy perennials. Irises, more particularly those known as German Irises, are very valuable town plants, and for planting in narrow borders or between shrubs are perhaps the most useful of any. Good varieties are the common blue Iris; Queen of May, rose lilac; Mrs. H. Darwin, white; Mme. Chereau, white, margined blue; and variegata aurea, yellow. Iris ochroleuca is a tall-growing species with cream and yellow flowers, and I. aurea is of similar growth, the flowers being golden yellow.

For the back row of borders the herbaceous Lupines are valuable, and should be planted in well-manured soil, and between them may be placed some of the Day Lilies, such as Hemerocallis flava, H. fulva and H. aurantiaca. Other

early summer-flowering plants are the Pæonies, both the old double red and the double and single Chinese varieties; Campanulas, such as *C. pyramidalis*, *C. persicifolia* and *C. latifolia*; Delphiniums, Oriental Poppies and such Lilies as *L. croceum*, *L. candidum*, *L. umbellatum* and *L. testaceum*.

For edgings in town gardens there are no better plants than Pinks, good varieties being Mrs. Sinkins, Albino, Her Majesty and Paddington. Carnations are also excellent town plants, more especially if raised from seed in preference to growing named varieties. Both the biennial and the perennial Evening Primroses (*E. nocturna*) succeed well in town gardens, while for shady borders the Funkias are useful for their handsome foliage and lilac flowers. *F. sieboldiana* major produces the largest and handsomest leaves, while some of the varieties of *F. lancifolia* have foliage margined or variegated with gold, white or silver.

Suitable plants for late summer and autumn blooming include Hollyhocks, Chrysanthemum maximum, with large white flowers; perennial Sunflowers; *Erigeron speciosus*, with mauve Daisy-like flowers; *Coreopsis grandiflora*; *Pyrethrum (Chrysanthemum) uliginosum*, a tall-growing plant with large white flowers; *Rudbeckia Newmanii*, which grows about 2 feet high and bears yellow flowers with dark brown cone-like centres; *Phloxes* in many shades of crimson, pink, purple and pure white: these require plenty of moisture in summer, and should be mulched with half-decayed manure to keep the roots cool and moist; *Sedum spectabile*, a handsome plant with glaucous leaves and large heads of rosy pink flowers; and Michaelmas Daisies in many varieties; these comprise flowers in shades of purple, lilac, rosy mauve and pure white, the plants varying from 2 feet to 5 feet or 6 feet in height, and, by a careful selection of varieties, a succession of bloom may be maintained from August to the end of October. Room must, of course, be found for some of the border Chrysanthemums, which are among the best of town plants, and will help to keep the garden bright during September and October; also in shady borders for *Anemone japonica*.

Annuals and Bedding Plants.—Space will only permit of a brief reference to these. Of half-hardy annuals Stocks and Asters may be raised from seed in spring and used for filling beds which have contained spring-flowering plants. Zinnias, Balsams, *Salpiglossis* and *Nicotiana affinis* may also be employed for this purpose. The soil for all these should be of a rich nature, and a dressing of decayed manure may be given before planting. Bedding plants such as Zonal and Ivy-leaf Pelargoniums, *Calceolarias* and *Petunias* flower best if the soil is not too rich. Cannas will succeed if planted in rich soil and kept well supplied with water, and good-sized beds of these plants are very effective. Nearly all the hardy annuals will grow well in towns. These should be sown thinly in good soil, and thinned out to 6 inches or 8 inches apart when large enough to handle. Those of medium height comprise annual Chrysanthemums, Shirley Poppies, Clarkias, annual Larkspurs, *Godetias*, annual Lupines and *Malope grandiflora*, while a few of dwarfier growth are Indian Pinks (*Dianthus*), Viscaria, *Linum grandiflorum*, *Linum catharticum*, *Dwarf Nasturtium* and Virginian Stock.

C. W. CAULFIELD.

Bridgen House, Park Crescent, Erith.

FORTHCOMING EVENTS.

June 10.—Messrs. John Waterer and Sons', Limited, Rhododendron Exhibition, Royal Botanic Gardens, Regent's Park.

June 17.—Grand Yorkshire Gala, Jubilee Exhibition, Bootham Park, York.

June 24.—Gardeners' Royal Benevolent Institution Annual Dinner at the Hotel Metropole.

PRIZES FOR READERS.

MAY COMPETITION—AWARDS.

In this competition readers were asked to give a list of the best flowers and shrubs for town gardens. The prizes are awarded as follows:

The first prize of four guineas to C. W. Caulfield, Bridgen House, Park Crescent, Erith.

The second prize of two guineas to D. E. Elder, Tyne Green, Hexham.

The third prize of one guinea to L. Johns, St. George's Hostel, University College, Reading.

The fourth prize of half-a-guinea to Gilbert Walsham, 25, Griffiths Road, Wimbledon, S.W.

The number of essays sent in was not so large as in some competitions, nor could the quality be considered so good. Generally speaking, the lists of plants were weak. Those from the following were of more than ordinary merit, and deserve commendation: G. H. Webster, A. J. Long, Miss E. A. Patch, H. Butler, J. Wooff, E. Cummins, W. P. Wood, J. Glasheen, D. B. Allwork, Evelyn M. Kent, A. Jones and F. Bulsitt.

NOTES OF THE WEEK.

Royal Horticultural Society's Gardens Guild.—The first annual general meeting will be held on Wednesday, July 8, the second day of Holland House Show, at 7 p.m., in the Charles Dickens Room, Carr's Restaurant, Strand. It is particularly hoped that all who have at any time been students or employes in the Royal Horticultural Society's Gardens at Chiswick or Wisley will endeavour to be present and will give early notice of their intention to the acting hon. secretary, Mr. R. Wallis, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey.

Flowers at the Bath and West of England show.—One of the most interesting features of the Bath and West of England Society's exhibition is the flower show, and the tent devoted to this section at Dorchester recently was well frequented by the visitors. There being no competition, every effort is made to render the collection pleasing to the eye, and the arrangement, as usual, was most tasteful. Messrs. John Waterer and Sons of Bagshot made an admirable display of Rhododendrons; and the Cedars Hardy Plant Nursery, Wells, staged a good collection of Carnations, including splendid examples of Mrs. T. W. Lawson and Fair Maid. Messrs. George Cooling and Sons of Bath added to a very pleasing show of Clematis, Roses and Carnations, some good Tulips and Irises and a choice collection of hardy rock plants. Colonel Brymer (gardener, Mr. J. Power) sent a large variety of Schizanthus and Orchids, to which his collection of Palms, Ferns and foliage plants served as an excellent foil. Messrs. W. H. Rogers and Son, Southampton, staged Acers, Genistas and Spiræas; and the Eames Floral Nurseries, Frome, sent, among other things, a few well-grown examples of *Anchusa italica* (Dropmore variety). Messrs. Jarman and Co., Chard, made a special feature of Pelargoniums, Carnations and Azaleas, and also showed the new Centaureas *The Bride* and *Honey-moon*. Messrs. Garaway and Co., Durndham Down Nurseries, Clifton, had a section made notable by some very fine Lilies of the Valley and blue Hydrangeas; and Messrs. Heath and Sons, Cheltenham, achieved a distinct success with a collection of rock plants, as well as greenhouse and hardy plants; a few heads of *Embothrium* attracted much attention, being evidently unknown to many of the visitors. Messrs. R. Veitch and Sons of Exeter showed some nice *Clianthus*, and Lady Digby made a very fine show of *Odontoglossums*. Hardy plants and Roses in great variety came from Messrs. Paul and Son of Cheshunt, and Pelargoniums were well represented by Mr. Godfrey of Exmouth.

Compounds (poisonous) for horticultural and agricultural purposes.—The horticultural trade should now bestir themselves and approach their Members of Parliament and obtain support to Clause 2 of the Poisons and Pharmacy Bill when it reaches the House of Commons. The final issue between the Traders in Poisons Society and the chemists monopoly is fast approaching, and every effort should be made to secure a victory for fair trade. The Bill has this season passed its second reading in the House of Lords, and Clause 2 (which will make it lawful for nurserymen, florists and agricultural agents to stock and retail insecticides, weed killers, sheep dips, &c.) has been recommended by a joint committee to go forward. It is anticipated that the Bill will reach the House of Commons from the House of Lords within the next few weeks, and it is most important that support for the Bill should be obtained at once by the horticultural trade by writing to their Members of Parliament, claiming support of Clause 2, as the chemists are opposing most strenuously and canvassing Members of Parliament. All information as to the way to go to work can be obtained from Mr. T. G. Dobbs, solicitor, Worcester (secretary of the Traders in Poisons Society). In the interest of horticulture and for the convenience of the gardening public I trust that you will insert this letter in your next issue.—J. H. RICHARDS.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Early-flowering Roses.—I think it would interest many fellow readers to compare notes as to which we find to be the earliest flowering Roses. I had three blossoms open on June 1 on two plants, *R. rugosa rubra*.—M. P. H.

Mistletoe flowers.—Noticing your request in THE GARDEN of April 25 last for male and female flowers of Mistletoe, we have much pleasure in sending you these gathered at our Langley Nursery, where we always cultivate a number of trees with Mistletoe growing on them.—JAMES VEITCH AND SONS.

Amaryllis Belladonna flowering now.—I read your note in THE GARDEN with interest. The plants here also sent up flower-spikes at the end of April. The stems rotted at the ground level, but I was inclined to attribute that to the frost and snow of Easter week. They did not flower last autumn.—G. M. ROBERTSON, *All Saints' School, Bloxham, Banbury.*

Viburnum Carlesii.—Referring to the note on *Viburnum Carlesii*, which appeared in THE GARDEN of the 16th ult., I think it may interest some of your readers to learn that a plant which has grown in the open ground, in a shaded and somewhat sheltered place, at Ketton in Rutland, since 1906, has flowered both in 1907 and this year. It does not appear to have been injured by the cold of even the past rather severe winter.—SUSAN H. BURROUGHS, *Stoughton Farm, Leicester.*

Coleus thyrsoides.—Now is the best time to propagate this useful winter *Coleus* to produce nice sturdy plants. If struck too soon they become very leggy by their flowering time. I find they root easily in a case kept quite close in a temperature of about 65°, and no bottom-heat is required. When struck, pinch out the tips and secure three or four breaks; the plants will then be most useful in 5-inch pots, or larger as required. I have grown this plant since its introduction, but never could I see its merits till last winter, when I flowered it in a much lower temperature than usual, maximum 50°. The colour then was much brighter and lasted three times as long in bloom.—J. S. HIGGINS, *Ridge Gardens, Corwen.*

The Gayton rake and Sproughton hoe.—In a recent issue the use of the Gayton rake was recommended. Will some reader kindly explain its advantages? Last year I bought the Sproughton hoe, recommended by the Rev. Foster-Melliar in his "Book of the Rose," a book, by the way, in my humble opinion, of invaluable use to all amateurs. I have put the hoe to very little use up to the present, as I fear the long, dagger-like blade may seriously injure the fibrous roots so often found near the surface. Will some reader kindly give me the benefit of his experience and suggestions as to the proper use of the Sproughton hoe?—**STURBAN.**

A well-grown Dendrobium thyrsoflorum.—I am sending a photograph of a Dendrobium, and, as I do not know the variety, I have enclosed flower [D. thyrsoflorum.—Ed.]. My garden friends think it very good. Last year it carried sixteen sprays from 9 inches to 18 inches long. This year it had eighteen sprays, but snails destroyed four, which left it with fourteen, but we were unable to show them all in the photograph. The treatment I give it is to keep it in a warm greenhouse till growth is finished, then remove it to a cold house where frost is just excluded till the buds begin to move. Then I return it to the warm house again.—**F. TAYLOR, The Gardens, Southcliffe, Lee, Ilfracombe.**

Saxifraga longifolia and offsets. Mr. Arnott, on page 225, enquires concerning the above, and as the enquiry is doubtless the outcome of an earlier statement of my own, I may be permitted to amplify, and at the same time verify, what I first said. I may say at once that, in dealing with large numbers of imported plants in the past I have more than once seen examples of this species, in robust health, producing a secondary growth. I am referring now entirely to the linear-leaved form everywhere recognised as the true *S. longifolia*. I do not say that instances of secondary growths are plentiful; indeed, they are rare, but I do say that such things occur and exist. To what I have already stated may be added the fact that, on the 13th ult., in the collection of Mr. E. Hambro, Hayes, I saw a very fine example of this Rockfoil with a good secondary growth or rosette. In the same collection was a slightly broader-leaved form also received as *S. longifolia* with four crowns. In the instances formerly seen the rosettes were usually of nearly equal size and most frequently placed back to back. In the Hayes collection the rosettes are of unequal size, and the presence of the smaller rosette in one instance has tilted the larger rosette to an angle of nearly 45°. In those instances where the two rosettes are of nearly equal size, I have, on consideration, regarded it as the result of injury, probably in the cotyledonous stage, the twin crowns having grown up in consequence. This could hardly be the case where the crowns or rosettes are of very unequal growth or development, one, say, of 8 inches diameter and another of 3 inches diameter, which is sometimes seen. In such instances I should, without much hesitation, regard the presence of No. 2 as the outcome of an adventitious bud or something akin. All the same, while I give the facts as these have appeared to me from time to time, the whole of my experience among choice alpinists points to one thing, viz., that much the finer panicles of bloom are produced by those plants having but solitary rosettes of leaves. In the wild state the species is a variable one, quite apart from the degenerate cross-breeds. This variability extends to the encrusted character, its density or sparseness, the length and breadth of the leaves, also their flat or distinctly arching character. But in all its phases the plant is a glorious one, and one to be grown by all lovers of alpinists. Seeds are produced abundantly, and only quite ordinary care is needed, with intelligence, to ensure complete success.—**E. H. JENKINS, Hampton Hill.**

THE KITCHEN GARDEN.

LEEK S.

THERE is little doubt that the Leek is one of the most wholesome of vegetables, and has long been held in very high esteem by all classes of society. The date of its introduction is uncertain, but we know it was cultivated in Egypt some 1,500 years B.C. Strange to say, for many years the production of high-class specimens was practically in the hands of Scotch friends and the extreme North of England, and it is only during the past twenty years or so that the Southern growers have found out that it is not merely the climate, as was once supposed, but the proper treatment of the plant, especially in the early stages of its growth. Whether intended for competition or for home consumption, every endeavour should be made to produce these at their best, and one can only appreciate good specimens when comparing them side by side with badly-grown produce.

There is considerable diversity of opinion as to what constitutes a good Leek. Some believe a long length of blanch is essential, while others are of opinion that thickness and not length is



DENDROBIUM THYRSIFLORUM.

what should be aimed at. But in my opinion an intermediate specimen is to be preferred, consisting of a blanched stem from 12 inches to 15 inches in length with a circumference of about 6 inches, uniform throughout and no tendency to bulbing. The most important item to observe in Leek culture is that the blanching should begin immediately the plants are put out, as by this means the stems are drawn up to the required height with suitable paper collars, which are easily made, or they can be purchased at a small cost. Far too many people even now are under the impression that the growth should first be made and the blanching done afterwards. This cannot be, as after the growth is once set nothing will induce the plant to run to the length required, the result being a short edible piece generally full of grit, which, of course, is objectionable.

The Leek requires much food and loves moisture, hence the trenches should be well prepared and three parts filled with good manure. Water should be given freely in a clean and liquid manure form and the tops damped over every fine afternoon. Fine soil should be drawn up to the blanched portion as the paper collar is raised higher, and to hold the soil in position boards should be placed upright on either side, leaving a space of about 8 inches between them. This is a method I have adopted

for the last few years with the greatest success. By so doing the roots are not buried to any great depth as when the soil is banked up in the usual way, and the plants can be fed and watered much more effectively, and very little bulbing will be found to take place. What first induced me to follow this plan was when lifting the specimens, after being treated under the old-fashioned principle, the roots were found largely in the banked up soil instead of at the bottom, where they should be. This often meant that the appearance of the specimen was very much marred. For a continuance of a regular supply through the winter and early spring three sowings and three plantings should always be arranged. The last sowing made at the end of March should be planted on a south border from the middle till the end of June. There is no more delicious vegetable than the Leek when properly cooked, and it is to be hoped such a wholesome addition to the table will become more popular.
E. BECKETT.

THE FRENCH SYSTEM OF GROWING VEGETABLES IN GLASS FRAMES AND UNDER BELL-GLASSES.

RELATING to the above, a correspondent writes: "Some articles have appeared in the daily Press on the subject of growing vegetables in frames and under bell-glasses. There seems a lot in it, and I should like to try my hand at it in my small patch." We have no doubt that our correspondent in his remarks voices the wishes of a great number of our readers; and in the interest of those who have suitable land available, leisure and a determination to cultivate such land to its utmost capacity under intensive culture such as that practised by our French neighbours, we have pleasure in submitting the following details of culture gathered from witnessing the system in operation in France, as well as from long experience in the culture of such subjects in this country.

Before entering on details of culture, it is only right that we should caution such would-be growers against extravagant expectations in regard to profits which may result from an amateur embarking in the business. It has been stated that as much as £500 has been extracted from the soil by the vegetable products of one acre in one year under this system of culture. On the face of it this seems almost incredible; but when we come to consider the cost of covering an acre of land with glass in the shape of frames and bell-glasses, the quantity of manure which must be forthcoming, as well as the cost of labour involved, we are not prepared to dispute the statement that, with this heavy disbursement, it is quite possible for this gross return to be obtained by experts in the business on land which had been highly manured and intensively cultivated for many years; but for an amateur starting for the first time in the business on comparatively poor land and without any experience to guide him, no such returns are possible.

However, with experience, confidence gained and close application to the work there is no reason why an English gardener (or amateur, for the matter of that) should not be as successful, or more so, than are the French gardeners. The climate for at least thirty miles round London is as favourable for the growth of these vegetables as is the suburb of Paris where most of them are grown. Without any appearance of boasting, it is safe to say that we have the best and most remunerative market in the world for such produce at our doors, which market in the past has been wholly supplied, in respect to the subject under notice, by French gardeners, to their credit and gain and, it must be admitted, to our loss and discredit.

The success of the system depends almost entirely on the quantity and quality of stable or farmyard manure available and on the use of glass, and of both commodities we have an

unlimited supply. The system has never had a fair and full trial in this country, but during the last year or two attention has been drawn to the subject by a market garden firm in the Vale of Evesham, and also in Berkshire, both parties engaging Frenchmen to carry out the work. This system of culture is eminently suited for the small holder, enabling him to secure a number of crops in the course of the year from the same piece of land.

It is essential for the position of the land to be open to the south and on a slight slope if possible, and to be sheltered from the north, north-east and east, and also that the soil should be of good quality and depth and well drained, and of a light rather than of a heavy nature, and, above all, to be deeply cultivated and well stirred with half its composition made up of rich well-decayed manure. The manure when received will be in the form of strawy litter fresh from the stables, in which condition it

ORCHIDS.

DISA GRANDIFLORA.

AS a grower of Disas I have, contrary to general experience, found their culture very easy. To begin with let the aspirant fully understand that Disas are really cool plants, and to place them in a warm house spells failure. The system I follow is very simple, and my results are always successful. Growth starts immediately the flowers begin to fade. At this stage I turn the plants out of their pots, removing all the compost and taking care to prick out any small tuber that may be among it. The largest tubers are generally flowering size. These I place in 5-inch pots and the smaller tubers go into less size. The soil I use is not an elaborate mixture, as it consists only of peat with the fine

pushing up their flower-spikes. The flowers remain in beauty from four to six weeks, and are always a great attraction.

Penicik.

W. ANGUS.

ODONTOGLOSSUM CRISPUM LEONARD PERFECT.

THIS is a very fine form of a most popular Orchid, and one that has given us many varieties during the past few years. The flowers are very large and of splendid shape and substance, the white ground being heavily mottled with brownish purple blotches. The plant exhibited was a very vigorous one and the inflorescence was enormous, this being composed of thirteen fully-developed flowers. The stem was as thick as a lead pencil, and the leaves very long and robust. Exhibited by Norman C. Cookson, Esq., Oakwood, Wylam-on-Tyne (gardener, Mr. H. J. Chapman), before the Royal Horticultural Society on the 12th ult., when it received a first-class certificate and a gold medal.

THE ROSE GARDEN.

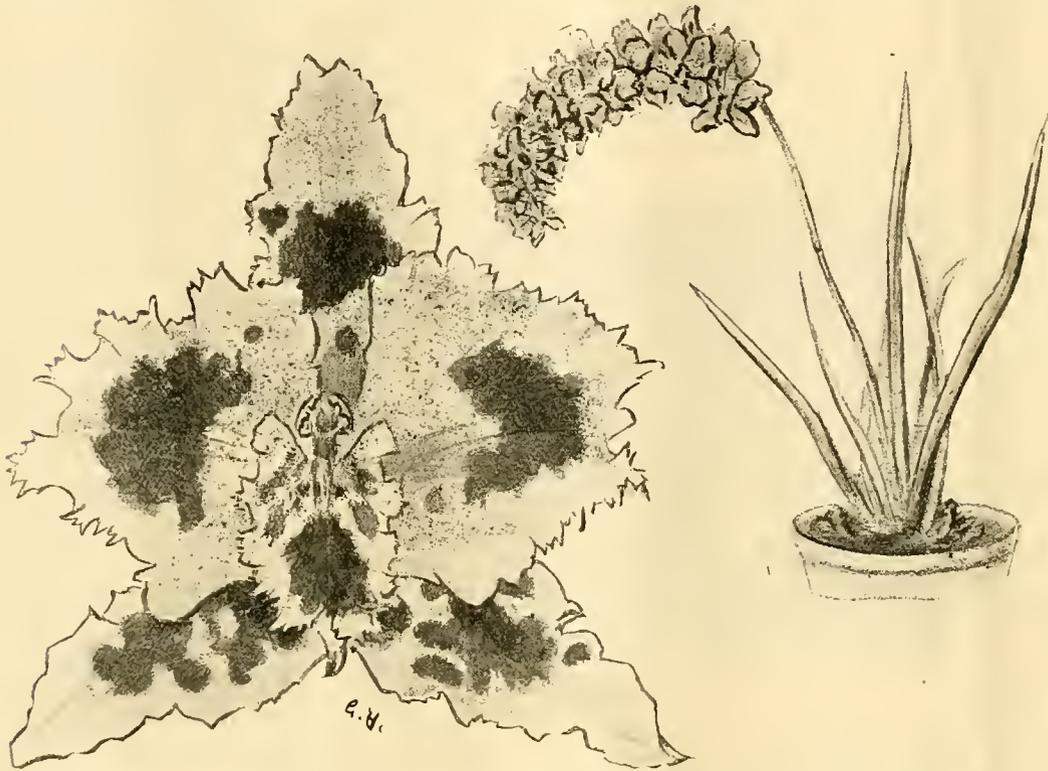
A BEAUTIFUL NEW SINGLE ROSE.

THE delightful new single-flowered wichuraiana Rose which Messrs. Barbier and Co. have given us under the name of Joseph Billiard cannot fail to become a favourite by all who appreciate these simple yet elegant Roses. The combination of colour is charming, as we might expect from a cross between *R. wichuraiana* and the lovely monthly Rose *Mme. Eugène Resal*. When in the bud and until the flower is half open the outside of the petals is a rich apricot yellow, the inner side of the petals revealing a bright rosy carmine tint. When the flowers expand they are fully 3 inches across. We then have a distinct white centre, which, together with the rich carmine of the remaining part of the petals and the golden stamens, makes up a most beautiful Rose, as pleasing in its way as the lovely hybrid of *Rosa sinica* known as *R. sinica Anemone*. Being so large a flower we could scarcely expect the clusters to contain many buds; they are produced three to five in a truss, but do not expand simultaneously. This Rose will be a delightful companion to *Jersey Beauty*, as it possesses a very bright and glossy foliage, but not quite equal to the latter in this respect. P.

A NOVELIST'S ROSES.

NOVELISTS are very fond of lapsing (or rising) into raptures about the Roses in a heroine's garden, but they seldom venture to give much information about the methods of culture or the most successful varieties. Mr. E. F. Benson, however, in his latest novel, "Sheaves" (but it may be only his latest but one by the time this can get into print) does—greatly daring—give us a catalogue, and a curious catalogue we find it. We begin, of course, on the high note. "As if he was [were] the conductor of some garden symphony, all the Roses had responded, as when a hundred bows are ready resting on the strings to that baton-beat, and had leapt on to a fortissimo." The catalogue follows.

"There was old-fashioned cabbage rose [denuded of capitals], homely to the eye but steadfast as a friend to the nostril; *La France* was there, perfect in line and scent; *Baroness Rothschild* was pinker



A BEAUTIFUL NEW ORCHID: ODonTOGLOSSUM CRISPUM LEONARD PERFECT. (Single flower natural size.)

is used for making up the hot-beds, and afterwards, when it has sufficiently decomposed, it becomes available as manure for the above purpose.

In France the frames used for the growth of Lettuce and other vegetables in winter are chiefly made on the ground by ordinary workmen. They are formed of rough boards, most of them dovetailed together so that they can be pulled to pieces and packed into small compass when not in use. They are usually 4 feet wide by 5 feet long, about 20 inches deep at the back and 14 inches in front. Glass lights to fit them may be obtained from horticultural builders by giving dimensions, with cloches or bell-glasses, the larger ones (and these are mostly in use) are from 15 inches to 16 inches in diameter and about the same in height. They are made of strong glass, and with care will last a lifetime, and there is no after cost entailed in the way of painting or repairs. The cloches are chiefly used for Cos Lettuce, and the frames for Cabbage Lettuce, because they can be grown nearer the glass.

OWEN THOMAS.
(To be continued.)

portions shaken from it, light loam broken into pieces, and a liberal quantity of sand so as to form a good open mixture. The soil is used neither too dry nor too wet; a practical man knows by the grasp of it. The tubers are placed in pots as described, the compost is worked in among them, finishing off by leaving the tuber entirely below the surface of the soil, and allowing a space of half an inch for holding water.

The best house I consider is a cool greenhouse, where they can have plenty of air and not too moist an atmosphere. I usually grow my plants in a greenhouse or a Peach house all the winter, where they are never without fresh air. The plants are flowered in a Carnation house, as the treatment for both suits admirably. This house has obscure glass, and a season like the one gone past I never had to use shading in any form.

In ordinary seasons it is always advisable to shade to preserve colour, and also to prolong the flowering season. When growth is in full vigour I feed liberally, but with judgment, with liquid manure. I find it most beneficial when they are

and more perfect in form, but with no other appeal; Richardson [presumably William Allen of that ilk] sprawled, desiring fresh trellises, where he could wrestle with the loose carmine pillar [justifiably loose after the annoying deprivation of his capitals also]; Beauté Inconstante showed copper, and yet maintained its value against the purer gold of Dijon [Gloire de Dijon]; Captain Christie [Christy] found an anchorage on this stormless margin of the Thames; and a company of alien ladies, Mme. Vidal, Mme. Rivot, Mme. Résal, agreed with Lady [Viscountess] Folkestone on the pleasantness of this Thames lawn."

Several things puzzle us here. If La France was "perfect in line," how could Baroness Rothschild be "more perfect in form"? It would be a very poorly-grown La France which could not beat a Baroness Rothschild in line or form, whatever the difference may be. And Captain Christy is not a delicate Tea "seeking an anchorage," but a strong garden Rose. But most puzzling are the "alien ladies." Mme. Résal we may, perhaps, assume to be Mme. Eugène Résal; Mme. Rivot might possibly be a large corruption of Antoine Rivoire. Mme. Vidal we give up in despair.

The natural conclusion would seem to be that Mr. Benson must join the National Rose Society at once, and spend July 3 in the Royal Botanic Gardens, so as to get a good Rose garden, with correct labels, ready for his next heroine, say, before the autumn. G. E. JEANS.

NEW PLANTS AT THE TEMPLE SHOW.

DRACÆNA DOUCETTI DE GROOTEL—This very handsome plant came from Messrs. James Veitch and Sons, Limited, Chelsea, and may be said to resemble a well-variegated form of *D. australis* with longer and more rigidly inclined leaves. The specimen was upwards of 4 feet in height, and as an isolated example for the conservatory would make a showy and useful subject.

Mr. Walter T. Ware, Bath, had a remarkably fine cottage Tulip of the largest size named Walter T. Ware. The colour is deep golden orange. It is probably the most intensely coloured in this section. This very handsome Tulip had previously received an award of merit and was now given a first-class certificate, a similarly high award being also granted to the *Dracæna* described above.

A very pleasingly coloured *Azalea* (*A. occidentalis graciosa*) was shown by Messrs. R. and G. Cuthbert, Southgate, and attracted a large number of visitors by the delicate tone of its blossoms. The body colour is of a creamy white, tinted with pale pink or blush towards the outer edges of the petals.

Begonia Empress Marie, as shown by Messrs. Blackmore and Langdon, Bath, may be said to represent a near approach to perfection in double white-flowered varieties, and those of the *Camellia*-flowered group in particular. The variety is an exceedingly beautiful one, very pure in tone, and the handsome character of the flowers is greatly enhanced by well formed and shapely petals of much purity.

A richly-coloured *Croton* of the three-lobed section, named Fred

Sander, was exhibited by Messrs. Sander and Son, St. Albans. The upper parts of the leaves are dark olive green, the central portion and the base near the leaf-stalk being of a clear gold colour.

Not the least striking or beautiful subject among the new plants shown for certificate was the orange-coloured *Dimorphotheca aurantiaca* from Messrs. Barr and Sons, Covent Garden. The shining petals or ray florets and their refined colouring are quite an attraction. The exhibited examples of this pretty Cape annual were about 18 inches high. We regard it as a plant best suited to warm soils and situations, and in such should form a really attractive bed, not far removed in effect from a small-flowered *Gazania*.

New Roses are always regarded with favour, but on this occasion absolute novelties were not plentiful, the most chaste and beautiful being Elaine, as exhibited by Messrs. William Paul and Sons, Waltham Cross. It is a Hybrid Tea whose outer petal tips are strongly recurved, while the central portion of the well-modulated tapering blossoms is of exquisite form. A white-flowered variety of fragrance and merit.

Two other varieties of Roses call for mention among the certificated novelties, and these are White Dorothy (rambler), shown by Messrs. B. R. Cant, Colchester, and William Paul and Son, Waltham Cross, and Tausendschön, also a rambler, shown by Hobbies, Limited, Dereham, and William Paul and Son, Waltham Cross. White Dorothy has happily a descriptive name of its own, and further remark would be superfluous, unless it be to say the newcomer is a counterpart of the old. Tausendschön, however, will doubtless prove a stumbling-block to many a gardener until the correct pronunciation of the word has been conquered, but the handsome Oleander-like blossoms of rosy pink, broad

and shell-like in petal, will appeal to all who delight to have beautiful pillar Roses in their gardens.

Pæonia decora alba, exhibited by Messrs. Wallace and Co., Colchester, is a single-flowered variety of the species indicated. It is, we believe, a variety that the late Michael Foster had in his garden for some years. An illustration and description of it will be found on page 291.

Tulip Duchess of Westminster may be briefly described as a rose-coloured Darwin with a suffusion of palest pink near the edges of the petals. It is a showy and beautiful variety of much merit, and was seen in the group from Messrs. Alex. M. Dickson and Sons, Belfast.

To each of the foregoing novelties an award of merit was granted.

CACTUS DAHLIAS IN VICTORIA, AUSTRALIA.

SOME eight years ago I decided to go in for Cactus Dahlias and give them special attention for show purposes. Right from the start I was most successful from every point. Such good results were obtained that I not only secured the champion prizes at all the leading Victorian shows, but I had plants which gave me champion blooms, and also provided me with thousands of beautiful flowers for distribution among my friends.

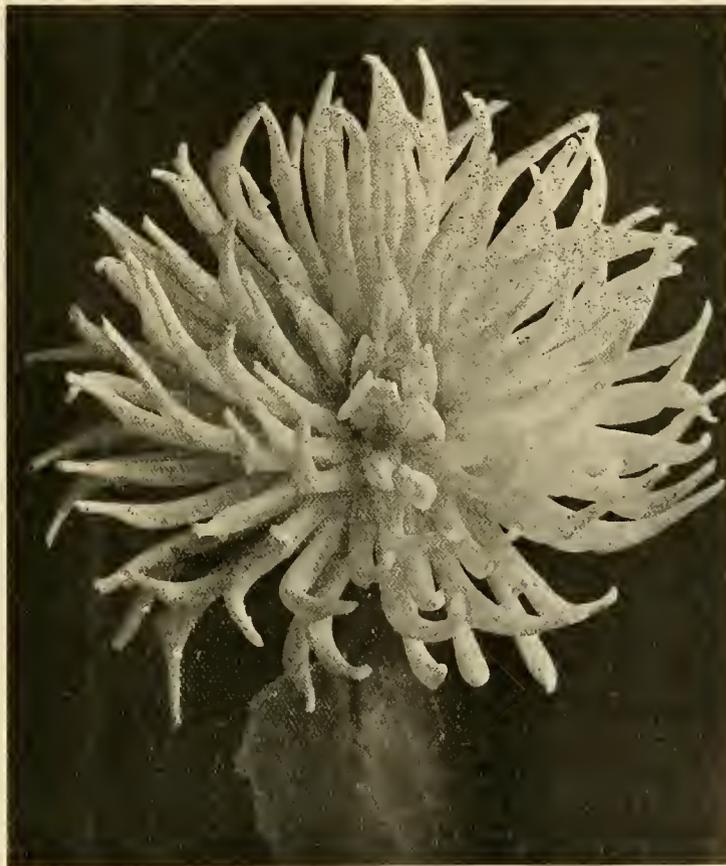
Victoria, especially the southern part, is specially suitable for the growth of Dahlias. The green plants are put out about the middle of December (our summer), and three months afterwards they start to flower. For the next six weeks they make a grand show.

We are right up to date as regards the latest novelties. Personally I import the majority of them every season, and as we can flower them six months after you have flowered them in England, it can be seen we are not far behind the English growers with their new varieties. On the other hand, we raise a good number of very good varieties ourselves; in fact, so fine that over and over again they have beaten all the English varieties for "champion bloom in the show." If one has the room, a bed of seedling Dahlias is most interesting; and if a number are grown there will, as a rule, be two or three worth saving.

The *Pæony* Dahlia has also "caught on" as a desirable garden flower; but the old-fashioned show Dahlia is now a thing of the past, and is very rarely shown at any of the good Dahlia exhibitions in Victoria.

In connexion with the Geelong Horticultural Association the Dahlia show is a very popular one, and the competition in all sections is very keen. We have three classes, viz.: Open Class, open to all, nurserymen or amateurs; Amateur Class, open to amateurs only; Amateur No. 2 Class, open to amateurs with small gardens. We find this latter class most popular, and in order to encourage beginners give prizes to those who have never previously won a prize.

HOWARD HITCHCOCK.
Geelong, Victoria, Australia.



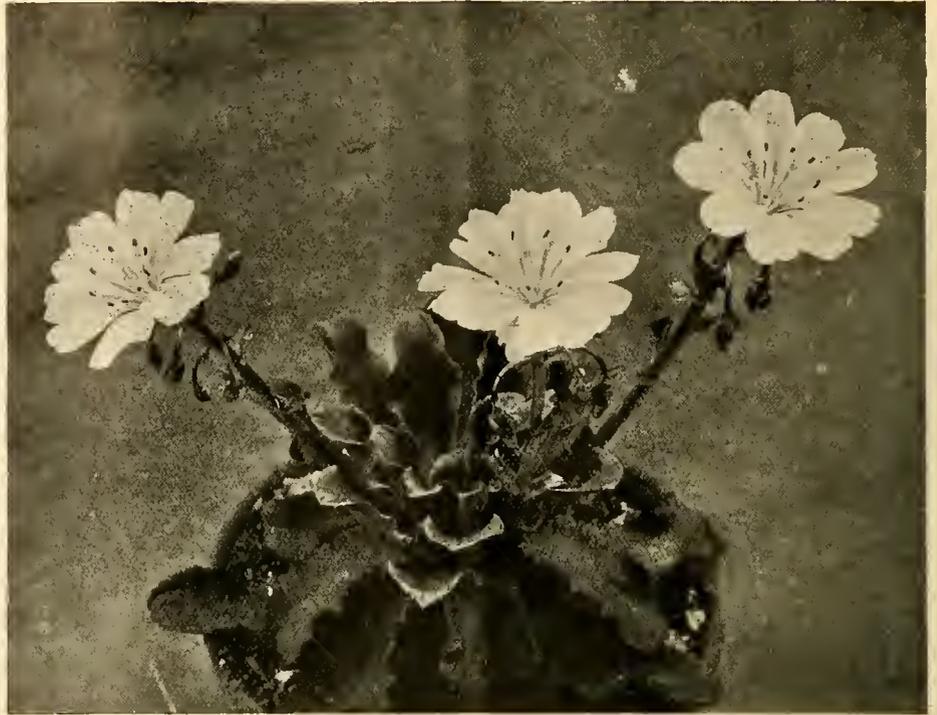
CACTUS DAHLIA MRS. F. MCQUADE AS GROWN IN VICTORIA, AUSTRALIA.

THE FLOWER GARDEN.

PREPARING FOR SUMMER BEDDING.

By the time these lines appear in print the important work of preparing the beds for a display of flowers during the summer will demand attention. The selection of plants for the various beds should have first consideration, and care must be taken that a sufficient number of these are in readiness before the actual work of planting out begins. Excellent notes have been printed in *THE GARDEN* recently respecting a variety of plants suitable for this purpose with details of their arrangement. These may be followed with every confidence of securing a pleasing effect providing the planting is carefully carried out. An important matter is a suitable soil for individual plants. Plants which are intended for producing a wealth of flowers such as the Geraniums, although not needing an abundance of fresh manure added to the soil, must, however, be provided with sufficient food to keep them in robust health, so necessary for the continual and free production of good flowers.

This is especially important when the beds have been filled with plants during the spring, some of which, such as Wallflowers, require a lot of food, and therefore leave the soil in an impoverished condition. For enriching the soil of these beds give half-rotten manure and bury this deep enough to escape coming in contact with the roots of the plants. If no manure is applied in the case of light, shallow soils, the growth of the plants will not be satisfactory, and should a period of drought occur they quickly fail owing to the extreme porosity of the soil. With a deep soil, and when following a regular system of manuring the beds in the autumn, it is not necessary to apply manure now for the majority of bedding plants. There may be exceptions, however, as in the case of Dahlias (dwarf varieties of which are used with good effect in some bedding schemes), which require a rich soil. Other plants for which manure may safely be applied are Cannas, *Lobelia fulgens* and any of the strong-growing specimen plants where a bold effect is desired. Dwarf-flowering plants intended for producing a sheet of colour are best without fresh manure, as this promotes too much foliage. A sprinkling of some approved fertiliser



A BEAUTIFUL NEW HARDY PLANT: LEWISIA COTYLEDON.

is, in many cases, sufficient, and even this may not be required if the soil is in good condition.

THE ACTUAL PLANTING.

Roots of all plants should be in a moist condition when planted. This is frequently advocated, but cannot be too strictly watched, especially when dealing with plants grown in pots. It is difficult to thoroughly soak the ball of soil after it is turned from the pot. Press the soil firmly round the roots and level the surface with the trowel as the work proceeds. After planting a bed, in the absence of rain, apply a copious watering, using a rose watering-pot for this purpose. Plants requiring supports should

be afforded neat, green painted sticks, and these should be placed in such a way so as to be as inconspicuous as possible. The soil between the plants should be frequently stirred during the season. Frequent watering has a tendency to produce a hard, caked surface, and if this is not broken with the hoe the plants suffer through the roots becoming unhealthy owing to the exclusion of air.

TIDINESS IS ESSENTIAL

throughout the season. Weeds, dead leaves and faded flowers must be removed, and every effort made to preserve neatness in the beds. Plants requiring tying to their supports should be regularly attended to, also those which require pegging down to the soil. When left too long and the growth becomes crowded the task is difficult, and there is always the risk of the plants getting broken. Plants carefully tended will give good results, and afford pleasure to all who see them.

Munden Gardens, Watford.

C. RUSE.

TWO NEW HARDY PLANTS.

THE *Lewisia* family, which contains some very interesting and beautiful plants, is confined to North-western America and is closely allied to *Calandrinia*. One of the first to be introduced into cultivation was *L. rediviva*, a native of the Rocky Mountain region, where it is found growing alongside rivers on dry prairies.

The latest addition to the number of species of this genus in cultivation is *L. Cotyledon*, a beautiful plant from the Siskiyou Mountains of Northern California. As may be seen in the illustration, it forms a rosette of leaves not unlike those of *Saxifraga Cotyledon*, but greener, more fleshy and without the silvery edge. They are about 4 inches in diameter, while the much-branched stems reach a height of 6 inches. The flowers, 1½ inches in diameter, have eight to ten petals, which are rose-purple with a broad white margin. The photograph of the plant was taken when only the three primary flowers were expanded, but afterwards the stems developed and produced more flowers, four to six being out together on each stem. These later flowers, however, were slightly smaller than those first



A NEW HARDY FLOWER: CORYDALIS ALLENI.

produced. A distinctive feature of the plant is that both bracts and sepals are fimbriated with reddish, glandular tipped hairs. It was found growing on well-drained rocky slopes, with a southern exposure.

So far the plants have been grown in pots in a cold frame, potted in very sandy loam, but there seems no reason why it should not be as hardy as the other species. All these, however, do not succeed in every garden, and some little care and attention is required in order to grow them successfully. The best position for most of the different species is one exposed to full sunshine, in a mixture of sandy loam and leaf-soil, with plenty of good-sized stones mixed with the soil. They require to be kept rather dry in the winter while they are at rest, and an overhanging stone will afford the necessary protection.

THE CORYDALISES.

All the Corydalises are pretty rock or shade-loving plants, some of the stronger-growing like *C. nobilis* being effective border plants, while others like *C. bracteata* and the lately-introduced Chinese *C. thalictrofolia* are graceful subjects for the rock garden.

The subject of this note and illustration is an earlier-flowering, stronger-growing form of the pale yellow *C. bracteata*. It is a plant of garden origin and there is a suspicion of hybridity about it, the colour of the flowers (yellowy white, with a tinge of purple) suggesting the influence of *C. tuberosa*. Flowering as it does some fortnight before *C. bracteata*, it is a welcome addition to our early spring plants. Judging from its behaviour so far it appears to be free growing, as it has already made an effective group. I have no knowledge of the raiser of *C. Alleni*, but the plants were obtained from Mr. Amos Perry of Enfield some two years ago.

Of the species of *Corydalis* worth growing in addition to the above, there is the well-known *C. nobilis*, with its deep yellow and purple-tipped flowers, and the pale sulphur yellow *C. bracteata*. An elegant species is *C. cheilanthifolia*, with Fern-like foliage and small yellow flowers. It makes great tufts and is quite a desirable plant for the rock garden. *C. thalictrofolia* is one of the best of late introductions from China, with bright, clear yellow flowers on long racemes, and it also has handsome foliage. It flowers all the summer, and continues till cut down by frost. *C. Wilsoni* is a beautiful plant with much-divided, almost white foliage and racemes of rich yellow flowers. All are easy to grow in well-drained, light rich soil, but the Chinese species are liable to damp off in winter unless protected by glass. W. IRVING.

PÆONIA DECORA ALBA.

THIS is a single and beautiful white-flowered variety of the above-named species. The handsome blooms of 4 inches or 5 inches across are of a spreading cup-like outline, and have a tuft of quite pale yellow anthers surrounding the ovary. The petals are of satin-like transparency and impart a pleasing effect to the flower. The plant is 2 feet high or rather more, and the blooms, as is usual, are solitary. This good border plant was noted in the group of plants staged by Messrs. R. Wallace and Co., Colchester, at the recent Temple show, when it received an award of merit.

GARDEN CACTUS DAHLIAS.

OWING to varying circumstances, but especially that the plants were sent in too late in the spring, the trial of Cactus Dahlias conducted last summer in the Royal Horticultural Society's gardens at Wisley, under the joint auspices of the Royal Horticultural Society and the National Dahlia Society, had a very indifferent result, nothing specially worthy of mention for real garden decoration resulting. A section of the Dahlia committee, not so absolutely engrossed in the mere exhibition aspects of the Cactus Dahlias as some others, are anxious to see these most

beautiful flowers made as attractive in gardens as they are at exhibitions, and for that reason have induced their own society, in conjunction with the Royal Horticultural Society, to promote trials of the newer varieties at Wisley to test their fitness for garden purposes. It is too well known that with very few exceptions, these being chiefly found in what is known as the Pompon section of the Cactus varieties, that the plants under ordinary garden culture run too tall, and generally show gross dense growth. The flowers, while produced in abundance, are too much hidden by the luxuriant foliage, and the flower-stems are too weak or limp, not carrying the flowers boldly erect, such as is seen in the ordinary Pompon Dahlia, without doubt yet by far the most florally decorative section of garden Dahlias we have. Trade growers aver that to have Cactus Dahlias in gardens at their best the plants need much of both thinning and disbudding. But those necessities constitute the weakness of the section, as it is just so much trouble in garden plants everyone wishes to avoid. Thus it is seen that while raisers have in Cactus forms produced what may well be described as marvellously beautiful flowers, many, perhaps, ranking among the quaintest in form found in flowers, yet their energies

seem to have been chiefly devoted to the production of exhibition varieties rather than those specially suited for and very beautiful in gardens.

The Wisley trial of the past season included varieties put into commerce from 1904 up to 1907. The ensuing trial for 1908 will include varieties sent out only since 1905 and inclusive. It is needful thus to limit the range of selection, as the primary object of the trial is not to include in it as Cactus Dahlias varieties that, however attractive in gardens, are yet not true to name, but only such varieties as produce flowers of the most up-to-date Cactus form. It is worthy of note that the next exhibition of the National Dahlia Society will be held at the Royal Horticultural Society's Hall, Vincent Square, on September 3, instead of at the Crystal Palace, as has hitherto been the case. A. D.

THE EDITOR'S TABLE.

JACKS-IN-THE-GREEN PRIMROSES FROM WOODCOTE.

Mrs. Danvers Bidlake of Woodcote, near Stroud, sends fine flowers of this old favourite with the following note: "I brought some of the plants from Ireland some years ago. I had collected them there from one spot or another, generally from old cottage gardens. One or two varieties I have got about here in the same way, but as varieties seemed to have increased in my garden, some, I believe, have come from inoculation. I found them much more difficult to grow here than in Ireland; the soil is too full of lime and too much clay for Primroses and the summer too dry. I planted them in various parts of this garden when first we came nine years ago, and then watched to see where they



A NEW SINGLE
PÆONY : PÆONIA
DECORA ALBA.

grew best, in the open or in the shade; and soon came to the conclusion they did best in a well-made rockery. I tried various experiments with manures and soils, and now use exclusively stable manure made of moss litter (a horse we had ate straw, and so we used litter instead) to grow them in; the more moss litter and leaf-mould the brighter the colours and the finer the foliage. I water them in the summer, and sometimes put shades over the more delicate plants. It takes trouble, but I am very fond of these and the Hose-in-Hose."

ARENARIA GRANDIFLORA FROM ESSEX.

An anonymous correspondent sends flowers of this charming Sandwort with the following note: "I am sending a few sprays of *Arenaria grandiflora*, as at present it is one of the most showy subjects in the rock garden. The plant measures 15 inches across, and is a mass of white flowers."

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE GREENHOUSE AND CONSERVATORY.—Fancy, regal and show Pelargoniums that have made such a fine display of late are now fast going out of flower; I am, therefore, placing these outdoors in a sunny position so that the wood may be ripened. I avoid watering freely and when the leaves turn yellow



1.—A CHRYSANTHEMUM PLANT TURNED OUT OF A 5-INCH POT, WELL ROOTED, READY FOR PLACING IN ITS FLOWERING POT.

it is my custom to cut back the old shoots to within about 2 inches of the main stems. If these plants are left in the glass structure too long with other subjects they often get infested with green fly. Fuchsias are now coming on very fast; these should be watered with manure water occasionally to keep them in health and ensure the development of fine blossoms. As the days get warmer very little fire-heat will be needed, and such subjects as Maidenhair and other choice Ferns must be shaded from the hot sun, otherwise the delicate tones of green will be lost. The leaves of fine foliage plants must be kept clean and free from dust if they are to do well at this season.

Roses.—Plants that have ceased flowering indoors I am now standing outside. The present is a good time to propagate these indoor Roses. Plants in the beds and borders outdoors I am constantly over-looking, removing suckers immediately they are seen, otherwise they soon become a serious trouble. Insect troubles have to be contended with, caterpillars needing to be searched for before they begin their ravages of both foliage and buds. Aphides may be got rid of by syringing with any well-known and approved insecticide, of which there are now so many really excellent preparations. The plants will now appreciate occasional applications of manure water, or, what is better, a dressing of some good guano or concentrated manure. This latter is especially beneficial in moist weather.

The Vegetable Garden.—Early Celery that has been pricked off in boxes or the cold frame some time should be planted now, if possible during rainy weather. If the weather is dry give the soil in the trenches a heavy application of water some few hours before the planting is done. The trenches should be 3 feet or rather more asunder, and should run from north to south. The width of the trenches may be anything from 15 inches to 18 inches; the depth should be about 12 inches, filling in with 6 inches of good, well-decayed manure and covering this in turn with 3 inches of the garden soil. Plant from 6 inches to 9 inches apart in the trench, taking out the soil with a trowel and in this way ensure each plant being well embedded. Water in afterwards. Continue to thin out all vegetable crops, such as Beet, Carrots, Parsnips and Onions, giving each plant ample space to develop satisfactorily.

The Flower Garden.—I am completing the planting out of such annuals as Ten-week Stocks, Asters, and the sweet-scented Tobacco plant, as opportunity offers. Annuals that were sown where they are to flower I am thinning out in most drastic fashion. It is a great mistake to allow these to grow in too crowded clumps. See to the staking of all flowering plants forthwith, as they are now making such rapid progress. Continue to plant Dahlias that have been hardened off in the cold frame. Give the plants plenty of room and stake them at the time of planting. Pansies and Violas should have their seed-pods and spent blossoms rigorously removed throughout the whole of the summer season to maintain the plants in health. For next year's supply of Canterbury Bells I am now making a sowing on a sunny border outdoors. Wallflowers, too, I am giving the same attention, although I would rather have done this some time since.

The Fruit Garden.—Fruit trees against walls should be syringed pretty often at this period to keep red spider and aphides from giving trouble. This should be done in the cool of the evening. Place clean straw on the surface soil between the rows of Strawberries to keep the fruit clean. If fine fruit is required it will be necessary to thin out the weaker and smaller fruits that have set on such subjects as Apples, Pears and other hardy fruits. D. B. C.

THE FINAL POTTING OF CHRYSANTHEMUMS.

ALTHOUGH beginners with the cultivation of the Chrysanthemum may have heard of the term "final potting" times out of number, they may be in doubt as to what this term really means. To give the plants the final potting, or, as termed by some authorities, "final shift," is really to place the plants in their flowering pots. This has to be done at its proper season, May and June usually being the best time. It is hopeless to expect to produce big blooms, or plants that are capable of developing a number of flowers of a decorative character, unless the plants are given sufficient root-room. Chrysanthemums vary in their character, some varieties being far more vigorous in their root-action than others; consequently a little discrimination is necessary when deciding in which size pots to place the respective plants. The more vigorous plants will do well if they are put into pots measuring 10 inches in diameter, those somewhat less vigorous into others 9 inches, and the somewhat weakly ones in pots measuring 8 inches across.

HOW TO KNOW WHEN THE PLANT IS READY FOR THE FINAL POTTING.

Evidence that the plant is ready for the final shift is given by the quick drying of the soil and

the more frequent applications of water needed as a consequence. If the grower is uncertain as to this fact, he may turn the plant out of the pot, when, if the plant be ready for transference into its flowering pot, it will have a mass of roots round the ball of soil. Fig. 1 is a very good illustration of a plant that is ready for its final potting.

SOIL FOR FINAL POTTING.

This must be well prepared and should comprise three parts of good turfy loam with plenty of fibre in it. This material should not be passed through a coarse sieve but should be broken up into little nodules. Add to this one part of leaf-mould and one part of well-rotted manure from a spent hot-bed, with a free admixture of road grit or coarse silver sand to make the compost porous. The foregoing ingredients should be well mixed, and to make the soil more fertile to every bushel of soil add a 5-inch potful of bone-meal and guano. The whole heap should be thoroughly mixed and turned over each day for several days before it is used.

HOW TO FINALLY POT THE PLANTS.

Crock the pots with care, placing potsherds in an inverted position in the bottom of the pot in layers to a depth of about 1½ inches to 2 inches. These should be covered with some of the rougher portions of the soil or a piece of turfy loam to prevent the smaller particles of soil working down into the drainage. Place a few handfuls of the compost over this in turn and make fairly



2.—LATE STRUCK PLANT, PROPAGATED WITH THE OBJECT OF FLOWERING IT IN A 6-INCH POT.

firm, and the plant to be repotted should then be placed in position. With the fingers of the left hand placed round the stem of the plant to maintain it in position, fill in all round the ball of soil with the prepared compost with the right hand, making this very firm, ramming it down by the aid of a wedge-shaped wooden rammer. Take care, however, when ramming the soil not to damage the roots, otherwise serious trouble will

ensue. Continue this up to the level of the surface soil of the plant, which should be 1½ inches to 2 inches below the rim of the pot, otherwise adequate supplies of water cannot be supplied during the summer season. Finish off with a thin layer of soil on the surface, pressing this down with the palm of the hand. On no account should this be rammed or the surface roots will be damaged thereby. Insert a small stake for the support of the plant, and stand each one as it is done in slightly shaded quarters, where they should be allowed to remain for a week or fortnight until they have recovered from the check experienced in the repotting. Do not water the plants at once unless the weather be very hot and dry. After a few days give them a copious application of clear water by the aid of a fine-rosed can, and do not rest content until the ball of soil is moistened throughout. It may be necessary to give two or three waterings in quick succession to achieve this.

POTTING UP LATE STRUCK PLANTS.

Fig. 2 serves to illustrate a cutting that was struck quite late in the season with the object of



4.—THIS PLANT WAS ROOTED EARLY IN MARCH AND HAS BEEN PINCHED TO MAKE IT BUSHY.

flowering the same in a pot 6 inches in diameter. It will be seen that the plant in this illustration is well rooted and ready for shifting into a pot of larger size. It may be either first transferred to a pot measuring 3½ inches in diameter, or be placed right away into its flowering pot measuring 6 inches in diameter. We would prefer to adopt the former course, although if the time be limited the second method is often practised. The illustration in Fig. 3 shows a plant struck slightly earlier than that seen in Fig. 2. The object of the earlier propagation was to obtain a plant of a bushy character. In order to do this the point of the shoot was pinched out a few weeks since, and in consequence of this treatment the plant has evolved two shoots where formerly there was only one. The illustration in Fig. 4 shows the plant in Fig. 2 finally potted in a 6-inch pot. Either of the methods above mentioned may be followed with the sure prospect of producing good results. Fig. 5 represents a plant that was pinched, i.e., the point taken out

of the plant, in late March, in consequence of which the plant has developed its branching growths earlier than would be the case otherwise. This is an advantage where the flowers are wanted early or where the plant is naturally late and the blooms are needed for an earlier display. The same rule is usually observed where large, bushy specimens are required for decorative uses.

SOME USEFUL HINTS FOR EXHIBITORS.

To the best produce the prizes are awarded, and exhibitors who have had considerable experience know how very important it is to try and grow every plant, flower, fruit or vegetable as well as possible when the object is to gain prizes at a horticultural show. I will give a few useful hints on essential points in connexion with the growing, packing and staging of different kinds of fruits, flowers and vegetables that amateurs may find of service to them.

ROSES.

As a rule a fair quantity of organic manure, in the form of manure from the cowsheds and stables, is dug into the soil at the time of putting in the plants. Where this has been neglected it may be well to put on a good mulch of rotted manure now, and not a littery mulch. The production of fine blooms is not absolutely dependent upon the large supplies of farmyard manure, but I always like to give the Roses a liberal quantity. At the present time give also one teaspoonful of sulphate of ammonia to each plant and well water it in. A week or ten days later apply a dessertspoonful of superphosphate to each plant. Then follow these applications with one of nitrate of potash, using 1½oz. to 2 gallons of water. In all cases see that the soil is moist before applying manure in any form. The foliage must be kept free from aphides and caterpillars, else the most promising buds will undoubtedly be lost. I hope to give a few hints about the gathering, packing and staging of the blooms in a later issue of THE GARDEN.

PEAS (CULINARY).

These must have plenty of moisture at the roots right through their growing season. Numerous roots must be encouraged to grow, and to this end the rooting medium should be deeply trenched. Encourage strong growth and then the plants will bear large, well-filled pods if superphosphate at the rate of 1oz. per yard run of row is scattered on the soil on both sides when the plants show signs of forming flowers and during the swelling of the pods. Phosphate of potash is also a grand food, 2oz. dissolved in 3 gallons of water being a suitable dose for each yard of row. Do not forget to put on a timely mulch of half-rotted manure; it is a valuable aid in spells of dry weather.

SWEET PEAS.

Practically the same treatment is necessary in growing large blooms of Sweet Peas. It is now too late to sow seeds, but if the plants are growing in deeply-dug ground you must help forward the haulm by applying superphosphate as soon as possible at the rate of 1oz. per yard run of row or per clump respectively. Put on the superphosphate during rainy weather. In the absence of rain give clear water first and afterwards wash in the stimulating food. Weakly sprays or those only bearing two blooms should be pinched off; and, furthermore, all faded flowers should be removed. On no account allow seed-pods to form on the plants. AVON.

WORK AMONG THE RASPBERRIES.

THESE plants will now be pushing up an abundance of vigorous young growths, and where the work has not already been done the thinning of these should be at once attended to. Healthy clumps always produce far more shoots than it is desirable to retain, and the early removal of those



3.—THE SAME PLANT AS SHOWN IN FIG. 2 FINALLY POTTED IN A 6-INCH POT.

that are superfluous is of much benefit to those that are left. Generally speaking it is a wise plan to retain three or four of the most vigorous and best placed suckers to each clump, and all others should be removed just below the surface of the soil, unless any are likely to be required for the formation of a new plantation in the autumn. Where such are needed those shoots that are pushed up some distance away from the clump should be retained, as they will be the best for lifting.

If not previously done a good 6-inch thick mulching of rather short manure should be placed along each side of the row, first giving the soil a thorough soaking with water if it is at all dry. Weeds must be kept down by lightly hoeing the ground, and any tying that is needed must be promptly attended to.

A point that is often overlooked by amateurs in the cultivation of this fruit is the early removal of the fruiting canes. As soon as the fruit is gathered from these they are of no more use to the plant, and, indeed, their presence is detrimental. They should be cut out immediately all the fruit has been collected, thus admitting sun and air to the young canes which are to bear the crop the following summer.



5.—A PLANT PINCHED IN LATE MARCH, IN CONSEQUENCE OF WHICH IT WILL FLOWER EARLIER

THE TOWN GARDEN.

CARNATIONS.—These are among the most satisfactory of all plants for cultivation in town gardens, for, although they are severely attacked by sparrows in some places, they only demand reasonably good attention to ensure gratifying results. At the present time the plants are in excellent condition, the growth being abundant and healthy and the buds clean and numerous. As far as the latter are concerned, the main things are reduction of numbers and light but efficient support. In all instances it is desirable to do a little disbudding, and the rule should be to retain the principal bud, except in those cases where it is deformed. Light, green sticks should be used to support the flower-stems, and one will suffice to each plant, the several growths being slung separately to it, and not tied up in a solid mass with one ligature. The surface of the soil should be kept open by persistent hoeing or pricking over with a small fork or a stick, and water must be given when the soil is almost perfectly dry. If it is suspected that the soil is becoming deficient in food, weak liquid manure, made preferably from natural manures, should be given now and again after the soil has been thoroughly moistened with clear water. It is essential that a sharp look-out be kept for slugs or they will quickly play havoc with the plants.

ROCKWORK.—Whether the rockery be one of pretension, that is entitled to be designated a rock garden, or is of quite modest dimensions, it will demand attention at practically all periods of the year. Just now the owner will devote much of his energies to keeping down the weeds and giving water according to necessity; but it is imperative that he shall also keep close watch on the progress that is being made by the stronger-growing occupants. If these are permitted to spread unchecked they will steadily overrun their weaker neighbours, and, as the latter are often the choicest plants in the collection, the result will be most disappointing. However, this is one of those things that is always under the control of the grower, and if he will only give it regular attention it is unlikely that any of the specimens will suffer to an appreciable degree. It certainly requires some strength of mind to ruthlessly tear up vigorous clumps of plants in full flower, but it is a necessity if the rockery is to continue a source of pleasure for a considerable period.

SEED SOWING.—Such subjects as Antirrhinums, Canterbury Bells, Polyanthus and others thrive splendidly in town gardens, provided that strong plants are raised and placed into their permanent quarters in the autumn. Wallflowers grow well if the garden is large enough to ensure abundance of air, but where the supply is stinted they are weak and rarely pass safely through the winter. In these circumstances it is wiser to procure healthy young stock and plant in the spring. The present month and July are the best for seed sowing, and a special bed should always be made up for the purpose. Dig the selected area deeply, and then put on a layer of about 3 inches of leaf-mould, pricking this into the surface with a fork, as one thus provides a material to which the young roots will cling with great tenacity. Upon the completion of this, make the surface level and moderately firm, and sow the seeds as thinly and evenly as possible either in drills or broadcast, the former for preference. If the soil is moist, no water will be required for some little time.

RED SPIDER.—This is a terrible pest on plants grown against the hot walls of town gardens, and if it is allowed to multiply unmolested it soon does an immense amount of damage. The grower should look over the leaves of the plants at frequent intervals, and immediately a sign of the enemy is seen the soil at the roots should be heavily watered and the foliage and stems cleansed with water through a hose, using as much force as possible. **HORACE J. WRIGHT.**

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

MANY plants grown during the summer months for autumn and winter decoration are much improved if planted out in frames, and all such may now be put in their places. Solanums, Bouvardias, Salvias, Eupatoriums, Carnations, Callas and Leonotus should have a nice mixture of growing material and be allowed plenty of room to develop. Keep the plants well syringed on every occasion when it is desirable.

Cyclamens may now be put into their flowering pots. Use good sweet soil and do not give too much water till the roots have gripped the new soil; an important factor is that the roots and ball of the plants should be in a moist condition when potted. Keep the plants shaded from bright sunshine and syringe under the foliage as much as possible.

Crotons and Dracenas that were struck early and are now in 2½-inch pots require 5-inch pots at once. Give some good loam and leaf-soil, with peat and a good sprinkling of sharp sand; pot firmly and shade for a few days.

Ixoras may be fed with some stimulant when flowers are showing. *Ixora Duffi*, *I. Westii*, *I. Williamsi*, *I. Prince of Orange*, *I. Pilgrimii*, *I. coccinea superba* and *I. Fraserii* are among the most effective. These plants must be kept clean, as they are very liable to be attacked with bug and thrips, which must be destroyed by fumigating.

Nepenthes (Pitcher Plants) must have plenty of water and be kept well syringed in order to keep down thrips. Shut up the house and run the temperature up to 90° at closing time.

Allamandas, *Clerodendrons* and the like should have the growths strung up artistically and the weak shoots removed. Plenty of feeding must be adopted with old or established plants growing in small borders or tubs.

HARDY FRUIT.

Plums and Cherries must be kept clean from aphid and maggot. Where the growths have become strong on walls they should now be pruned. The same may be said of Pears and, in fact, all fruits on walls. Finish off the disbudding of Peaches, and keep every portion of the tree free from aphid by constantly syringing with some approved remedy. Thin the fruits on Apple, Pear, Plum and Peach trees, especially on small ones, and it is well not to allow weak trees or newly-planted ones to carry any fruit at all, or the trees will suffer in subsequent years.

Strawberries.—If not already done, these should be mulched between with clean Wheat straw, so that the fruit may be had in perfect condition. Previous to strawing a good dusting of soot round the plants is a fine thing to kill slugs.

KITCHEN GARDEN.

Tomatoes may now be planted out. Carter's Sunrise is one of the best, perhaps the best of all, for outside purposes, especially for profit, and it ripens early and is an exceptional good grower. These should be planted at least 2½ feet apart and have a good stout stake put to each at once. Prick out more Brussels Sprouts, Broccoli and Cauliflower. Continue to sow seeds of salads every week or as often as may be deemed necessary. Hoe all crops and keep down weeds, remembering that the ground cannot perfect two good crops at once.

MELONS AND CUCUMBERS.

Continue to plant these for general succession; it will not be much good to plant Melons after this month. **W. A. COOK.**

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

BOUVDARIAS.—Where the planting-out system is followed, no time should be lost in getting these into their summer quarters. Well fork the ground in order that leaf-mould and manure may be thoroughly incorporated with the soil. A sunny border is the most suitable position for the plants. The earliest batch should soon be ready for the flowering pots, and, if well managed, will make fine specimens by the end of the season. Both for the plants inside and in the open the syringe must be freely used during the afternoons of bright days in order to keep down the red spider and to encourage growth. For this purpose I use soot water.

Phyllocacti.—Where repotting is necessary this should be done immediately the plants have flowered, but take care not to overdo this. It is far better to under pot them than to put them into pots several sizes too large. It is by no means necessary to repot each season; every third or fourth year is usually sufficient. The soil then used must be free and open, the following suiting most sorts admirably: Two parts sharp river sand, one part pounded charcoal or bricks and four parts good rich fibrous loam. Good drainage is an absolute necessity. Stagnation at the roots is fatal. For large-sized pots one-third of the depth should be filled up with broken crocks.

FRUITS UNDER GLASS.

Vineries.—Should the spell of fine weather continue, it will be advisable to do without fire-heat altogether in the early vinery. The Grapes should not need it, except, perhaps, to dispel moisture and prevent damping of the berries. The less fire-heat used the longer the berries will remain plump, and the wood will ripen far better if the process is not hurried. Of course, a dry atmosphere should be maintained from the time the Grapes ripen until they are cut, and, if this and a cool temperature are persevered in, the bunches will hang in first-rate condition for several weeks. A light shade, too, will help to lengthen the season and to preserve the bloom on black Grapes, which, if exposed fully to the light, will gradually assume a red tinge.

KITCHEN GARDEN.

Summer Turnips.—This is a good time to make another sowing of Turnips for summer use. The Milan varieties should be succeeded by a good strain of Snowball or Veitch's Red Globe. Do not depend upon one variety, as Turnips are much influenced by the season and are apt to run to seed.

Celery.—I always adopt the plan of getting the Celery trenches dug out early in the season. This allows of the ridges being used for quick-growing crops, such as Lettuce, Spinach and dwarf early-hearting Cabbage, Cauliflower and French Beans, but, of course, due attention must be paid to watering, especially in light soils and dry seasons. Labour is economised and a good growth secured by sowing good dry-weather varieties of Lettuce down the centre of the ridges, merely thinning the seedlings out.

FLOWER GARDEN.

Aquilegia hybrids.—The flowers of the hybrid Columbines are so varied and beautiful and so useful for decoration, either in the plant or in a cut state, that they deserve a place in every garden. A packet of seed from a reliable source will give hundreds of plants in all conceivable tints and gradations of colour, while the foliage itself is very beautiful. Mine are now in full beauty, from seeds sown in June of last year. They look well in the borders of the kitchen garden, and in various parts of the flower garden and grounds they are most useful.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

LEGAL POINT.

Fixtures (Removal).—Things annexed to the freehold, but which do not become part thereof and which are commonly designated "removable fixtures," are grouped as either agricultural, trade, ornamental and domestic convenience fixtures. Agricultural fixtures are governed by the Agricultural Holdings Act and other recent statutes; the law as to the rest is chiefly found in judicial decisions. The right to remove fixtures put up for trade purposes is certainly wider than that enjoyed by tenants who have merely affixed the article for ornament or domestic convenience, but a resemblance occurs in the fact that the right must be exercised before the expiration of the tenancy. The decisions on fixtures put up for purposes of ornament and domestic convenience chiefly relate to things put up in the house, but there is no reason why they should not extend to things in the garden, although up to the present gardening points of law have not been common. Rails, fences and hurdles have, however, been held to be removable. The right to remove in any individual case may be defeated by the mode and degree of annexation and the physical injury to the freehold which would ensue. From the description given by our present querist, we gather that there will be no permanent injury to the land, and we think removal would be justifiable.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Tulips diseased (Puzzled).—The spots upon the Tulip leaves are due to an attack upon the plant by the fungus *Botrytis parasitica*, the cause of the Tulip disease. The fungus is abundant upon the leaves and flowers, but as yet does not seem to have invaded the bulbs. This will, no doubt, occur later, and then the resting form of the fungus will be produced in the form of black masses of mycelium known as sclerotia, and by means of these the disease will be carried over to another year. It would be well to remove all the leaves and tops of the plants affected in order to check the passage of the fungus down into the bulbs and burn them, not throw them upon the rubbish-heap. It is quite probable that weather conditions have contributed to the disease by so injuring the foliage as to lay it open to the attack of the fungus. Snow lying in the heart of the plant and perhaps freezing there would be a possible contributory cause.

Primrose flowers and Rhododendron leaves for inspection (J. E. B.).—The abnormal form of *Primula vulgaris* with a greenish corolla which you send is occasionally met with in various parts of the country, and at times the green colouring is much more pronounced than in your example. Numerous variations occur in this Primrose, some being very extraordinary in the shape, size and colour of the flowers. The injury to the Rhododendron leaves is most likely due to the reason you suggest, especially as last year was a bad ripening year. A great number of evergreens have been disfigured by reason of the leaves turning brown since the commencement of last winter. This, in many cases, can be traced

to bitterly cold winds following on the insufficiently ripening of wood and leaves. The same sort of injury is sometimes caused by drought, but this is more often due to drought during the growing season, and the results are noticeable in summer. Bad root action would also cause a similar effect. It is quite probable, however, that in your case the disaster was caused by the storm from the sea you experienced last autumn.

American Violets (Wilmslow).—Of the two small American Violets sent the pale blue one with the finely-cut leaves is *Viola pedatifida* or lobe-leaved, the other, having dark flowers, is evidently *Viola ovata*, having egg-shaped leaves. Grow your Violets, if possible, on rockwork and in cool, shaded positions. Possibly where you collected these plants in New England the site was a cool northern one. With us here Violets in a warm position are apt to be eaten up with minute insects.

Carnation leaves blistered (J. E. W.).—The shoots of Carnations sent have evidently had the leaves scalded in some way. The most probable cause is by the sun through the glass, or it could be done by an overdose of insecticide or too strong fumigation. There is no fungoid growth on them. The border Carnations are more hardy and would not feel the effects of sunshine or an overdose of fumigation so much as the Tree and Malmalson types. The only thing that can be done is to air the house freely and shade from bright sunshine after a spell of dull weather.

Nitro-bacterine for Sweet Peas (Norah Unwin).—If you wish to give your Sweet Peas some of the new bacterine material your best course will be to dissolve a very small quantity in water and pour it in very limited quantity in and about the Peas, doing so once a fortnight till the end of May. We have no practical knowledge as to its nature, but hope to learn more during the present year. Opinions greatly differ as to the value of the inoculation; your best course will be to use the solution on portions of your Peas or rows, and thus test for yourself its usefulness or otherwise. When you purchase the bacterine, instructions as to the relative proportions of that and water will doubtless be provided.

TREES AND SHRUBS.

Lilac plant drooping (Captain E. T. O.).—The drooping of your Lilac is no doubt owing to the fact that, being planted only last autumn, the roots have not yet taken possession of the soil, and consequently a combination of hot sun and drying wind causes the young shoots to flag. This theory is further borne out by the fact that the plant quite recovered during the night, as it naturally would with the absence of sunshine and the increased amount of atmospheric moisture. As all outdoor subjects are now rooting freely, your Lilac will soon become thoroughly established, and we do not think that any further trouble will arise from the drooping of the shoots. Should it, however, occur again, give the roots a good soaking with water.

Soil and situation for Judas tree (N. N.).—The Judas tree is not a very fastidious subject with regard to soil and situation once it becomes established, for if given a position in full sun or in partial shade, in light or heavy loam, it grows satisfactorily. It cannot, however, be called one of the best plants to establish, and it often takes some little time to get over transplanting. If, as you say, your plant shows signs of growth, it will doubtless grow more vigorously presently. When planting shrubs in poor soil it is a good plan to excavate holes 5 feet or 6 feet in diameter, and give a little new soil at the time of planting.

Information about Privet and other shrubs (F. J. P. H.).—Strong three year old plants of the oval-leaved Privet can be successfully moved by the first week in October, in proof of which we may mention that two years since we planted a hedge of it by the second week in September and it is now in splendid condition. You can certainly plant standards of the two trees mentioned, but we should prefer them 12 feet apart rather than the lesser distance named. *Choisya ternata* will thrive against an east wall. Where Lavender bushes are required to form a neat shapely hedge, they should be pruned in the spring.

THE GREENHOUSE.

Treatment of Azaleas in pots (Young Gardener).—It will not be wise to plunge your Azaleas outdoors until the third week in June. In the meantime give them an abundance of fresh air, so as to harden off the growth as much as possible. In plunging the worm trouble may be obviated to a great extent by placing a good layer of sharp coal ashes and soot under each pot. The plants must have copious supplies of water during hot, dry weather, and they will be much benefited by weekly applications of much-diluted liquid manure while growth is

being made. On the evenings of very hot days give the plants a light syringing overhead.

Information about a Cyclamen (J. H., Harpenden).—It is of course impossible for us to say definitely what species your Cyclamen is, but very probably it is *Cyclamen neapolitanum*. This is quite hardy and flowers in the autumn. Your better way will be to plant it out of doors in a sheltered and partially shaded spot, mixing some sand and leaf-mould with the soil. It will then probably soon push up leaves and ultimately flower, when its correct name can be ascertained.

Winter-flowering Begonias (Enquirer).—The best of the winter-flowering Begonias are Agatha, similar to the well-known Gloire de Lorraine, but the flowers are larger and richer coloured; Ensign, carmine-scarlet, semi-double; Gloire de Lorraine, rose pink; Gloire de Sceaux, bronzy green leaves, rose-coloured flowers; Haageana, handsome bronzy foliage, bluish white flowers; Ideale, bright rose carmine; John Heal, deep carmine; Julius, pink; Mrs. Heal, large flowers of a bright carmine-scarlet; Turnford Hall, bluish white form of Gloire de Lorraine; Winter Cheer, semi-double, carmine-rose; Winter Perfection, semi-double, bright rose pink. Most of these varieties were raised by Messrs. J. Veitch and Sons, Limited, Chelsea, from whom all of the above can be obtained.

Stocking a greenhouse (L. F. B.).—A minimum temperature of 45° during the winter months will be better for greenhouse plants in general than 5° lower. Your selection of plants for clothing the back wall is a good one, but for the border at the foot there are very few suitable plants other than Ferns, of which a good selection is herewith appended: *Adiantum cucuatum*, *A. decorum*, *A. formosum*, *Asplenium bulbiferum*, *A. Colensoi*, *Cyrtomium falcatum*, *Doodia caudata*, *Lastrea aristata*, *variegata*, *L. lepida*, *L. patens*, *L. Standishii*, *L. varia*, *Nephrolepis exaltata*, *Onychium japonicum*, *Osmunda palustris*, *Polystichum setosum*, *Pteris arguta*, *P. argyrea*, *P. cretica*, *P. c. albo-lineata*, *P. leptophylla*, *P. longifolia*, *P. major*, *P. serrulata*, *P. s. cristata*, *P. tremula* and *P. Wimsettii*. The only plants other than Ferns that we can recommend are the green and golden Creeping Moss (*Selaginella kraussiana* and *S. k. aurea*), *Aspidistra lurida* variegata, *Isoplepis gracilis* and *Ophiopogon jaburan* variegatum. With regard to the plants to grow in pots on the staging, we advise you, as you know nothing of greenhouse management, to commence with subjects whose cultural requirements are simple. For flowering throughout the summer months, you have a wide choice of such things as Fuchsias, Pelargoniums of the different sections, but especially the double-flowered Ivy-leaved and Zonal classes, *Heliotrope*, *Lantanas*, flowering *Cannas*, *Begonias* (both tuberous and fibrous-rooted kinds), *Carnations*, *Calceolarias*, *Campanulas*, *Coleus*, *Celosias* and other plants. These can be obtained in the shape of thriving little plants at a cheap rate from the nurserymen who advertise in the columns of THE GARDEN. A suitable selection of cool house Orchids of comparatively easy culture is herewith given: *Ceologyne cristata*, *Cymbidium lowianum*, *Cypripedium insigne*, *C. venustum*, *C. villosum*, *Laelia anceps*, *L. autumnalis*, *Lycaste Skinnerii*, *Madevalla harrayana*, *M. ignea*, *M. veitchiana*, *Odontoglossum crispum*, *O. Hallii*, *O. Pescatorei* and *O. triumphans*. Mushrooms may be grown under the greenhouse staging, and on this subject you will find a valuable illustrated article in THE GARDEN for November 23 last year. We have not space here to repeat it. Books that will afford you great assistance are "Gardening for Beginners" by E. T. Cook, 12s. 6d. net, from THE GARDEN Office; and "Pictorial Practical Greenhouse Management" by Walter P. Wright, price 1s. 9d. (Cassell and Co.).

FRUIT GARDEN.

Destroying caterpillars on Gooseberry trees (P. S.).—Procure some Paris Green (Blundell's) and dissolve 1oz. in 10 gallons of water, taking care to have it well mixed. Then spray the trees with this mixture, using a syringe that will give a very fine spray for the purpose. Coat every part of the foliage with the liquid. It will be necessary to keep it well stirred while applying it. This substance is poisonous and must not be used within a fortnight of gathering the fruit. If you cannot obtain Paris Green procure some white Hellebore powder, freshly ground, from the chemist, and mix 2½lb. with 10 gallons of water, keeping it well stirred while using. Spray with this as advised for Paris Green. A week after the application of either mixture give the bushes a heavy syringing with clean water.

Leaves of Apple tree curled (E. Diekmann). The leaves of your Apple trees are infested by one of the Apple aphides (*Aphis pomi*). Now that the leaves are beginning to curl there is little chance of killing the aphides with any insecticide, as it is so difficult to make any spray reach them. In the autumn, just before the leaves begin to fall, the trees should be thoroughly sprayed with a strong solution of paraffin emulsion, and in the course of the winter they should again be sprayed, this time with a caustic wash or with an insecticide lately

put on the market and known as V1; but these washes must not be used after the buds show any signs of opening. In the spring, before the leaves begin to curl, if in any way you suspect that they are likely to be attacked, they should be sprayed with a weak solution of paraffin emulsion or an insecticide known as V2.—G. S. S.

Book on grafting (H. S.).—We know of no work exclusively devoted to grafting and budding, but the "Alphabet of Gardening," a useful little book, gives information on grafting, budding, pruning, hybridising and kindred subjects, with explanatory diagrams. This may be had from the *Gardener's Chronicle* Office, 41, Wellington Street, Strand, W.C. Price 1s. 9d.; cloth, 2s. 3d.

Grapes and Vine gone wrong (Mr. Nicholson).—The Vine foliage and bunches of Grapes have all the appearance of having been scorched by a burst of hot sunshine acting on an inadequately ventilatedinery. The weather lately, having been dull for so long, has caused the growth of Vines under glass to be attenuated and weak, compared to what it is when exposed to more sunshine, and consequently more easily injured by this cause. We have had many similar complaints. Sometimes a cheap, bad pane of glass in the roof of theinery will cause such scorching. We can find no trace of disease or of injury from insect attack.

Pear blooms injured (H. H. Jones).—The description you give of your injured Pear blooms and the appearance of the sample bloom sent would lead us to the conclusion that they had been injured by frost. It is not necessary for the bloom to be fully developed to be injured by extreme cold and rough weather. Very frequently the heart of the bloom where the stigma or embryo fruit is situated, is injured while in the bud state, and turns black and falls, as in your case. We can only surmise that your tree of Pitmaston Duchess is growing in a more exposed position than the others. It sometimes happens that the anthers on the flowers of the Pear are devoid of pollen and are barren in consequence. We presume your trees are not near enough to the sea to be affected by sprays of salt water.

Louise Bonne of Jersey Pear—young fruit diseased (F. W. E.).—The young fruit received is no doubt suffering from a bad attack of *Eladospodium dentriticum*, a fungus which grows on the leaves and young twigs as well as on the flowers of the Pear, preventing the fruit from properly setting and swelling, in fact, rendering it useless. The most destructive agent to use against all forms of fungoid diseases on fruit trees, in our experience, has been Bordeaux mixture, and as an application of this mixture seems to have been at least partially successful in protecting the leaves of your tree from the fungus this year, there is reasonable ground for hoping that, by perseverance in spraying the trees in winter, immunity in time may be had from its ravages. It is a singular, well known and interesting fact, and borne out by your experience, that wherever there happens to be a Louise Bonne Pear tree in a collection, this fungus will always attack this variety in preference to any other.

Vine leaves diseased (F. E. M.).—The disease from which the Vine leaves are suffering comes under the term of "scorching." It is caused by too moist and close an atmosphere during the night, this causing the extremely tender leaves at this time to be heavily coated with condensed moisture towards morning, and which is not sufficiently dispersed before the early sun causes a sudden and great rise of temperature, and which is accountable for the mischief. The more healthy and robust the Vines are, the more likely they are to suffer from this cause, and in our experience the Black Alicante variety is the most liable to suffer. The remedy lies in the admittance of a small chink of air (front and back) all night while the weather is favourable and growth is so active, at the same time applying a little extra warmth to the hot-water pipes to prevent the temperature falling too low, and also to prevent the deposit of so much moisture in the foliage by the freer circulation of air and the greater buoyancy of the atmosphere. At one time we suffered much from the same complaint, but since we have adopted the plan above recommended we have had no recurrence of the trouble.

A sailor's Vines (Lieutenant, R.N.).—If you will add perseverance and application to your evident enthusiasm for gardening, the small matters, which appear at first puzzling and difficult, will soon come easy to you. For ainery 30 feet long twelve canes or rods is the correct number to have. This will leave each rod a little less than 3 feet apart. The trellis to which the Vines are trained should be 2 feet from the glass, and should be fixed to the rafter under which each Vine is growing from the front of theinery to the back (not crossways). The trellis should consist of three wires arranged in a bracket and fastened to the rafter 9 inches apart, the brackets to be 3 feet asunder. The side shoots of this year's growth should be 15 inches apart on either side of the Vine, and each one should be stopped at the seventh leaf. The young lateral growths which will emerge from these shoots during the summer must be stopped at the third leaf. By attending to this work the growth of the Vine will be kept under control and prevent the overcrowding of leaves and branches. Whether the young shoots are showing bunches of Grapes or not, they must be retained if wanted to make up the shoots on either side to 15 inches apart. The shoot which has no fruit on this year will probably have a better bunch next year. The leaf sent is no doubt suffering from mildew. It is very small and poor; let us hope that by diligent attention to watering, ventilation and stopping the shoots a marked improvement will take place next year. If you write us in the autumn, quoting the page on which this reply appears,

we shall be glad to point out the best winter treatment to adopt. The best way of destroying the mildew is to sprinkle flowers of sulphur on the base of the walls and paths thickly on the afternoon of a warm day, closing theinery after syringing a little after 4 p.m. when the sun is shining, so that the temperature will rise to from 83° to 88°, leaving the house closed until the next morning. The Rose is evidently of the summer-flowering class, which bears only one crop. Send us a flower next year and we will tell you its name.

Apple trees with bulbous growth on trunk (Stroud).—1. These excrescences are termed "galls," and are common on many trees, including the Oak and the Apple. They are also found on the roots of some trees, such as the Oak, the Elm and Beech. They are produced by the deposit of the eggs of insects in the bark of the tree. When cut the gall is found to enclose a number of granules, each containing a minute larva, corresponding possibly to the dark spot you mention. Our experience of these galls is that they practically do no harm to the trees, and also that it is very doubtful if the seat of the mischief can be got at by cutting the gall, and thereby running a risk of causing a nasty wound in the bark of the tree without any compensating good, therefore we advise their being left alone. 2. There is no better way of killing ants than to watch carefully their return journey home in the evening and then to pour boiling water into their nests. 3. Your greatest care should be to help the young tree to make a free, healthy new growth this summer for the production of a good crop of fruit next year. This can best be done by allowing each new branch it makes to grow to its full length without stopping it, tying or nailing the branches to the wall as they grow, being particularly careful not to allow the new branches to overlap and become too crowded, cutting the weaker ones away when this is the case. Cover the roots with short decayed manure at the end of this month to the depth of 3 inches, and in dry weather give a soaking of clean water once a fortnight. In exceptionally severe frost in winter the roots and branches of the tree should be protected by mats, straw or Bracken Fern. 4. The book on "The Enemies of the Rose" may be had for 2s. 6d. from Mr. E. Mawley, Rose Bank, Berkhamsted, Herts.

ROSE GARDEN.

White flies upon Roses (J. H. M.).—The small yellowish white flies are known as thrips. They are very destructive to the foliage, sucking out the juices by means of a small proboscis. We recommend you to syringe the plants with paraffin emulsion or Quassia extract, either of which you can obtain from your seedsman. You will find that diligent spraying, preferably in the evening, will keep them in abeyance. For cloches try Messrs. Pilkington Brothers, Limited, Horse Shoe Wharf, 10, Upper Thames Street, London, E.C.

Mildred Grant as a pot Rose (W. Williams).—We agree with you that Mildred Grant is a fine pot Rose. We have had similar experience of this Rose as you relate, and although the quantity of blossoms are not numerous the quality is superb. To all who have a greenhouse we would recommend a trial of this splendid Rose. We have had similar experience with Bessie Brown. This grand Rose is almost a failure with some individuals. It grows freely enough outdoors, but the blossoms are too double to open freely. Under glass the flowers develop into superb specimens, and although given to hang its head this can be remedied by means of a neat stick.

Rose with injured buds (A. Reid).—The Rose blooms and buds you sent were not from Gloire de Dijon but William Allen Richardson, and it is quite a common occurrence to find the buds of this Rose malformed in various ways. We could detect no injury from any insect, and we think you will have little cause to complain when the buds are fully developed.

Growth of Crimson Rambler turning black (H. P. M.).—This is a fairly general occurrence with Crimson Rambler this year. It is the effect of the winter frost upon the old wood. We have some plants upon pillars in the open where all the old wood is quite black. At pruning time these were suffered to remain to see how they would behave. They have steadily got worse, and they will now be removed. The growths made last year are perfectly sound. You will do well to cut away the growths just below the blackened parts, and rely upon the young wood for your blossom. The hedge of the same Rose having escaped injury is probably owing to the more sheltered situation, or they may not have continued to grow so late in the year as the pergola plants, consequently the growths were more matured. These blackened growths have nothing to do with the tying, it is simply a matter of frost, and you must take a hint from this, and see that most if not all of the old wood is removed from this Rose as soon after flowering as practicable. It is a variety that needs to be annually

treated something like Raspberries, i.e., cut away all old wood and allow several canes per plant of the young wood to replace that removed.

MISCELLANEOUS.

Royal Caledonian Horticultural Society (Competitor).—No particulars have been received by us concerning the results of competitions arranged by the above society.

Diseased Mint (F. B.).—The fungus affecting your Mint is known as *Puccinia Menthae*, also known as Mint rust. It is, unfortunately, a somewhat common disease, and once it gets possession of a garden is difficult to eradicate. The Pansy family suffers from it often in the same way. You seem to have tried several remedies. We can but advise to run a hoe over the bed and cut off every piece hard to the ground, rake it off and burn it, then give the bed a good dusting with fresh slaked lime, and with it some flowers of sulphur as a possible remedy.

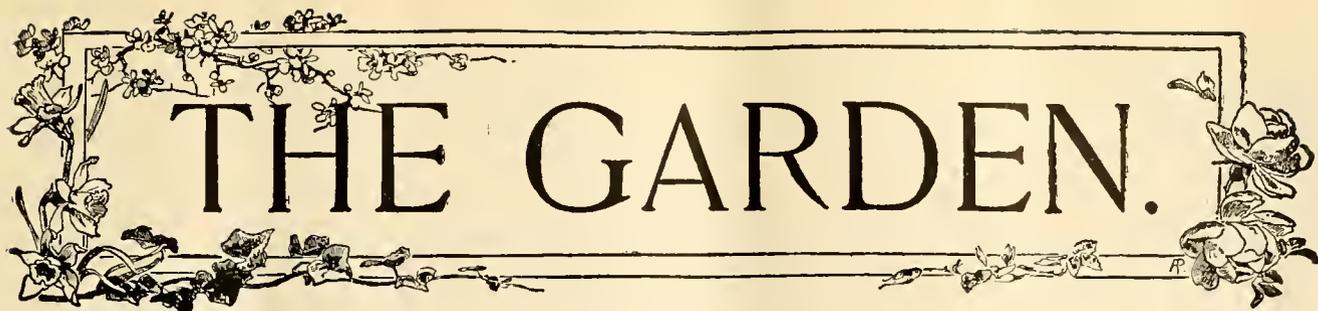
Using poultry manure (Somerset).—This manure may be used to fertilise soil for almost any kind of vegetable or flower, but it should not be applied in a fresh state. To have it in good condition mix the manure each time it is removed from the hen-house with fully its equal quantity of soil obtained from any source. If you can add to it a good quantity of soot to destroy the insect life commonly generated by poultry manure do so. Mix the whole and let it lie in a heap, adding more manure and soil from time to time and occasionally turning the whole heap. At the end of some three or four months the dressing may be applied to soil thinly and be well dug in before the ground is cropped. Add soot as freely as you well can.

Late cropping a garden (Wallflower).—Your best course to take with a garden that much needs renovation is to have the soil liberally manured and deeply dug, burying down all small weeds, but forking out all coarse ones. Then, so fast as you get ground thus prepared, you can crop it. Thus you may get sow some good 3-feet Pea quite thinly in drills 4 feet apart; also you can sow Scarlet Runner Beans. If you can get tall sticks, let the rows be 5 feet apart. If you have no sticks, then let the rows be 4 feet apart, so that as the plants grow they can be pinched to make them bushy. You can also sow in drills, 2 feet apart, dwarf French Beans, the seeds in the drills being 3 inches apart. It is too late to sow Parsnip seed, but you may sow in drills, 12 inches apart, Early Nantes Carrot, Snowball Turnip, tap-rooted Beet and Salsify. You had better get from your locality strong Onion plants to put out now, also Leeks in trenches and Celery plants for the same purpose. You may sow seed of Savoy and white Cabbage, and get plants also of Cauliflower, Cabbage, Brussels Sprouts and Kale to plant out, also white and purple sprouting Broccoli. It may not be too late to plant Potatoes, especially early ones such as Puritan or White Beauty. You will do well to read our calendar of garden operations, and a vegetable book such as the small one on "Vegetable Culture," price 1s., published by Macmillan, London, will greatly help you. Any bookseller can get it for you. As to purchasing plants, call on Mr. W. Baylor Hartland, 24, Patrick Street, Cork, and no doubt he will supply you with what you want.

House sewage for garden (A. H.).—In disposing of a considerable quantity of house sewage, largely liquid, it is unfortunate that yours is a stiff, retentive soil with a clay base, as such soil needs less artificial watering than does a porous soil on sand or gravel. While in ordinary light soils liquid sewage, which must be disposed of somehow, may be given to trees and shrubs during the winter, it may be harmful to do so in your case with such a water-holding soil. The cesspool liquid has the very slightest manurial value. In dry weather it may be given to anything growing, even to lawns, with usefulness, but such use in wet weather would be harmful. Even when used, it is evident from your statement that it is very hard and that the cesspool should have a small force-pump fixed to it, and a large tub close to it into which the liquid could be pumped each night after being emptied, so that by twenty-four hours' exposure to the air it may soften. With respect to the dry matter from the earth closet, dry soil, if obtainable, would be far better than coal ashes. Cannot you provide a cement enclosure or receptacle in a covered place, where that matter as it accumulates can be put and the real house slops added to it? If with that were added soot occasionally, the whole being now and then turned and mixed, you would have an excellent manure. Your cesspool badly needs an overflow drain, thus enabling the solid matter to settle for clearing out once a year, while the mere liquid could pass off to some distance and disperse itself in woods or where it can in time soak away. Of course, in the summer months every drop of liquid after exposure to the air as advised may be utilised on fruit trees, Roses, shrubs or borders.

Name of fruit.—W. G.—We regret that we cannot name the Apple sent; please send a better fruit when you gather them this year.

Names of plants.—Miss L. H.—*Osmanthus Aquifolium latifolium*.—*J. H. P., Ledbury*.—1, *Prunus Padus* (the Bird Cherry); 2, *Crataegus coccinea*.—*C. W., Worcester*.—1, *Pedicularis sylvatica*; 2, *Menyanthes trifoliata* (Bog Bean).—*W. D.*—*Lonicera alpigena*.—*J. Dixon*.—*Anchusa sempervirens*.—*W. F. Brooks*.—*Cheiranthus Cheiri* variety.—*Devon*.—*Solanum* species, cannot name without flowers; *Cymbidium lowianum*.—*L. B. W.*—1, *Saxifraga Hostii*; 2, *S. cespitosa*; 3, *S. trifurcata*; 4, *S. rotundifolia*.—*R. F. J.*—1, *Carex pendula*; 2, *Symphytum officinale* variety; 3, *Dicentra formosa*.—*J. Dalton*.—*Paeonia tenuifolia flore-plena*.—*Southport Botanic Gardens*.—1, *Beschermeria bracteata*; 2, *Nolina longifolia*.



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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

DRYING, MOUNTING AND PRESERVING PLANTS.

DURING the summer months many readers will be visiting remote country districts, famous gardens, or, perhaps, taking a trip abroad, and it frequently happens on such occasions that plants are secured which one may desire to press and preserve as dried specimens. Although many plants are comparatively simple to thus preserve, there are others that will give considerable trouble if not handled properly, but if the following hints are carefully observed these difficulties may readily be overcome. If one intends preserving plants in this way on an extensive scale a wire lattice work press should be obtained. This ought to consist of two frames measuring approximately 18 inches by 13 inches, these being held together by four wooden cross-bars (two at each end), which must project about 3 inches over each side of the frames. Through these projecting ends holes are bored so that a bolt and thumb-screw can be used at each end of the cross-bar for tightening the whole. A more simple plan is to use a good stout pair of leather straps for the purpose. In addition to the press a good supply of paper, folded to the size of the press, will also be needed. Although tough blotting paper is much the best for aquatic plants and those of a succulent nature, old newspapers will answer admirably for the majority of plants.

Having thus made the necessary preparations we must now see about securing the plants. The nature of these will, of course, depend upon the object for which they are intended. Where possible, a complete specimen should be preserved, i.e., one possessing roots, stems, leaves and flowers. It is always advisable, where possible, to secure a few extra flowers and fruits for drying. Of course, many plants will be too large for this, and in these instances portions of each organ should be used. Much trouble will be avoided if the plants reach the press in a fresh condition. Roots must be washed clean, and where thick stems, bulbs or roots exist these should be split lengthways, so as to considerably reduce their thickness.

In placing the specimens in the press first lay one of the wire frames flat on a table or the floor, then place several thick sheets of paper on it and then spread out the specimen so that every root, stem, flower and leaf is seen to advantage. Leaves and flowers are often troublesome, as the segments frequently have a tendency to curl up, but any trouble taken with them at the outset will be amply repaid later. A slip of

paper bearing the name of the plant and when and where collected should be placed with the specimen, which is then covered with several thicknesses of paper and another plant placed thereon, the process being repeated until all have been dealt with, when the press is strapped or screwed moderately tight and placed in a hot or sunny position. Where the plants are of a sticky nature they should be first placed between tissue paper, this being retained on the plants until they are quite dry. The press must not be filled too full at once, a total thickness of plants and paper of 5 inches being sufficient.

For the first few days the paper ought to be changed every day, using dry paper to replace those used, and taking care to bring those plants that are in the centre of the press one day to the outside the next, and *vice versa*, the object being to get them dry as quickly as possible. After, say, five days, it will suffice with most subjects if the papers are changed every other day.

When the plants are quite dry they may be either mounted at once or placed between dry sheets of newspaper, each with its label, and the papers tied into a bundle and stored in a dry place until mounting can be done. The regulation size of the papers on which plants are mounted is 10½ inches by 15½ inches, and it is wise to use white paper of stout texture. Where large plants have been dried it will, of course, be necessary to mount them in sections on a number of sheets. Although any good paste will do for mounting, gum arabic is the best, this being used in a rather thick condition. It should be applied to the whole of one side of the plant with a small brush, the specimen being then placed on the sheet of paper and firmly pressed down with a clean cloth. A reasonable amount of care will be needed in this operation, as many plants are very brittle when dried. Where possible one or more leaves and flowers should be mounted so as to show the under surface. Where thick stems and roots exist, it will be necessary to use narrow strips of thin but strong paper to keep them in place, these being secured by each end to the mounting sheet with the root or stem underneath.

A mistake that many novices make is to mount the plants as nearly as possible in the middle of the paper, with the result that when a number have been done the pile of papers and plants is much thicker in the middle, this causing the sheets to curve badly. This is easily avoided by placing some specimens towards the sides of the sheets. As each plant is mounted a neat label, bearing the name of the plant and any other desired particulars, should be pasted

on, and where extra flowers and fruits were secured, they should be placed in a small envelope, which must also be pasted to the sheet. These extra flowers and fruits are very useful for a botanical examination, if such should at any time be desired. The novice will be wise to experiment with a few common plants, both as regards drying and mounting, before dealing with any that are rare or valuable.

NEW PLANTS.

MILTONIA ST. ANDRE.

HERE we have a very large yet refined-looking flower. The pure white ground of the petals and labellum is marked with deep purple and brownish crimson, two large purple blotches being situated at the base of the petals, and a heavy striation of brownish purple at the base of the labellum. Shown by Baron Schröder, The Dell, Egham. First-class certificate.

ODONTOGLOSSUM QUEEN ALEXANDRA CRAWSHAYANA

This is a grand variety of a very good Orchid and is a great advance on the type plant. The broad sepals and petals are of a rich brown hue, delicately marked with bright yellow. The labellum is large, the creamy white ground colour being heavily marked with rather small bright purple blotches. The plant exhibited had one raceme composed of five fully-developed blooms. Shown by de B. Crawshay, Esq., Rosefield, Sevenoaks. First-class certificate.

ODONTOGLOSSUM PHOEBE THE DELL VARIETY.

This is one of the many good things that have been raised by Baron Schröder's clever gardener, Mr. H. Ballantine. The specimen exhibited was a grand one, the long arching raceme being composed of twelve fully-opened flowers. The white ground of these is heavily besprinkled on all the segments with good sized rosy purple blotches, with a deep rich yellow blotch at the base of the labellum. In addition to the handsome colour combination it has flowers of superb form and a plant of robust character. Shown by Baron Schröder, The Dell, Egham. First-class certificate.

MILTONIA BLEUANA STEVENSII.

This is a very beautiful variety of a well-known Orchid, and is particularly noticeable on account of the purity and refinement displayed in the flowers. The pure white ground colour of the large blooms has a blotch of deep rosy lilac placed at the base of each petal, the large labellum being heavily striated with dull brownish crimson. Shown by W. Thompson, Esq., Walton Grange, Stone. Award of merit.

ODONTOGLOSSUM GLORIOSUM DELICATULUM.

As indicated by its varietal name, this Orchid is a very delicate flowered member of a large and popular family. The rather small pale citron-coloured flowers are borne in profusion on a long, rather arching stem in the form of a compound raceme. The ground colour is blotched with faint green markings, and the segments are very much pointed and reflexed at the tips. Shown by Messrs. J. and A. A. McBean, Cooksbridge. Award of merit.

DEUTZIA WILSONII.

A new species from China with oppositely placed, lance-shaped leaves serrated at the margin. The pure white starry blossoms are freely borne on terminal and axillary clusters, several of the 4-foot-long shoots being simply crowded with buds yet to expand. The individual flowers are of large size. A valuable plant for the garden. Shown by Messrs. James Veitch and Sons, Limited, Chelsea. Award of merit.

PHILADELPHUS LEMOINEI ROSACE.

The pure white semi-double blossoms of this plant give one the impression at first sight of a

Rambler Rose, in which the inner petals are much narrower than the rest. Hence it is very distinct. Only small cut branches were shown, but these gave all the evidences of great freedom of flowering. Shown by Sir Trevor Lawrence, Dorking. Award of merit.

CARNATION SNOWBALL.

A full-petalled variety of good shape. It is not a pure white, and is inclined to a quite pale blush. The variety is said to belong to the tree section. Shown by Mr. H. Burnett, Guernsey. Award of merit.

PYRETHRUM LANGPORT CRIMSON.

A very handsome single-flowered variety of large size and of a velvet crimson-scarlet shade. Shown by Messrs. Kelway and Sons, Langport. Award of merit.

RHODOTHAMNUS KAMTSCHATICUS.

This is a dwarf-growing deciduous shrub with slightly hooded or cupped flowers, which rise but 3 inches above the rather woolly leaves. The whole plant as shown is not more than 6 inches high. Exhibited by Mr. G. Reuthe, Keston, Kent. Award of merit.

STOCK VEITCH'S MAGENTA STRAIN.

A very excellent strain of these popular flowering plants came from Messrs. R. Veitch and Son, Exeter, an award of merit being granted for the strain.

Iris carthusiana, *Zephyranthes aurea* and *Rosa Moyesii* each received an award of merit, and we shall describe and illustrate these in a future issue.

All the above were exhibited before the Royal Horticultural Society on the 9th inst., when the awards were made.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

June 24.—Gardeners' Royal Benevolent Institution Annual Dinner at the Hotel Metropole.

Royal Horticultural Society's committees at Windsor.—On Wednesday, the 10th inst., by gracious permission of His Majesty the King, the members of the Royal Horticultural Society, council and standing committees paid a visit to Windsor, when the first item on a most pleasant programme was a lunch, most hospitably provided by His Worship the Mayor of Windsor, E. Bampfylde, Esq., in the historic banqueting saloon of the Town Hall. About 100 guests were present, among whom were Sir Trevor Lawrence (president of the Royal Horticultural Society), the Rev. W. Wilks (the indefatigable secretary), Sir John T. Llewelyn, Bart., V.M.H., Sir Albert Rollit, Sir George Watt, the Rev. the Vicar of Windsor, Father Bampton, Canon Fowler, S. K. Tahourdin, the Hon. James Boscawen, Colonel Holford, Messrs. Harry J. Veitch, J. Gurney Fowler, A. Mackellar, A. T. Nutt, Spencer Pickering and A. W. Sutton. As the programme involved an inspection of the State apartments, as well as the beauties of Frogmore Gardens, brevity was a necessary characteristic of the speeches in connexion with the toasts of the King and Royal Family, proposed by the Mayor in happy terms, and followed by that of the guests from the same source and the health of the host who presided, proposed by Sir Trevor Lawrence and received with all honours. The party then proceeded to the castle and were escorted through the magnificent suites of State apartments, filled with priceless treasures of art of all branches and of all nations. The private gardens adjoining the castle were then inspected, and with the majestic castle as a background and bathed in the sunshine of an ideal summer day, their freshness, verdure and skilful design formed a delightful picture and example of high-class gardening. Mr. Mackellar, the head gardener,

then accompanied the visitors across the park to Frogmore Gardens, where the immense range of conservatories, all filled with the choicest and most up-to-date examples of horticulture, were fully appreciated by those best able to judge, and the skill of the gardener was recognised throughout. Melons, Vines, Strawberries, Grapes, &c., claimed the attention of the fruit committee, the Orchid houses that of the many specialists in that particular line and the general floral judges had an even wider field in the infinite variety and charm of non-orchidaceous blooms, while the tree-loving arboriculturist was often absorbed in admiration of the noble specimens of Oak and Beech and the conifer tribe, the latter including one of the most magnificent *Salisburias* in existence.

Franco-British Exhibition.—The flower show in connexion with the Franco-British Exhibition, to be held from the 24th to the 26th inst., will be arranged in the spacious Palace of Music, in the Court of Honour, the most prominent and central position in the exhibition. No. 3 entrance, Wood Lane, will be the most convenient way of approach for exhibitors' vans, &c.

Rhododendrons at Regent's Park.—Londoners and visitors to the Metropolis are much indebted to Messrs. John Waterer and Sons, Limited, Bagshot, Surrey, for the splendid exhibition of Rhododendrons held annually by the firm in the Royal Botanic Gardens, Regent's Park. This year the show opened on the 10th inst., and, as usual, the interior of the huge tent, covering nearly half an acre, was a mass of well-arranged flowers and foliage. About 2,000 plants were so disposed as to form natural borders and beds, the somewhat subdued light in the tent showing the delicate colours of the flowers to perfection. As usual, Pink Pearl was in grand condition, and Gomer Waterer, white, slightly blushed, and Mrs. E. C. Stirling, delicate blush pink with no markings in the throat, were other favourites. Cynthia, pale shell pink; Michael Waterer, scarlet-crimson; Kate Waterer, rosy crimson, large yellow blotch; Lady Clementina Walsh, white, edged pink; and Mrs. William Agnew, pale rose, yellow blotch, were other specially noticeable varieties. The interest of the exhibition was greatly added to by the display of Japanese pigmy trees and herbaceous plants and flowers made by Messrs. Barr and Sons, Covent Garden. The Japanese trees were especially attractive, those that were growing several kinds in the crevices of one piece of rock attracting much attention.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Worms in lawns.—Having been asked by several readers of THE GARDEN the best way to get rid of worms in lawns, and seeing that Mr. Horace J. Wright on page 232 recommends lime water to reduce them, I may say I have tried lime water and also several other cures, but at last I have got a real effective one in Sutton's worm destroyer. It is the simplest, safest and most efficient cure you can find. There is not the slightest danger of harming the turf, no matter how you use it, and that is a great point in its favour, as there are certain cures which are no doubt harmful to the worms, but at the same time damage the turf. If Messrs. Sutton's directions are carried out there is not the slightest fear of damage, and it greatly enriches the turf and improves the grass generally. Apart from the improvement in the condition of the lawn, the question of labour also comes into consideration, as a lawn freed from worms does not require to be brushed or rolled daily, and, what is more, you will not be troubled with worms in the lawn for the next twelve to eighteen months.—THOMAS BERRIDGE, *The Kew Club, Mortlake Road, Kew, Surrey.*

A new Guelder Rose (*Viburnum Carlesii*).—This *Viburnum*, illustrated in THE GARDEN for May 16, is undoubtedly entitled to rank as a most desirable acquisition among flowering shrubs, and one, I think, soon destined to become popular. As a supplement to the note in THE GARDEN, a slight sketch of its history may be of interest. It was first brought under my notice by a characteristic woodcut in THE GARDEN as long ago as September 6, 1902. The illustration was prepared from a photograph sent from Yokohama, the plant having been previously obtained from Corea. At that time the plant, I believe, was not in this country, but in the autumn of 1905 it was announced for distribution by the well-known firm of MM. Lemoine et Fils of Nancy. In their catalogue it was stated that they had obtained the entire stock from M. Louis Boehmer of Yokohama. At Kew in 1906 it flowered, as far as I know, for the first time, while last year it attracted a good deal of attention. In the early part of May of this year I was fortunate enough to find it in full flower, despite the wintry weather experienced just before. The delicious fragrance of the blossoms is a very notable feature. It is pleasing to record that this delightful shrub is perfectly hardy, for the specimens that were shown on April 14 had been expanded under glass. So highly do I value this *Viburnum* that I have but little doubt that the award of merit bestowed upon it will, before many years are past, be increased to a first-class certificate.—H. P.

Tulps at Colchester.—I was very interested in your article on the above (page 283), and would be glad if you would kindly allow me to make a few remarks upon it. It appears to me to be hardly correct to differentiate *gesneriana* varieties from Cottage Tulips. They are Cottage Tulips if any are; and it would be better to describe them as a section of the Cottage Tulips just as we do the *billietiana* group, instead of something different to them. It is certainly, too, not quite correct to say that they have "sharply pointed" flowers. This description would be more appropriate for *Didieri* and *maculata* forms. *Farncombe Sanders* is not a dark crimson; from the description it would appear that it is somewhat darker than *King Harold*, whereas it is of the brightest rosy red colour imaginable, and whenever I have picked out the brightest spot of colour in a Tulip field I have invariably found it to be *Farncombe Sanders*. It is a grand Tulip. The article mentions *Zulu* as a very fine deep purple-black Darwin. It is. It deserves every bit of praise it gets. One thing I might mention about it is that it remains in good condition a very long time, and seems better able than most to withstand the vagaries of our springs. I am rather at a loss to understand why *Primrose Beauty* was singled out for its chameleon-like propensity. It does become much paler as it grows older; but the change is not so marked as in *Vitellina*, and nothing to be compared with the remarkable change that turns *Isabella* from a primrose, edged and flushed with pink, into an almost entire deep rose, nor to the alteration of Messrs. Wallace and Co.'s new May-flowering *Lord Curzon* (syn *Singularis* of Hogg and Robertson) from rather an ugly reddish purple-edged bloom into a handsome self. This change, which is quite common in the late-flowering sorts, is one of the factors which make the Tulip so interesting.—JOSEPH JACOB.

A SIMPLE WAY OF SHOWING PANSIES.

THE accompanying illustration depicts a simple yet effective method of exhibiting Pansies or Violas, as adopted by Mr. Howard Crane at the recent Temple Show. As may be seen, the blooms were lightly arranged in flat bowls, with a few sprays of the common Hawthorn for garnishing, one variety only being included in each bowl.

THE FRUIT GARDEN.

THE CULTIVATION OF THE STRAWBERRY.

UNDER good cultivation the Strawberry seldom fails to give a satisfactory crop. The early flowers are sometimes damaged by late frosts; but it is unusual—in the south, at least—for the entire crop to be damaged in this way. Perhaps it is the most certain of all our hardy fruits, and as it is so greatly valued, both for dessert during summer and as a preserve during winter, it is one of the most important crops in all good gardens, both large and small. To

FORM A NEW PLANTATION

a sufficient number of rooted runners must be secured as early in the season as it is possible; these with good treatment will give a good return the first season after planting. Do not propagate from old, worn-out stock. If there are no young, healthy plants from which runners may be taken, it is far better to purchase the

should be taken in hand as soon as the ground is vacant, so that the young plants may be placed in their permanent quarters before becoming stunted in the pots. Light soils should be firmly trodden down before planting is commenced. A loose soil is not suitable for the Strawberry, and after the plants become established it is advisable to tread around the plants occasionally; this is especially necessary in winter after a spell of frosty weather. In the absence of rain, water the plants carefully to settle the soil about their roots.

THE DISTANCE OF PLANTING

varies considerably, but when determining this point the relative vigour of the varieties and also the nature of the ground must be considered. Varieties of moderate growth, such as *Fillbasket*, may be planted in rows 2 feet apart and 18 inches in the rows. More vigorous sorts, such as *Royal Sovereign*, require more room, and should be allowed from 2½ feet to 3 feet between the rows. Some growers with a good supply of plants at command set them out 1 foot apart each way, and after the first crop is gathered every alternate row is removed and every alternate plant in the rows which remain. This leaves the plants



A SIMPLE WAY OF SHOWING PANSIES.

young plants from some reliable firm who make a speciality of these fruits. Providing some good varieties are at hand from which a number of runners are required to form a new plantation, the work of preparing these should be undertaken as soon as they are far enough advanced to be handled. This can be determined by examining the runners, and when the emission of roots is noticed they are in a suitable condition for layering. A number of 2-inch pots should be prepared by filling them with good turfy loam. This should be pressed rather firm in the pots, the runner placed in position and secured either by a neat peg or a stone, and the pot plunged for half its depth into the soil. By adopting this latter plan the plants are less liable to become disturbed, and it is also an aid in maintaining the soil in a moist condition, which is most essential for the quick establishment of the plants.

THOROUGH PREPARATION OF THE LAND

is most important, and by planting early excellent results are secured the first season. The ground which has been cleared of an early crop of vegetables, such as Potatoes or Peas, is suitable for planting with Strawberries after it has been trenched and heavily manured. This work

2 feet apart each way. The ground should then be lightly forked over and a heavy application of manure afforded. The

MANAGEMENT OF AN ESTABLISHED PLANTATION

consists of three important items, viz., keeping down weeds, applying abundance of water during dry weather, and removing all runners which are not required for propagation as fast as they appear. Early in May place some litter around the plants; this is chiefly for the purpose of keeping the crop clean, but is also to some extent a protection against frost. After the crop is gathered cut off all the old large leaves.

Although in some cases Strawberry plantations remain profitable for six or seven years it is seldom advisable to allow them to remain more than three years. It is a good plan to make a new plantation annually, destroying the old and exhausted bed. There must be no stint of manure in successful Strawberry cultivation. A heavy mulch should be afforded the beds annually in January or February, and on light hungry soils this may be followed by heavy applications of diluted farmyard manure water during the spring.

Munden Gardens, Walsford.

C. RUSE.

(To be continued.)

THE KITCHEN GARDEN

THE FRENCH SYSTEM OF GROWING VEGETABLES IN GLASS FRAMES AND UNDER BELL-GLASSES.

(Continued from page 288.)

FOR commencing operations under this system the season begins in September, and, as Lettuces are probably the most important and lucrative crop, we will first speak of them. The area of land to be planted must be determined by the space the grower has at his disposal, bearing in mind to reserve enough land for successional crops from winter to spring. The border, if possible, should be formed with an inclination to the sun by giving a border, say, 6 feet wide a rise of 18 inches at the back. Six feet is a convenient width for one of these borders. This will afford room for four cloches in a row across the border, with a little room to spare, and the same with the 5 feet long frames. Sow early in the month across the border at one end one row of Cos and the same of Cabbage Lettuce, drawing a drill for this purpose rather more than half an inch deep and sowing thinly, covering the seed with fine soil. The quantity of seed to sow at one time will depend on the extent of the ground to be planted. These two rows (6 feet long) will provide plants to furnish a large-sized border.

As soon as the young plants are large enough to handle they must be planted in the rich border prepared for them. If they are permitted to remain too long in the seed row in an overcrowded condition, the seedlings will soon become permanently damaged. Before beginning to plant mark four spaces across the border from top to bottom, within 2 inches of one another, by pressing one of the cloches into the soil and forming a ring. Into each of these spaces plant five Cabbage Lettuces, one in the centre and four round the side, not too near the glass, or, if Cos Lettuces are preferred, three only of these should be planted. If it is intended to use frames instead of cloches to cover the Lettuces later on, the same distance between the plants must be allowed as in the cloches. This crop planted thus early may mature without the aid of glass, but the probabilities are that the weather towards the end of October will be so broken and cold as to necessitate the use of the cloches. After the end of this month no ventilation of the cloches will be necessary, as the slight heat of the sun shining on the glass will help to develop the full growth of the Lettuce and to greatly improve its quality. The more forward of these Lettuces will be fit to cut early in November and the later-developed ones will keep the supply going well on to Christmas. As the season advances and hard frost may be expected, provision must be made for protecting the crop; this is secured first by pressing the cloches rather deeper and firmly into the ground and by placing dry leaves or litter between them half the way up, pressing it down rather firmly and by covering with mats at night and taking off in the day.

This first crop is a valuable one and has been grown with little expense, and should be made a large one by those who grow for market. A similar sowing to the above may be made three weeks later, and if the weather remains open and favourable will be found forward enough to follow the last crop, with the help of glass placed over them about the end of October and well protected from cold, as described for the other. It may be found that this crop is too late for maturing in the open ground in the winter, in which case it must remain dormant until spring, protecting with a thin layer of leaves or straw in very hard weather and placing the cloches or frames over at the end of March or as soon as the plants have started well into growth.

OWEN THOMAS.

(To be continued.)

RIVIERA NOTES.

THE TREE PEONY is a shrub that should be in every garden on this coast where it can be given good soil and a fair amount of shade and moisture, though it is most enduring of drought when fully established. In England no variety seems better and more free than the bright red *Reine Elisabeth*. Here it is not so, as it becomes very lanky in habit, and its heavy flowers weigh down the branches. Had I to plant only one variety it should be the handsome growing *fragrans maxima*, with splendid salmon rose double blossoms. Next to it comes the equally vigorous *Souvenir de Ducher*, a rich plum-purple of enormous size. *Stuart Low* is the most gorgeous flame colour, neat and vigorous in growth, and decidedly the best in this colouring: an universal favourite. Of double whites there are: *Koch's Weisse*, very neat and free in growth and fine double white blooms; *Bijou de Chusan*, a weakly doer, but with fairy-like petals that are deeply lacinated. It opens pure white, but is pale pink in the bud, so it is worth a place near the front. *Caroline de Italie* is a grand flesh white, and *Souvenir de Maria Leguenot*, a cream white of remarkable beauty, which is rather new as yet, and so is not very well known. *Louise Marechelet*, *Comtesse de Tuder* and *Ville de Versailles* are all magnificent in flower and in shades of pink and rose; but their habit is tall and straggling in comparison to those I have mentioned.

The Japanese single and semi-double varieties are neat in habit and most surprising in their new shades of colour. They are grafted on a stock that suckers very badly, and, unless carefully watched in spring, the stock shoots deprive the graft of nourishment and kill the variety; but *Milliet* and other French growers are now grafting them on the European stock, and so avoid this serious drawback. It is much to be hoped that European equivalents of their Japanese names may be published, for the vigour and beauty of their varieties must be seen to be fully appreciated, and the foliage is as remarkable as the flowers. One deep blood red flower has rich bronze leaves. One copper red flower has apple green leaves of the most startling shade. There is a grand double pure white flower with bronze leaves. There is a creamy white flower that resembles the white *Lotus*, but is even more beautiful. There are two ethereal blush pinks, one that has apple green leaves and the other deep bronzy red leaves; indeed, the number of varieties is so bewildering that it needs someone to classify them so that buyers may know what they are getting; but one thing is certain that if anybody plants them in suitable positions in this climate they will give each year a series of surprises and gain notes of admiration from all.

THE FINE LATE-BLOOMING WISTARIAS (*W. multijuga alba* and *W. brachybotrys*) are so distinct and so beautiful that they should both be more frequently planted. *W. multijuga alba* is the most elegant of all the Wistarias; it flowers with its fresh green leaves, and its long and most delicate sprays of fragrant white flowers hang in such profusion that the bright green leaves do not hide them unduly. I could not counsel anyone planting this in England, for the least moisture spoils the delicate flowers directly. Here in most seasons it succeeds admirably. *W. brachybotrys* is a very vigorous and handsome late-flowering *Wistaria* that somehow is little known or grown; but it is in my estimation the most desirable of all, as it flowers later than the others and so escapes the storms of early spring. Its habit is quite distinct, as it flowers on the whole length of the previous year's shoots even more freely than on the older spurs. Its colouring is decidedly deeper and bluer than *W. chinensis*, and the quantity and compactness of the flower-spikes makes it far more effective in the mass than that old favourite. This should certainly be given a good trial in English gardens, where it should

flower with the common *False Acacia* or *Robinia*, and would make a pretty effect when trained up its trunk and allowed to grow among the branches. Another distinct feature about this *Wistaria* is that it seeds freely and the seedlings have occasionally flowered the third year from sowing, so that in this climate it is easily propagated.

A NEW BOUQUAINVILLEA (*Mand Chettleburgh*) has been one of this year's surprises, and is a plant to take notice of for the future. It is a very vigorous form, larger and brighter in colour than *B. Sanderae*, and, like it, a good winter bloomer, decidedly a hardier plant than *B. spectabilis*, which it should replace in all but the most sheltered nooks. Its blooming period is so long that I am myself pulling up a large specimen of *B. spectabilis*, which flowers so much later and so frequently suffers from a few cold nights that I think this new variety is more desirable. The colouring of the bracts is almost identical with *B. spectabilis*, and their size is quite a quarter larger.

PTERONIA INCANA.—The "Queen's Bush," as it is called by those who know how delighted Queen Victoria was with the fruity fragrance of this pretty Cape shrub, is in great beauty this year. It loves a dry, sunny bank and where its slender, hoary branches and stiff little tufts of fragrant yellow flowers may bask in the sun and fill the air with fragrance during April and the first part of May. It requires propagating by layers, as cuttings root with difficulty; but otherwise its cultivation is of the easiest, and once established on a dry bank will take care of itself for many years.

Nice.

EDWARD H. WOODALL.

INSECT PESTS.

ANTS IN GARDENS.

THE following is one of several letters we have recently received from readers: "Our garden, made last year, is infested with ants. They eat the fruit, and have now taken to eating the Rose buds. What can I do to prevent this? I have tried *Quassia* with no effect, and have got pots filled with grass under the trees as advised in "Gardening Made Easy"; but meanwhile they are feasting on my Roses."

One can hardly help placing these insects among those that are injurious in gardens, though the amount of mischief they do is very small, and it is only when they make their nests at the roots of a plant that any harm is done, and that only indirectly, as they do not feed on the roots; but these are injured by not being in such close contact with the soil as they should be. It will nearly always be found that if an ant's nest be made among the roots of any plant the roots are attacked by one of the root-feeding aphides. This position has been selected in order that they may the more easily feed on the sweet secretions of these insects. When this is the case the plant should be taken up, its roots carefully washed and freed from the aphides, and then replanted elsewhere. The ant's nest may then be destroyed by pouring boiling water, diluted carbolic acid or paraffin oil into it. If it be undesirable to remove the plant, take a good-sized garden pot, stop up the hole at the bottom, half fill it with leaves and place it bottom upwards on the ground close to the plant, then water the plant copiously every day, so as to keep the soil thoroughly saturated. The ants will soon begin to move their nest to the shelter of the pot, which in about a fortnight's time may be taken carefully away, when it will be found to contain the nest. Ants are often of service by showing when a plant is attacked by aphides or scale insects, for if several ants are found on a plant it is almost certain that it is infested by one of these insects.

THE FLOWER GARDEN.

HISTORY OF THE PRIMROSE, COWSLIP AND AURICULA.

(Continued from page 278.)

THE POLYANTHUS.

THE Polyanthus, as already stated, was the latest section of popular Primulae to be evolved. Hill and Hanbury, late eighteenth century authors, attributed its source to Turkey, no doubt being misled by Parkinson (*Theatrum Botanicum*), Ray and other botanists, who refer to it as a kind of Primrose with trusses, and as having been received by Tradescant from the Levant. Botanists long contended whether the Polyanthus was a distinct species or merely a variety. Darwin thought it to be a variety of the Cowslip, but two centuries ago it was unmistakably associated with the Oxlip. In present-day collections there are to be found two distinct types, one carrying flowers characteristic of the Primrose, the other of the Cowslip or Oxlip, only much larger. Not improbably the "red Cowslip" or Oxlip of Rea was a Polyanthus. It was "of several sorts, all of them bearing many flowers on one stalk, in fashion like those of the field, but of several red colours, some deeper, others lighter, some bigger like Oxlips, others smaller like Cowslips." "The variable scarlet" had an orange centre, the edges being cinnamon; others were shades of scarlet. Ray, too, describes the flowers as having yellow orange centres with outsides coloured. They carried many flowers umbel fashion on the same stalk, were scented like the wild Primrose, and frequently Hose-in-hose varieties were to be found among them. In Bradley's "New



DAFFODILS IN THE GRASS IN MR. KINGSMILL'S GARDEN. (See page 302.)

Improvements" the earliest description of the plant as Polyanthus is found. They are there stated to be Cowslip Primroses, single and double, Hose-in-hose, Pantaloons, Feathers, single red, white, purple, yellow, sometimes violet, frequently variegated, the latter expression referring almost invariably to edged or laced flowers.

Pantaloons had "green leaves about their blossoms which are sometimes variegated with the same colour of the Flowers they encompass." "Feathers seem to have been at first design'd by Nature for hose-in-hose, and have their Blossoms so split and curl'd that they something resemble Bunches of Feathers." Another writer remarks of these: "Others have the Husk that the Flower

grows in split in Pieces, and finely colour'd and the Flowers split likewise, which are call'd Shags, Feathers and scatter'd Polyanthis." These must have become extinct shortly after this period, and have never been revived.

The Polyanthus became very popular, and to some extent superseded the Auricula in gardens, rain, as one writer remarks, not affecting the flowers injuriously as it did the Auricula. Not much can be said of the plant until towards the end of the eighteenth century, but it may be noted that Hill gives a good description of it (in 1757) in "Eden" and an accompanying figure of an edged flower. James Maddock, the fore-runner of the modern florist, records in "The Florists' Directory" (1792) that the Polyanthus had been greatly improved "within the last twenty or thirty years; and the sorts known fifty years ago are not now in cultivation." The pip of a laced variety illustrated the forward stage the Polyanthus had reached.

The varieties of laced Polyanthus either deteriorate or die out sooner than the Auricula, for not one of the sorts named in Hogg's catalogues of 1822 is in existence at the present day. In lists of 1833, however, George 4th and Bang Europe appear, and a few years later Cheshire Favourite and Formosa. The last-named was so profitable to its raiser that, according to Mrs. Loudon, he was able to build a cottage from the results of its sale. By 1860 the cultivation of the Polyanthus had reached a low ebb, and about 1870 and a little later letters appeared in the *Florist and Pomologist* deploring the loss of the old varieties, while a little previously correspondents were advised by another journal to try Lancashire as the only likely part in England where they could be procured. At the same time, here and there laced Polyanthuses from seeds continued to be grown, but their unfortunate habit of dying in the course of a year or two, especially if the soil was dry, no doubt hastened their almost total extinction. The introduction of the Fancy or Bunch Polyanthus caused the old sorts to be little missed, and it is questionable if to-day a collection can be found in Great Britain.

I have already mentioned whence the word "truss" as applied to the Auricula is derived, and it may be interesting to state that the word "pip," which, as far as I have been able to discover, was first used by Hill in 1757 to distinguish the individual flowers of a Polyanthus, in course of time came to include not only the tube, but every part of the flower. "Lace" originally is the same as "ribbon," the ribbons by which brides were led to church in olden times being called "bride-laces" R. P. BROTHERSTON.



ODONTIODA CHARLESWORTHII, A RARE BI-GENERIC HYBRID EXHIBITED AT THE TEMPLE SHOW. (Natural size.)

ODONTIODA CHARLESWORTHII

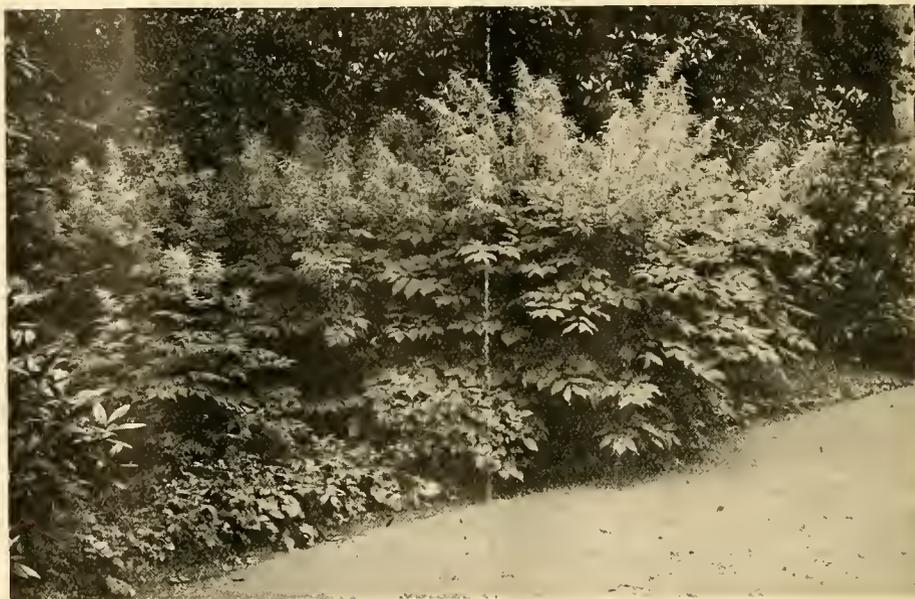
THIS beautiful little Orchid was a centre of attraction during the first and second days of the recent Temple show. It is the result of a cross between *Cochlioda noetzliana* and *Odontoglossum harrayanum*. The flowers, of which our illustration is natural size, are of a rich glowing scarlet colour with a rich yellow blotch at the base of the labellum. It certainly ranks as the brightest coloured of all this ever-increasing bi-generic race, and added to its unique colouring it has a habit that is exceedingly graceful.

It was exhibited by Messrs. Charlesworth and Co., Bradford, and received the high award of a first-class certificate from the Orchid committee.

A GARDEN IN HARROW WEALD.

IT is many years since we visited Mr. Kingsmill's pretty garden, The Holt, Harrow Weald, and it was with delight we renewed our acquaintance with the many interesting trees, shrubs and hardy flowers with which it is planted. The view from the house is one of the most beautiful in Middlesex, and the whole setting to the garden is as perfect a framework as the most critical could desire. A sweep of turf throws into relief the masses of flowers, the purple of *Aubrietia*, the white of *Arabis*, and the many shades which the hundred rare plants contribute to the gaiety of the garden. Around are Scots Pine, Beech, and woodland, and the wonderful view across to Hampstead Heath from the flower-stained terrace.

The garden has been a labour of love for many years, and Mr. Kingsmill has gathered round him a collection of great rarity and charm, many of the plants the gifts of friends to remind him of the pleasant hours spent in the gardens of those who rejoice in the brotherhood of gardeners. There is nothing formal in the setting out, as the illustrations from photographs taken by Mr. Clarence Elliott suggest, the clouds of colour from the *Roses Euphrosyne*, *Thalia* and *Aglaia* being typical of the effects that may be seen here. It is impossible to mention all the plants that Mr. Kingsmill grows, but that they are of more than ordinary interest our readers are aware from the instructive notes this keen gardener occasionally sends to this paper. *Papaver cambricum* was one of the brightest plants in flower early in June, and other things we noticed of rare interest were *Rosa pimpinellifolia*, *R. altaica*, *R. Brunonis* (running over a Holly bush) and many other rare species and hybrids. *Tropæolum speciosum* or the Flame Nasturtium is a wonderful success; it is a weed, if one can call so glorious a flower by so harsh a name. The writer wishes he could coax this somewhat fractious plant into behaving respectably; a cool root-run and shade for the young growths is what it most desires, and then it will grow with great vigour, sending its thin, graceful, light green shoots into a thicket of stems and leaves.



A BOLD CLUMP OF *SPIRÆA ARUNCUS* IN MR. KINGSMILL'S GARDEN

A flower pointed out to us as one of the bluest of the blue is *Cynoglossum nervosum*, but it is rarely seen in gardens. *Ranunculus Lingua* or the Great Spearwort is a noble flower, which we first remember in Mr. William Robinson's garden, Gravetye, Sussex. It was by the lakeside, and the writer remembers the charming coloured plate of it drawn by the late Mr. H. G. Moon. It is one of the finest of all the Buttercups, and the plant to group by the waterside. The stem is strong and straight, and holds flowers of the deepest golden yellow. Mr. Kingsmill's group is one of the most vigorous we have seen of recent years. *Thalictrum glaucum*, the Bronze-leaf (*Rodgersia podophyllum*) and *Achillea Kelleri* we also noticed in luxuriant health. Near the house there is a collection of plants, a friendship garden, and these will give a new interest to the sur-

roundings, when they become more established. Any description of The Holt would be incomplete without mentioning the beautiful trees and shrubs, flowering and evergreen, which throw into relief the masses of flowers set out in the most charmingly informal way. *Spiræa Aruncus* is represented in one of the illustrations, and there are such interesting trees as the cut-leaved Beech, the purple-leaved Nut, *Pyrus himalaica*, one of the noblest and most silvery of its family—a tree that though rare will, we hope, become common—*Olearia macrodonta*, crimson Maples, *Rubus nutkanus*, *Ceanothus azureus* and *Solanum crispum*.

COLOURED PLATE. PLATE 1350.

A BEAUTIFUL WINTER-FLOWERING PLANT.

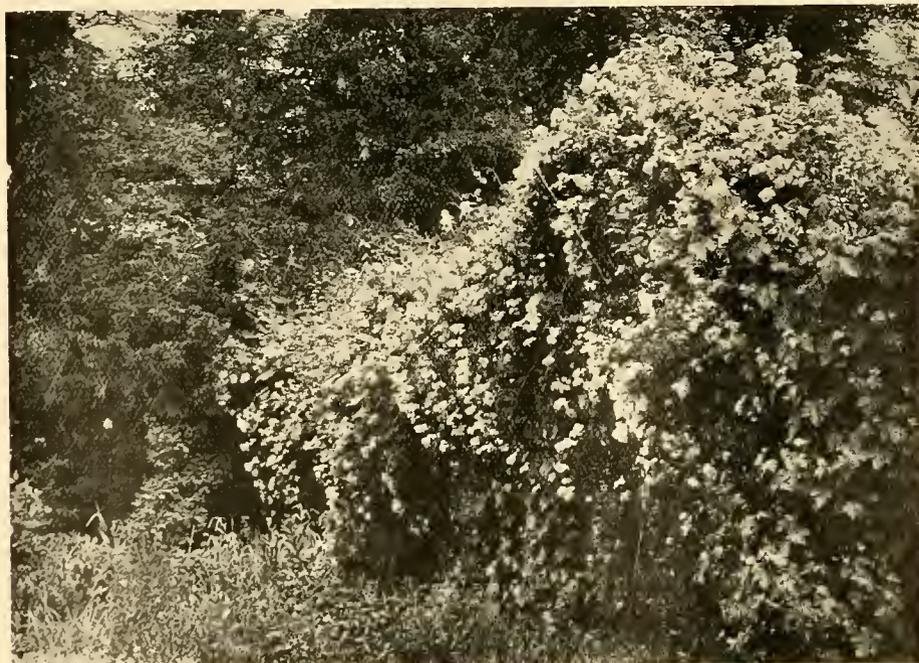
(*MONTANOA BIPINNATIFIDA*.)

AT the meeting of the Royal Horticultural Society held on December 10 last year an award of merit was given to this *Montanoa*, and judging by the remarks overheard at the time, it was practically unknown to the numerous visitors. A group of plants was contributed by Messrs. Paul of Cheshunt, the specimens composing it being from about 2 feet to 5 feet in height. It forms naturally a stout, erect stem of a half-shrubby character, clothed with large, oppositely arranged, much divided leaves, the divisions in their turn being deeply cut, hence the specific name of *bipinnatifida*. It is a member of the huge Composite family, and the ray florets which go to form a bloom of about 3 inches in diameter were in the specimens pure white, although "The Dictionary of Gardening" states they are yellow.

Montanoa bipinnatifida is a native of Mexico, and has been long known in this country, but chiefly regarded as a foliage rather than a flowering plant. Under the name of *Polymnia grandis* it is often used for sub-tropical bedding. Other names for it are *Montanoa heracleifolia* and *Polymnia heracleifolia*.

This *Montanoa* is readily propagated by cuttings or seeds, and the plants may during the summer months be placed out of doors. Care must be taken to remove them under glass before the nights get too cold.

H. P.



ROSES *EUPHROSYPNE*, *THALIA* AND *AGLAIA* IN MR. KINGSMILL'S GARDEN.

THE ROSE GARDEN.

NEW ROSES FOR BUDDING.

WHERE a few hundred stocks can be set apart for new Roses there can be no more interesting spot than this plot when these plants are producing their fine maiden blooms. One may see at a glance what a Rose is worth from these budded plants, and it would serve a useful purpose because we could then plant largely such sorts as prove themselves worthy of such increase. New Roses will never lose their charm if they are genuinely distinct, and the variety in the Rose seems to be infinite. Although pink novelties predominate, who can say that they do not want both Lady Ashtown and Joseph Lowe? They are both described as pink, yet how distinct! It is the same with many other novelties. We must not too hastily say they are too much like other Roses until we have grown them side by side. It is worth anyone's trouble to plant 200 or 300 half standard Briars every year and bud them with novelties. These can be purchased in pots with nice buds upon them, or if procured in good time and given a shift into a larger pot quite a lot of buds will be available by the end of July if the plants are put into strong heat and kept well syringed and watered.

Taking the matter up from an exhibitor's point of view, I would advise all to bud some of each of the following dozen sorts, which I believe to be the best novelties obtainable: Lady Helen Vincent, Lyon Rose, Mme. Constant Soupert, William Shean, Albatross, Queen of Spain, Beatrice, Elaine, Mrs. Myles Kennedy, Renée Wilmart-Urban, Harry Kirk and Frau Ernst Borsig. Then, if there are still some stocks to spare, bud them with all or some of the following: Betty, Joseph Lowe, Frau Alfred Mauthner, Grossherzogin Alexandra, Dorothy Page Roberts, Konigin Wilhelmina, Lady Falmouth, Lohengrin, Laurent Carle, La Vendomoise, Lucien de Lemos, Mme. Maurice de Luze, Mrs. Stewart Clark, Marichu Zayas, Marquise de Sinety, Melanie Soupert, Jenny Gillemot, Mrs. Aaron Ward, Celia, Dora, Mrs. Peter Blair, Nadia, Rosomane E. P. Roussel, Simone Beauniez, Souvenir de F. Vercelline, Souvenir of Stella Gray and Yvonne Vacherot. This seems to be a large collection to add, but if space is available they are all worthy of being grown, and most, if not all, are of first-rate constitution.

We are not only improving in this matter, but in size and substance also, although it must be admitted many novelties are too thin. But who would refuse to grow Betty or Irish Elegance because of their want of fulness? We obtain delightful blendings of colour, which should always be remembered when we feel tempted to blame raisers for introducing these thin Rosea. Happily, we do not all regard Roses from an exhibitor's standpoint. P.

ROSE LADY ROBERTS EARLY IN THE YEAR.

If one would see this fine Rose in its best form it should be grown under glass. Under artificial

conditions the flowers are a glorious colour, a rich reddish apricot, absolutely distinct from all other sorts. It is an example of the value of sports, for it is well known to have originated from Anna Olivier, and both in its excellent growth, beautiful shining foliage and fine long buds it resembles this variety.

Under some conditions outdoors the flowers of Lady Roberts become so pale that one cannot distinguish them from those of Anna Olivier, but this seldom happens upon old plants. I have not grown Lady Roberts in a cool house, but I used to have wonderful blooms of Anna Olivier upon standard plants in a cold house. The petals developed to an enormous size, and I see no reason why Lady Roberts should not be equally and even more beautiful under similar conditions. Mme. Hoste is another fine Rose, which some think is a sport of Anna Olivier. It is wonderfully like it in growth and foliage and excellent for forcing, one of the best of the pale cream

as the Rose is not specially full this arrangement is seen to perfection. Then how can one describe the colour? The inner tint is of a rich and deep shell pink, almost carmine, with a tendency to orange, a colour that reminds one of Mme. Jules Grolez. Then, to add to its beauty, there is a distinct whitish edging to the centre petals. All Rose growers must be indebted to Herr Lambert for this flower. P.

THE GREENHOUSE.

A FRAGRANT GREENHOUSE SHRUB.

(MICHELIA FUSCATA.)

ALTHOUGH the flowers of *Michelia fuscata* are not so showy as are those of many of the species of *Magnolia*, to which it is related, they compensate for lack of size and colour by the delightfully refreshing perfume which they exhale when the sun shines on them. An old garden plant, *Michelia fuscata* was figured in the *Botanical Magazine* just over 100 years ago under the name of *Magnolia*, and from the text accompanying the plate we learn that it was "introduced to this country from China by Mr. Evans of the East India House, in whose valuable collection it first bloomed in 1802."

The name *Michelia* is in commemoration of the Italian botanist Micheli, and the specific name *fuscata* is descriptive of the brown-coloured buds and young wood, which are clothed with a soft pubescence, and the reddish brown flowers. The essential points which distinguish *Michelia* from *Magnolia* are the position of the flowers (which, instead of being on the ends of the branches, are in the axils of the leaves) and the number of seeds (of which there are two in each carpel in *Magnolia* and more than two in *Michelia*).

About a dozen species are known, and these are inhabitants of South and South-western Asia, including the islands of the Indian Archipelago; but *M. fuscata* is the only one in general cultivation. In the Southern States of North America, where it is perfectly hardy and frequently cultivated, it is known as the "Banana shrub" on account of its Banana-like perfume. It requires the protection of a cool greenhouse in this country, and succeeds best when planted in a bed of good loamy soil, in which position it will attain a height of from 5 feet to 8 feet. Cuttings of the ripened wood root readily if inserted in sandy soil and placed in bottom-heat.

Michelia fuscata is an evergreen shrub clothed with ovate, lance-shaped leaves 4 inches to 6 inches long, strongly veined on the under surface and alternately arranged on the branches. The flowers are produced from early spring till September. They are about 1 inch to 1½ inches in diameter, composed of six perianth pieces of a reddish brown colour, edged with carmine and cream-coloured on the back. In the absence of light they remain in a half-opened condition until they fall, but on a bright day they expand fully, forming star-shaped rosettes with a central tuft of stamens and a pointed pistil, and fill the whole house with their fragrance, which suggests Bananas according to some opinions, and according to others Pine-apples. H. SPOONER.



ENTRANCE TO THE PERGOLA IN MR. KINGSMILL'S GARDEN.

section. It is rather remarkable that many of our best forcing Roses are sports. There is the Bride and Bridesmaid, both sports of Catherine Mermet; Sunset, a sport of Perle des Jardins; Sunrise, a sport of Sunset; and Souvenir de S. A. Prince or The Queen, a sport of Souvenir d'un Ami. The question that arises in my mind was whether the high temperature induced a sporting propensity. I have seen Liberty give off blooms almost the colour of Mme. Abel Chatenay. All who force Roses in quantity should keep a sharp look-out for sports. P.

ROSE FRAU ERNST BORSIG.

(HYBRID TEA.)

THIS is one of the good things among the novelties of last year, and will become a favourite perhaps as much for its exquisite form as for the clearness and loveliness of its colouring. The form is so beautifully regular and of that circular arrangement of the petals that we admire so much, and

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE FLOWER GARDEN.—My herbaceous Phloxes are beginning to feel the effects of the warm weather. I am therefore lightly forking over the soil between the plants, applying copious applications of water from time to time and giving them a good watering with manure water once a week. Old plants I am mulching with a good dressing of well-decayed manure. In districts where dry weather is severely felt it is a good plan to give similar attention to Hollyhocks, Pansies, Roses and Pinks. I am now making a sowing of Delphiniums, Aquilegias, Sweet Williams, Hollyhocks, Pansies, Anemone Coronaria and other equally interesting hardy flowers. The seeds should be sown in light, sandy soil, well prepared, and in cold frames. Sow thinly, keep the soil moist, and after the seeds have germinated admit plenty of air, shading from bright sunshine for a time. Ultimately remove the frame lights altogether. I am now lifting plants of London Pride and Creeping Jenny that have made such an excellent edging just lately: the plants are being divided and bare places filled in.

Chrysanthemums.—These plants need special attention at the present time. If large blooms are desired in November and December next the plants must be well grown and be flowered in pots measuring either 9 inches or 10 inches across. The plants, if well rooted in their smaller pots, should be finally potted into those of the measurement above described. Use good soil of a lasting character and carry out the work as fully described and illustrated in these pages a week or two ago.

The Vegetable Garden.—In showery weather I make it a rule at this season to plant winter greens. April-sown seeds of Broccoli, Borecole, Savoys, Cauliflowers and Brussels Sprouts are now in splendid condition for plants. Plant in

rows. Those for Brussels Sprouts should be 3 feet asunder and the plants 30 inches apart: Cauliflowers and Broccoli may be planted in rows about 30 inches asunder and 2 feet apart in the rows. The dwarf Savoys should be planted in rows 15 inches asunder and about 1 foot apart, the larger varieties in rows 2 feet asunder and 18 inches apart in the rows. Borecole does very well in rows 2½ feet asunder and the plants 2 feet apart. Continue to thin vegetable crops. Carrots, Parsnips, Turnips, Onions and Beet need continually looking after in this respect. The frequent use of the hoe between growing crops is highly beneficial at this season. Anticipate the attacks of the Celery fly by dusting the leaves with soot, moistened by the aid of a syringe or water-can with a fine rose placed thereon, and subsequently applying the soot. If this be done in the cool of the evening it is better and more efficacious.

The Fruit Garden.—For providing a fresh plantation of Strawberries layer runners without delay. Fill small pots with good soil, placing a runner with the base of the plant on the surface, maintaining this in position by placing a small stone on the runner itself. Keep the soil moist and useful plants will very soon be ready. To make good Raspberry canes for another season I find it a good plan to retain about five or six stout shoots on each plant. It may be that only four good strong shoots are available; in any case remove the weaklings. Plums, I fear, will not need much thinning this season, but these fruits and others, such as Apples and Pears, should be thinned while it is possible to obtain the benefit of this timely work. Peaches that are ripening their fruit should be kept rather drier at the roots or the flavour will suffer in consequence. Continue to syringe fruit trees growing against walls to prevent attacks of aphides and red spider. Grapes should be thinned out at this period, and take care to ventilate the house in the early morning, otherwise trouble will most assuredly arise.

D. B. C.

BRIAR SUCKERS UPON ROSE PLANTS.

Most of the cultivated Roses now grown are budded upon the root-stem of seedling Briars, and they have the appearance of being on their own roots. The term "own root" means that the plant was produced from a cutting, and, of course, in such cases all growths are of the Rose proper, consequently there can be no wild suckers, which are only produced upon budded plants. The amateur is often at a loss to distinguish these suckers, and we have prepared an illustration of a Briar sucker and also a typical one of a garden Rose, which we trust will assist those who are in doubt about the matter. These Briar suckers are readily distinguished from Tea, Hybrid Tea and Hybrid Perpetual Roses by their colour, which is usually of a dull grey-green, both in the stem and leaf, and, moreover, the leaflets are produced in sevens, whereas the tribes named have rarely more than five on a stalk.

There is such a vast difference in colour and in size of leaf between the Briar sucker and the Rose proper that there should never be any doubt as to which to cut away. When they first appear the Briar sucker is a little more difficult to discern; but a careful observation and comparing the young growths to those in the hedges will soon make the beginner proficient in their detection, and we need hardly say that they should be removed as quickly as possible by the aid of a sharp spud, which any ironmonger will



A ROSE SUCKER: ONLY FIVE LEAFLETS TO EACH LEAF AND THE GROWTH MORE REFINED.

supply. Standard Roses frequently produce a lot of Briar suckers from beneath the ground, and these should always be removed early.

We recommend own-root plants, especially of the Rambler Roses, as they produce in many cases seven leaves and are not so readily distinguished from the Briar sucker if the plants are budded on Briars. There is another stock often used for Roses called the Manetti stock. Although readily observed by the practised eye, it is often overlooked by the beginner. These suckers are usually quite upright, the foliage a grass green and the stems a ruby red colour, with very numerous reddish thorns. If suckers of Briar or Manetti are not carefully suppressed when first seen they become an incessant source of trouble, as they will send out another growth below where cut off. Some may wonder how it is these suckers appear from the root, but the Briar is so full of vitality that if pieces of the roots were cut up quite small each one would make an attempt to grow and in time make a Briar plant.

HOW TO GROW FINE SALADS IN SUMMER.

THE hotter the weather the greater is the demand for fresh crisp salads, and it is at such a time that many beginners find a difficulty in growing high-class produce. The great heat of the sun quickly dries up the soil, and if young plants are allowed to lack moisture they become tough, drawn, or otherwise unfit for use in the salad bowl. Given proper treatment, the hot sunshine will greatly facilitate the growth of the plants.

Position.—Of course in spring-time the warmest and most sheltered border is generally selected for the raising of the earliest crops of salad plants; but in summer-time there is no



A BRIAR SUCKER: NOTE THE COARSE GROWTH AND THE SEVEN LEAFLETS ON EACH LEAF.

special reason for making use of such borders. Any open quarter in the garden will do if the soil is of fairly good quality. It is necessary to have deeply-dug soil, well tilled and enriched with rotted manure.

Lettuces.—The seeds of these plants are cheap and plentiful, and, consequently, they are generally sown too thickly, the only good seedlings being those growing near the edge of the bed. Sow the seeds very thinly, keep the resultant plants well watered and duly transplant them in a well prepared border. Do not pull up the young plants forcibly, but while the soil is moist raise them with the aid of the garden fork and plant them with a trowel, thus preserving all the roots intact. If well watered the young plants will quickly form big specimens, and if neatly tied up while the leaves are dry the inner portion of each plant will be well blanched.

Radishes.—Tough roots are useless. If they are a long time in growing or receive any check the roots will be tough and stringy. Sow the seeds thinly broadcast, and if the soil is very dry thoroughly saturate it prior to the sowing of the seeds. Surface sprinklings while the plants are growing are useless. Moisten the soil through deeper than the roots.

Mustard and Cress.—The seeds must not be buried with soil, but sown thickly on the surface of a rich loam and pressed into the surface slightly with a wet piece of board. Raise these plants on a border facing the north. It will be necessary to maintain the soil in a moist condition, and this can best be done when the position is such that the sun does not shine upon it during the middle of the day. Sow seeds every week and thus keep up a regular supply of young plants, as the latter should be cut while they are in their seed leaves.

Endive.—The young plants may be raised in the same way as Lettuces are, and should be similarly treated while growing to a fit condition for use, but the blanching is done by the laying on of clean boards, tiles or slates; and before frosts come a number of plants should be lifted and replanted fairly close together in a frame. A temporary frame will answer the purpose.

Cucumbers.—The shoots of frame and ridge Cucumbers should be trained about 1 foot apart over the surface of the bed. By pinching the shoots at one joint beyond the one from which fruits are growing, new shoots will grow, and in due course bear fruits, so that a regular supply of tender Cucumbers will be available. AVON.



1.—A PLUM TREE BEFORE SUMMER PRUNING. NOTE THE MASS OF GROWTHS.

SUMMER PRUNING FRUIT TREES AND BUSHES.

THERE are few operations in connexion with the cultivation of hardy fruit trees and bushes capable of giving such good returns for the labour expended as a judicious course of summer pruning, yet this is a task that is often left entirely undone by the beginner. The main object of this work is to admit an abundance of light and a free circulation of air to all parts of the tree, so that those shoots which remain shall derive the full benefit of these important factors and thus become well ripened for the following year.

A vigorous fruit tree or bush will always produce far more shoots than it is desirable to retain, and the removal of these during the summer months cannot fail to benefit the tree. The exact time at which summer pruning should be carried out is a debatable point among cultivators, but generally speaking early in July is as good a time as any. If the work is done earlier it frequently happens that secondary growths are made, and these in turn have to be removed, but if the operation is delayed until the time stated above there is not much likelihood of this happening.

Summer pruning must be divided into two distinct styles, according to the trees or bushes to be dealt with. Thus in most Apples, Pears, desert Cherries and Red and White Currants, where the fruits are borne principally on lateral spurs, a shortening back of the lateral growths will be the chief needs; but with Gooseberries and Plums, where the fruit is produced on both spurs and young wood, a thinning and shortening back of laterals will be necessary. In the case of the Morello Cherry, where the fruits are borne only on wood of the previous year's growth, a thinning only is required. This summer pruning is not intended as an actual substitute for, but rather an aid to, the winter pruning, although in the case of stone fruits many growers now make it almost entirely take the place of the winter pruning as gumming is supposed to be thereby avoided. If we examine a vigorous young Apple or Pear tree or Red or White Currant bush early

in July we shall find that lateral shoots have been evolved in profusion from the main growths, and it is to these laterals that we must look for our future spurs. In the ordinary way these shoots, except in the case of those needed to fill up gaps, would be spurred back at the winter pruning to within two or three buds of their bases, but with summer pruning it is not advisable to shorten them severely. The best course is to cut them so that about four or five leaves and buds remain, then at the winter pruning they can be cut to the proper distance. If they were pruned to within two buds or leaves of the main branch, secondary growths would be more likely to come. Of course, there will be many laterals that are weak and misplaced, and these may, with advantage, be entirely removed. The leading shoot of each main branch is left



2.—THE SAME TREE AFTER SUMMER PRUNING. NOTE THAT MOST OF THE LATERAL SHOOTS HAVE BEEN CUT TO WITHIN THREE OR FOUR LEAVES OF THEIR BASES AND THAT THE LEADERS ARE LEFT ENTIRE.

untouched, as also are any side or lateral growths that are needed to fill up any blank spaces in the tree or bush.

In the case of Plums and Gooseberries, *i.e.*, where the latter are grown for fruiting chiefly on the young wood, it will be, as previously stated, be necessary to somewhat vary the above methods. In the first place, all weak and obviously misplaced growths should be entirely removed, then those that are intended to eventually form spurs are cut back as advised for Apples and Pears, taking care to leave a sufficient number of well-placed and sturdy young growths to furnish the bush or tree, leaving each so that it stands well apart from its neighbour. Here, again, the leading shoot of each main branch should be left untouched by the knife.

In the case of the Morello Cherry no spurring back is done, the operation consisting in removing entirely all weak and misplaced shoots, and also thinning out the others so that sufficient only are left to well furnish the tree with fruiting wood another season.

For fruit trees that are growing on walls this summer pruning is especially valuable; it is no uncommon thing to see these trees a mass of growth in the summer months, with the result that they do not become properly ripened and a poor crop of fruit only is secured the following year. Fig. 1 depicts a Plum tree on a fence before it has been summer pruned, and Fig. 2 shows the results of summer pruning. It should be borne in mind that all flowers for next spring are formed in the buds this autumn, and that the two chief factors in their formation are sun and a free circulation of air. In the event of secondary growths being pushed from the laterals these should be pinched back to within two leaves of their bases as soon as possible.

SOWING ANNUALS.

MANY amateurs and gardeners wisely retain a little seed of annuals in the packets when making the main sowing in the spring, and if these seeds are sown at once a fine autumn display of blooms will result, providing the weather is at all favourable in the meantime. Practically all hardy annuals may be thus treated, and even Asters and Stocks have given good results when sown as late as this. It will be necessary to keep the soil well watered after sowing and while the plants are small, as it is most desirable that the plants be kept growing right on without a check. Thin the seedlings early so that they are able to branch to their fullest extent.

THE TOWN GARDEN.

SHIRLEY POPPIES.—There are few more delightful annuals for the town garden than these charming Poppies, provided that the plants are thinned out sufficiently to allow them to branch and develop their full powers of flower production. Although the individual blooms are extremely fugacious, the succession is persistent as long as the fading flowers are promptly removed. For use as cut flowers the buds should be secured prior to expansion, as they open freely in water and last a fair time. When the plants begin to show signs of passing their best, the soil should be heavily watered with clear water and an hour or two subsequently with weak liquid manure; as soon afterwards as the surface has become dry enough it should be pricked over with a small handfork or a pointed stick. It must not be assumed that this will completely restore the plants, but it is usually effectual in ensuring a further supply of blooms. If it is desired to have Shirley Poppies late in the summer, seeds sown now and the seedlings thinned early and widely enough apart will provide splendid results. The soil must be deeply worked and moderately firm, but it should not be made excessively rich by the addition of natural manure.

THE ROSE MAGGOT.—Notwithstanding the fact that Roses are acknowledged to be among the most unsatisfactory of all plants for the town garden, it is more than probable that every amateur essayer their culture at some time or another, and he is seldom disheartened by one or two failures. One thing is quite certain, viz., that those who have any Roses in their gardens have also a supply of the wretched Rose maggot. As far as its own comfort is concerned this pest is quite sensible, for it ensconces itself in such a position in the growths that it is impossible for the grower to apply any powder or liquid dressing which will destroy it without at the same time killing the shoot itself. It is, therefore, imperative that hand-picking shall be had recourse to, and while it is tedious, it affords some substantial pleasure as one firmly pinches each enemy to death between the thumb and finger. Personally, I do not remember to have seen the infestation more serious than it is this season, and where many plants are grown it means hours of unwearying effort to keep it in subjection. The searcher should examine the point of every growth, and in the youngest unfolded leaves he will find the maggot carefully encoased. To leave one means ruination to the blooms; to leave many means to spoil the first display of flowers from the plants for the season.

WATERING AND HOEING.—These operations are of the utmost importance in the town garden, and they should always go hand in hand. As far as the former is concerned the rule should be a thorough soaking when water is wanted and no more until the soil again approaches dryness, while the latter should invariably follow as soon subsequently as the surface has become dry enough for the blade of the tool to work freely. In addition to the watering there should be frequent sprinklings, preferably through a hose, with a view to the removal of the dust, which accumulates upon the plants so quickly during dry weather; this may be done each evening or every alternate evening, according to convenience and necessity.

PEGGING DOWN.—In the case of many plants, of which one may mention Phlox Drummondii as a typical example, it is possible to much improve the effect of the display by pegging the shoots down to the surface of the soil. Some care is, of course, required in carrying out the operation or the growths may be broken off; but if this is given the results will be so much better that the time expended will be most generously repaid. The pegs utilised for layering Carnations answer admirably for the present purpose, but any form can be employed at the will of the cultivator.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FLOWERING SHRUBS.

THOSE shrubs that have flowered should now have the seed-vessels picked off and any pruning done that may be required. Any plants that have become overgrown or untidy should be cut back into shape. Prunus of various types, Berberis, Azalea, Ceanothus and many others are all the better for being thinned at this season. All seed-pods ought to be gathered from Rhododendrons of the earlier varieties, taking care not to injure the young growths. The flowers of many of these are now over, and this operation should be effected at once. Other shrubs may be assisted with a mulching of manure; this will assist the development of the flowers and keep the roots cool and in good condition.

Roses should be mulched and manured, and when extra-sized blooms are required the flower-buds must be thinned. Keep them free from aphid and maggot.

ALPINE GARDEN.

*Saxifrage*s and many other things should now be propagated by cuttings and seed collected and sown as soon as ready. Keep plants that are located in dry positions supplied with moisture, and see that shade-loving plants get the required amount in the middle of the day when the sun is at its hottest. Branches of Rhododendrons, common Laurel or Erica will answer very well for this purpose. Ramondias have been most charming this season; they do not last nearly so long if exposed to much sunshine. Continue to prick out seedlings into small pots and pans, and keep them shaded. Many seedlings are lost through inattention to this seemingly small detail.

FRUITS UNDER GLASS.

Vinerias.—Give an abundance of air to houses containing ripe fruit and allow the shoots to grow more freely. Pinching need only be done to keep them free of the roof. Keep the atmosphere of the house cool and dry, but still maintain the moisture right in both inside and outside borders, or red spider may make its appearance. Late Grapes should be looked over often and have the laterals pinched, and if any berries have been left that are not required take them out carefully with Grape scissors. Feed the roots at every other watering. Muscats must be kept warm (70°) now at night, so as to correspond with the high day temperatures; it is well to look over these carefully and frequently, stopping and tying down the laterals.

KITCHEN GARDEN.

Owing to the late heavy rains and tropical heat vegetables and weeds have grown at a great rate, and what appeared to be a late season has now so far become quite normal. Prick out all Broccolis, Cauliflowers and Brassicas generally for the autumn and winter. Sow Carrots, Lettuces and Turnips frequently. Thin out all crops, allowing room for proper development. Earth up all Potatoes at the earliest moment, and keep all plants and walks free from weeds.

SWEET PEAS.

The early crops of these are bearing very fine flowers. Stake with tall sticks all the later sowings. I am afraid we are getting too many varieties. As soon as one class of anything in the garden becomes popular it is overdone, and I have noticed that some varieties vary in different soils very considerably. Whites, reds and blues are the best for general purposes. The Countess Spencer varieties seem to take precedence with some. John Ingman, Dorothy

Eckford, King Edward and Queen Alexandra are most beautiful sorts. A good sowing now will produce fine late blooms.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

DENDROBIUMS.—The majority of those with the habit of *D. Phalenopsis*, *D. bigibbum* and others in this section are now starting into growth, and the present will be a good time to repot or rebasket any that may require it, or to surface-dress any that are in fair condition at the roots and do not need disturbing. Although greatly alike, species and varieties in this class need a little different treatment; but I find the greater number like small perforated pans or shallow baskets better than any other receptacle.

Indian Azaleas.—Plants that were forced in the early part of the year, and have since been in heat to encourage them to make growth, should now be removed to a cooler house, where they will remain until growth hardens and the flower-buds are well set. Syringe frequently to keep red spider in check and to also help the flower-buds to develop steadily. Reduce somewhat the supply of stimulants to the roots.

KITCHEN GARDEN.

Asparagus.—Where sowings of this to supply plants for making new beds or for forcing were made early in April, attention must now be turned to thinning out the seedlings. This must be done with a free hand, as if left thickly the growth will be weakly and a difficulty will be experienced when the plants are lifted for transplanting. A soaking with farmyard liquid manure once or twice during the summer will be of great benefit to the plants. Beds which were made last year for forcing in the coming year will now be advanced in growth, and liberal feeding must be resorted to in order to secure extra strong crowns for early work. Weeds must be kept closely down, either by means of hand weeding or by the application of moderate dressings of salt two or three times during the summer.

HARDY FRUIT.

Gooseberries.—It is but very seldom that there is any attempt made to grow a distinct lot of bushes to provide green fruit for cooking, and where such bushes are not grown it is the custom to go over all the bushes to find fruits for this purpose. This is not a bad system, provided the finest fruits are left for ripening, but the general practice is to pick the largest and leave only the smaller fruits to remain for dessert, the consequence being that there is a want of size about the ripe fruits that reduces them below mediocrity and brings the Gooseberry into bad repute as a dessert fruit.

FLOWER GARDEN.

Double Wallflowers.—Now is the best time for putting in cuttings of the double Wallflower. They strike freely under handlights in light, sandy soil in a shady situation. When rooted plant them out into beds. They will grow and bloom in very barren soil, but to have a long continuance of bloom they must have rich, dry ground.

Nemophila insignis.—Where a splendid mass of blue is the object for a couple of months in autumn, this is the most effective thing. It quite eclipses *Lobelia speciosa* seen at a distance, and in cold localities it is, perhaps, superior to the *Lobelia*, especially when the latter is from seed. To have a fine bed of it in August and September, sow the seed now, and when well up thin out to 6 inches. I find this interesting subject does best in a dry soil.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

THE EDITOR'S TABLE.

DOUBLE-FLOWERED WELSH POPPIES FROM ARMAGH.

Mr. J. McWalters, The Mall, Armagh, sends a beautiful contribution of these charming flowers, the bright orange and yellow blooms providing excellent material for vases. Mr. McWalters' strain is one of the best we have ever seen. He writes as follows: "The double and semi-double *Meconopsis cambrica* seedlings are now making a great show in the garden here; hundreds of plants combine to make a brilliant stretch of colour, and groups and single plants set in pretty foliage are effective in the rock garden. As for cut flowers, I send a few for your table."

TREE PÆONIES FROM FRANT.

Mrs. C. Malden, Henley House, Frant, sends excellent blooms of the Tree Pæony with the following note: "I have seen several times lately suggestions that those who grow the Tree Pæony well might, with benefit to others, give an account of how the plants are situated and treated. I have a very large bush standing about 10 feet to 11 feet high; it has at the time of writing seventy-eight blooms or buds on it. It would have been a truly splendid sight if a thunderstorm had not shattered the flowers. I send you two to judge of the size. The border is a long-shaped oval. Tall bushes or almost trees grow at the back and shelter the Pæony from the south. I enclose a little of the soil from the border. It has only been manured once in the last twelve years, but it is dug over twice a year. All my Pæonies are growing on the north side of borders, and get the early morning sun. I believe the best place for them is where they are kept cool in the spring, so that they do not begin their growth too soon. Also, I do not believe in too much manure, as it makes the growth rank and soft."

ROSES FROM THE ISLE OF WIGHT.

Lady Thorneycroft sends from Steyne, Bembridge, a box of beautiful Roses, representing several varieties we treasure in our gardens, and the following interesting note: "I am sending you a few Roses which it may interest you to see. Mme. Alfred Carrière has been in full bloom for more than a week, and I could pick hundreds of Roses of this variety, which here comes into bloom early and goes on blooming into November, and as a climbing decorative fragrant Rose is difficult to beat. Mme. Lambard on a stone wall had some blooms fully out in Easter week and is now in great beauty, the pink Roses looking particularly pretty on the greyish white stone wall. A bed of General Shablikine has been covered with Roses. The first are nearly over, but the plants are covered with buds, and we find that this Rose is a particularly good autumn one here. We have many other Roses coming into bloom well, and already with one or two blooms fully out, but Mme. Alfred Carrière, Mme. Lambard and General Shablikine are the three varieties which are already giving us a profusion of flowers."

PYRETHRUMS FROM LANGPORT.

Messrs. Kelway and Sons, Langport, Somerset, send us some beautiful blooms of their famous Pyrethrums, which remind us of the value of these plants both for border and house decoration, the richly coloured and beautifully shaped flowers with their long stems rendering them most suitable subjects for many purposes. Of single varieties we were particularly pleased with the beautiful crimson-scarlet variety called Langport Scarlet. General Buller and General French are similar in colour and make excellent companions. Roseen is an exquisitely-shaped flower, the colour

of which reminds us of Rose La France, and Snow White is a pure white variety. Seduction is a huge double flower of beautiful rich crimson, and Lord Rosebery and Captain Mars are similar in colour. Empress Queen and Lady Kildare are blush pink sorts, and excellent whites are represented by Aphrodite and Souce. Among those of a deep rose colour we were particularly pleased with Millie Fowler and Evelyn.

HARDY BROOMS FROM NEWRY.

Mr. T. Smith, Daisy Hill Nursery, Newry, sends us some of the newer forms of the hardy Brooms of which he makes a speciality. The examples sent show a marked advance on the older sorts and ably demonstrate the value of these hardy shrubs in the flower garden. Firefly and Mayfly are two that somewhat resemble the old *andreaeus*, but they are decided improvements, both in the size of the flowers and clearness and brightness of the colouring. The wings of the first named are rich mahogany crimson, and in Mayfly this colouring is much paler. In each instance it contrasts well with the rich yellow colour of the other parts of the flower. Daisy Hill has pale cream flowers with rosy crimson wings; Newry Seedling is canary yellow with rosy crimson wings; Moonlight has large flowers of pale golden hue and Butterfly has blooms of the richest gold colour slightly suffused with crimson on the wings.

PINKS AND FLOWERING SHRUBS FROM LEONARDSLEE.

Mr. W. A. Cook, gardener to Sir Edmund G. Loder, Bart., Leonardslee, Horsham, Sussex, sends us a fine collection of Pinks (*Dianthus*) and a few of the choicer flowering shrubs. The Pinks comprise *Dianthus fimbriatus*, *D. cæsius*, *D. anernensis*, *D. alpestris*, *D. multiflorus roseus*, *D. alpinus*, *D. arenarius* and *D. deltoides*. Among the shrubs were sprays of the Bottle-brush Tree (*Metrosideros floribunda* or *Callistemon salignus*), gathered from a tree measuring 6 feet in diameter and 10 feet high; *Rhododendron ferrugineum album*, *R. hirsutum album* and *Deutzia discolor grandiflora*, all gathered from plants in the open on the 10th inst. All these were in fine condition, thus testifying to the generous and judicious treatment accorded them by Mr. Cook.

RARE SHRUBS FROM CHELSEA.

Messrs. James Veitch and Sons, Limited, Chelsea, send us a collection of the rarer flowering shrubs, many of which are most beautiful additions to existing varieties. Perhaps the most interesting of all were three varieties of Lemoine's Mook Orange (*Philadelphus Lemoinei*), named respectively Avalanche, with beautiful large white flowers; purpleo-maculatus, white, purple centre; and Manteau de Hermine, a very refined-looking flower. *Rubus nuthkanus*, *Deutzia discolor major*, the lovely-scented Rose Mrs. Anthony Waterer, a reputed cross between General Jacqueminot and rugosa; *Weigela* or *Diervilla* Abel Carrière; the Moonlight Broom, *Cytisus pallidus* or *C. scoparius sulphureus*; *Ceanothus thyrsiflorus*, *Rhododendron fragrans*, *R. govenianum*, *Viburnum plicatum*, *Lonicera Maackii* and *Polygonum baldschuanicum* were a few others among the many beautiful things sent, all of which are worthy of a place in English gardens.

EARLY SWEET PEAS.

Mr. R. C. Notcutt, The Nursery, Woodbridge, sends excellent flowers of Sweet Peas with the following note: "I beg to enclose you some blooms of Sweet Peas grown from seed inoculated with nitro-bacterine, which have been three months and five days from the date of sowing; they are far ahead in this soil of varieties which have not been inoculated. I thought it might interest you to see them."

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Lily of the Valley (K.).—The soil of the bed in which these things are planted must be lacking moisture or the requisite supplies of food for the plants. Partial shade, too, is important. If the leaf growth is small, or thin and poor looking, apply liquid manure freely and note the results. You do not say if the bed is an old one or not. It is possible, too, that overcrowding is also a cause of the present condition of the plants, but you give us no clue to guide us in helping you.

Water beetles in Lily pond (K.).

The introduction of newts into your Lily pond will probably have the effect of clearing it of the water beetles which are destroying your Nymphæas. The manure you speak of ought not to have an injurious effect on the newts. It is difficult to suggest any other method of clearing the pond, for if anything very strong is applied it will most likely kill the Lilies as well as the beetles. Newts, during the greater part of their lives, live on insect life and are only vegetarian during the very earliest stages of their existence.

Plants for rockery (A. K.).—You cannot do better than add some of the following plants, all of which are suitable for the purpose: *Campanula muralis*, *C. garganica*, *C. g. alba*, *C. pumila* and its variety *alba*. *C. turbinata* and *C. G. F. Wilson*; of dwarf Phloxes, any of the *P. subulata* forms, such as *frondosa*, *atropurpurea*, *The Bride*, *Nelsoni* and *Vivid*; *Saxifraga oppositifolia*, *S. o. major*, *S. granulata plena*, *S. sancta* and *S. apiculata*, *Lithospermum prostratum*, *Cyclamen repandum*, *Acantholimon glumaceum*, *Crucianella stylosa*, *Iberis* and many more. A capital way of reducing the slugs is by paying night visits, and with the aid of a pointed stick and a small bucket of salt and water a large number might be disposed of. If you can possibly apply salt to them at sight, nothing is more fruitful of good results. Kilogrub, if used according to the directions, is also excellent.

TREES AND SHRUBS.

Making a tennis lawn (A. E. B. F.).

Presumably you purpose allowing the 30 yards' length of lawn on the upper side of the whole to remain. In making the remainder, roughly 100 yards, which now slopes gently to an ultimate depth of from 6 feet to 9 feet, we assume you wish to make of that length two other levels, thus necessitating steps from higher levels to those below. Your course will be in the autumn to remove all the turf, having it properly cut and rolled, from the 50 yards which immediately adjoin the upper untouched and level portion. Then you will need a long, perfectly level edged piece of wood, 2 inches wide and 4 inches to 6 inches deep. This may be some 10 feet to 12 feet long, and the upper and lower edges should be absolutely even. Place that lengthwise on the ground the way of the slope, and on its centre an ordinary spirit level; lift the lower end of the wood on bricks or blocks till the spirit stands quite in the centre of the level. By that means you would be able to note exactly how many feet at the lower end of the 50 yards the soil would need raising to make the required level.

If, for instance, 18 inches depth gradually running out to nothing at 25 yards were wheeled from the upper end of the 50 yards to the lower end, raising that end to 18 inches and running off to nothing in the centre, the desired level on which to relay the turf would be found. Even an ordinary bricklayer's plumb-bob level would do almost equally well. The second or lower 50 yards would then be treated in the same way. October and November are excellent times to do work of this kind.

Removing Elm suckers (R. H.).—The suckers of these trees are often very troublesome, and the only effective way of getting rid of them is to dig down to the roots from which they originate and remove the root at a point nearer the tree than that from which the suckers are produced. It is little use to cut them off, as they will soon sprout again.

Rhododendrons gone wrong (J. A. W.).—From the appearance of the leaves and buds of Rhododendrons you send, we should say that there is something radically wrong at the roots. Drought causes such an effect, and sour soil also. If you remove the soil from about the balls you may perhaps discover the source of the injury. In some places Rhododendrons were injured during the winter on account of insufficient ripening last autumn; but the injury was more in the nature of destroyed shoots than damaged leaves. The critical time with regard to water is the period during which new growth is being made. If the balls are allowed to become dry at that time leaf injury usually occurs. The reason for buds going wrong as yours have done may frequently be traced to sour soil or bad ripening of the wood.

THE GREENHOUSE.

Treatment of Crinums (W. B.).—We think that most probably your Crinums are *C. Moorei*, the most generally grown of the greenhouse species, and one of the most satisfactory under cultivation. Where conveniences exist for planting it out in the greenhouse or conservatory *Crinum Moorei* will do well treated in this manner. Still, in many places this cannot be done, and then the plant may be grown in pots, and when large masses exist tubs are preferable. A compost consisting of two-thirds loam and the remaining third made up of manure, leaf-mould and sand is very suitable. Repotting when necessary is best done in early spring before growth recommences, but with regard to this it may be pointed out that large plants will remain in the same pots or tubs for years and flower all the better for this treatment. Briefly, the cultivation of *C. Moorei* may be summed up in keeping it quite dry in a structure from which frost is just excluded from October to March, when it must be watered and will quickly start into growth. As the noble head of foliage develops give occasional doses of liquid manure. About midsummer many of the plants will show signs of going to rest, after which the flower-stems will soon be pushed up and the blooms quickly open. When the flowering season is over the plants may be stood under a south wall or in some similar position in order to thoroughly ripen the bulbs, but they must be removed under cover before autumn frosts set in. This *Crinum* may, if desired, be allowed to stand out of doors throughout the whole of the summer.

Name of, and information about, an Orchid (B. M. J. de la F.).—The name of the Orchid sent by you is *Cymbidium lowianum*, a native of Burmah, from whence it was sent to this country in 1877. It is not a particularly good form of the species, and it is impossible to say the value of such a plant without seeing it. At all events, it should be well worth a guinea. We think that your plant needs repotting, and the best time to carry this out is as soon as the flowers are over. In the case of this *Cymbidium*, they remain fresh so long as to put a considerable strain on the plant, hence it is a good plan to cut off the entire spike when the flowers show signs of fading. Directly after this the potting should be done. The most suitable compost is equal parts of good fibrous loam and peat, with a liberal sprinkling of rough silver sand and broken crocks. This compost will remain sweet for a very long time, which is an important consideration, for during the growing season this *Cymbidium* needs a liberal amount of water at the roots, yet it is very impatient of stagnant moisture. For this reason the pots must be effectually drained with broken crocks to about one-third of their depth. *Cymbidium lowianum* is essentially a cool house Orchid, and in winter a temperature of 50° to 55° suits it

well. No fire-heat will be needed throughout the warmest part of the summer. Very large old plants are apt to get hollow in the centre, and consequently unsightly. When this happens the better way will be to divide up the plant into as many pieces as there are separate growths and pot them singly.

Planting *Primula obconica* outdoors (H. J. C.).—*Primula obconica* may be safely planted out of doors for flowering during the summer. It is not hardy, and therefore will, in all probability, perish in the winter, but from now till the autumn frosts set in is a period of some months, and throughout the whole of that time it will, under favourable conditions, maintain a display of bloom. Of course, very young plants, such as those raised from seeds this spring, will not be suitable for planting out this summer.

Bouvardia leaves spotted (F. T.).—The spots on the Bouvardia leaves may be caused by the smoke from the furnace, but in our opinion a more likely cause is the sun shining brightly on the leaves while they are still wet. Such spots are by no means uncommon at this season of the year, not only in the case of Bouvardias, but also of many other greenhouse plants. The explanation of this is that during the winter the leaves have no special strain put upon them, and consequently they remain fairly fresh and bright; but when the sun gains power they are unable to withstand the additional strain, and therefore soon suffer. The leaves now produced are not likely to be injured to the same extent. Of course, the roots may be in a bad state, and the leaves therefore rendered more susceptible to injury; but on this point we cannot say without personal inspection. At this season of the year Bouvardias need to be shaded from the direct rays of the sun during the hottest part of the day.

FRUIT GARDEN.

A simple method of bottling fruit (V. S.).—Select firm, well-ripened fruit, carefully wipe and place in clean, dry bottles or jars. Place these in a warm oven, fill up the jars with a syrup made of 1 lb. loaf sugar to 1 pint of cold water, slowly cook until the fruit looks slightly shrivelled. Take from the oven, and when cold tie down in the ordinary way and store in a cool, dry place. Patent bottles for this purpose, with full instructions for using same, may be obtained from Messrs. Whiteley's, Westbourne Grove.

Grubs attacking Strawberries (F. E. Mayhew).—The only means of killing the grubs which are attacking your Strawberry plants without disturbing the plants is to make some holes, say four, round each plant with a dibble or stout stick about 6 inches in depth; then put 1 oz. of Vaporite into each hole and fill up the latter again. The Vaporite when in contact with the moist earth gives out certain gases, which permeate the surrounding soil and kill all insects which are under their influence. Watering with any insecticide which would kill the grubs would also kill the plants. Taking up the flagging plants and picking out the grubs is of course the more certain way of destroying them.—G. S. S.

Peach and Nectarine leaves diseased (G. L. K.).—The foliage received is suffering from a fungoid disease to which Peaches and Nectarines when grown out of doors are, unfortunately, very subject to. It is commonly called the Peach blister, and is supposed to be caused by sudden and violent changes in the weather such as we have lately had. It is seldom or ever met with on trees cultivated under glass, and the best way of getting rid of it is no doubt by erecting glass over the trees. For the present the best thing you can do is to cut off the leaves which are most affected and burn them, and then dredge the trees thickly with flowers of sulphur (having first moistened the trees by gently syringing), leaving the sulphur on the trees for a couple of days, when it may be syringed off with water, and as soon as dry again scraped off the soil and burnt. The sulphur will kill all the fungus it comes in contact with, and this gives the tree a chance of developing healthy foliage again during the summer. But the best way of killing it right out is by a winter application of a fungicide invented by the firm of George Bunyard and Co., nurserymen, of Maidstone, who claim for it that it effectively prevents an attack from this most destructive pest. The name of the antidote is "Medila."

Fig fruits mildewed (Harry Lou).—The past cold and changeable weather has probably helped to cause

the fruit of your Fig trees to become mildewed, and your want of fire-heat at the same time has, no doubt, helped to aggravate the mischief by your not being able to create a free circulation of air in the house for the want of the adequate heat. There is no doubt that a too cold and sluggish atmosphere has been the cause of the attack. We have suffered in the same way on many occasions, and the remedy of extra heat in the pipes, with increased ventilation and less moisture in the air, coupled with sulphuring the pipes when hot, has always had the desired effect of preventing further mischief. If you cannot increase your fire-heat, we advise you not to start the trees into growth so early next year. The loam it seems to us is excellent.

Vine foliage diseased (Vectis).—The Vine foliage sent is suffering from a bad attack of mildew, and if the berries are similarly attacked the crop will be virtually ruined for the season. The best way of destroying the mildew is by heating the hot-water pipes to that degree that you can scarcely bear your hand on the pipes. Then have ready some flowers of sulphur mixed with water to the consistency of thin paint, and wash the pipes over while hot. The resulting fumes will destroy the fungus, if not on the first application, it will on the second given the following night. The operation should be carried out in the evening, the weather should be calm, and of course the ventilators and doors of theinery sealed as close as possible to prevent the escape of the fumes. The sulphur should be allowed to remain on the pipes for some time, as slight fumes will continue to rise and help to ward off another attack.

Insect-infested Gooseberries (T. M.).—The only insects we could find in the box sent, which also enclosed a very tiny and stunted piece of a Gooseberry shoot with leaves, were red spider, a minute sucking insect which infests and preys on the leaves. That your bushes are not in a robust, healthy condition seems to be evident if the small portion sent indicates the character of general growth. It is so very evident that the soil must be very poor and needs liberal manure dressings. The bushes need to be daily heavily syringed with water to wash off the insects, and once a week a good spraying with a solution of Sunlight soap, dissolved at the rate of 1 lb. to ten gallons of boiling water, would do great good. The trouble, however, all seems to come from poverty of soil. Even now, if the bushes have no fruit, we would advise cutting them hard back low down, giving a dressing of manure and liquid sewage to compel new, strong, clean shoots to form.

Blenheim Orange Apple and Peach tree unsatisfactory (C. J. D.).—It is characteristic of the Blenheim Orange Apple that the tree bears fruit sparingly while young; but as it has been planted seven years it should by now be bearing fair crops, provided the conditions for growth are favourable. By your description of the practically leafless condition of the tree we are led to think that the cause of its being in this condition is owing to its being planted in unsuitable soil, either too poor, too wet or too heavy. An Apple or any other fruit tree which does not make a free and robust growth becomes an easy victim to the attack of fungoid and insect enemies, and we suspect that the cause of the defoliation of your Apple, as well as your Peach tree, is an attack of red spider or mildew. Should this be so, syringe the trees with flowers of sulphur mixed in soft water, half a pint of sulphur to a gallon of water. In the autumn (early in October) lift up your Apple and Peach tree, trench the ground 3 feet deep and in doing so add a good proportion of turfy soil (with the grass cut off), some well-decayed farmyard manure and a gallon of bone-meal to the soil in which each tree is replanted, mixing all well together, removing the worst of the soil to make room for these additions. Replant carefully, placing the new soil round the roots with the hands, pressing firmly as the work proceeds until finished, and in a year or two you will be rewarded by your trees coming round to good health and fertility.

Young Vine shoots and leaves diseased (Harry Lou).—From a careful inspection of the Vine shoots and leaves sent us, we find that the leaves are large, of succulent growth and very tender, and we think that the injury to them has been caused by the hot rays of the sun shining on them while moist with condensed vapour of the night and before adequate ventilation had been given in the morning. We can find no trace of fungoid growth or of spider. The remedy in this case another year lies in leaving slight ventilation (top and bottom ventilators) all night as soon as the weather is favourable in spring, with, of course, sufficient heat in the pipes to secure a free circulation of air. As regards the young shoots, the disease from which they suffer is more obscure. Our Vines have suffered occasionally from the same malady, and we always found that its attack was confined to young Vines in robust growth, and always to the tenderest and softest shoots the same as in your case, and it always seemed to favour the varieties Alicante and Gros Colman for its attack. At first we attributed the cause to some form of mildew, but with further experience we were satisfied that a minute species of red spider was the cause, and we were afterwards confirmed in this opinion by the decision come to by the scientific committee of the Royal Horticultural Society to the same effect. It is a most tiresome and dreaded thing, and what is worse, is the fact that it will recur every year unless it is stamped out. We recommend you to cut away most of the affected parts and to dredge sulphur thickly over those remaining, leaving it on for two or three days, then syringing off and, when dry, to burn it, as the disease is said to be epidemic. By doing this and keeping a vigilant look-out the following spring for its reappearance and immediately applying sulphur, we were enabled to stamp it out. How it originated with you it is hard to say; possibly from the manure, as you suspect.



ONTANOA BIPINNATIFIDA.

THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

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PROSPECTS OF THE COMING ROSE SEASON

I HAVE written a few notes on this subject, more particularly, perhaps, with reference to the National Rose Society's metropolitan show, during the last few years; and at the request of the Editor I contribute the following with rather more pleasure than usual:

Last year, writing at about this time, Roses looked well, but were late and needed what, as a matter of fact, they never got—a few hot days—to bring them to perfection. They had, it was true, a slight check in May, caused by frost, but they had formed better than usual, only the abnormally cold June of 1907 ruined (or nearly so) what promised in the early days of the month to be the best Rose season of recent years. But what of 1908! I quite agree with Mr. Mawley, the Rose clerk of the weather, that the early part of the Rose season is more affected by the weather of the preceding month than it is by the autumn, winter or spring weather, he the latter what it may. To go back to the autumn, we had, after a fine September—which enabled the finest lot of autumn Roses to be exhibited at the autumn show of the National Rose Society as we are likely to see for some time—a very wet October, which caused the growth then making to be unduly sappy, and a large portion of which never ripened, at any rate sufficiently to withstand the terrors of Jack Frost, and consequently this season Roses generally pruned badly. There were numerous complaints throughout the country of dead wood, brown pith, &c., necessitating in some cases pruning to the ground level or below it before sound wood was reached. With regard to the exhibition flower, this cannot be considered much of a loss; but to the garden or decorative section it was more serious, as many of these Roses produce their flowers on the wood of the second year. The spring we have passed through was cold, and everything up till mid-May was very late; but the hot weather of the last fortnight, coupled with the occasional showers, has made a very considerable alteration, so much so that the prospects are that we shall not only have an early Rose season rather than a late one, but a very good one too.

Circumstances over which the National Rose Society had no control compelled the alteration of the date of the metropolitan exhibition from July 9 to July 3, and what at one time looked like a misfortune will turn out, I think, a blessing in disguise. Writing of the Roses in the south metropolitan district, they promise to be not only early but particularly good. This year they have entirely escaped the late May and even June frosts that sometimes have played havoc with them. Until May was nearly out they grew slowly but without a check; since that date they have grown fast, and now look as well as I can remember seeing them.

Speaking of my own garden, green fly and mildew are both conspicuous by their absence, but there has been an unusual quantity of maggot, caterpillar and Rose beetle about, as

if to justify the appearance of the society's last publication, "The Enemies of the Rose." But where hand-picking has been systematically carried out these plagues are dealt with before much damage is done, and the foliage is now looking both clean and healthy—exceptionally so, I think. Then there is an almost entire absence of that *bête noir* the blind shoot, due largely to sudden changes of atmosphere, so that from the exhibition Rose standpoint the prospects are excellent.

Garden Roses look uncommonly well, but are distinctly early in this part of the country, so much so that many sorts will be over before the month is out; but so extensive is the area from which the society draws its exhibitors that I have little doubt that this section will be unusually well represented at the show on the 3rd prox. The feature of such Roses as have put in an appearance at this early date has been their high colour, which always means robust health. To sum up the situation in this district, given decent weather between now and the date of the show, I venture to think we shall have a record show at the Royal Botanic Gardens on July 3 next, both as regards quality and quantity of flowers.

I have endeavoured to gather the opinions of the leading exhibitors throughout the country, and quote a few of some from the letters I have received for the benefit of your readers. I hope the show may prove a record in one other respect beside these above referred to, namely, in attendance. Especial precautions are being taken to provide for the comfort of visitors. The catering, always the most difficult matter to arrange satisfactorily, is having unusual care bestowed on it. The finest military bands have been engaged, and, given a fine day, the Royal Botanic Gardens will be at their best when the queen of flowers knocks at the gates on the 3rd prox., and the combination will be worth a long journey to go and see.

The president of the society, E. B. Lindsell, Esq., writes from Hitchin: "I think my Roses look promising, and that they will be fairly out by July 3. Only genial weather is required to realise an excellent promise."

My other Hitchin correspondent says: "My Roses never looked better. We should have a grand show on the 3rd."

From Hitchin to Colchester, where the leading amateur in this district says: "The garden varieties are well above the average, and I think it will be found that July 3 will be quite late enough for most amateurs. Rain is wanted. Fly and mildew not much in evidence, but I have never seen so many maggots. Teas promise well, the Cochetts are really fine and Hybrid Perpetuals and Hybrid Teas promising."

The trade speak even more confidently. One of the leading firms write me: "I think the prospects for the coming Rose season are distinctly bright. Roses will be in good time; plants are strong and healthy, carrying fine buds on nearly every shoot, which has not been the case of late years, and are free from blight and insects. The National should see Roses at their best, especially in the exhibition sorts, but some of the singles and garden varieties will be over."

A leading amateur south of the Thames writes: "Roses are looking better than they have done for some years; the plants are wonderfully clean and healthy, and the buds look very promising. All flowers out have been very highly coloured. The season is early here and there should be some fine flowers by the 3rd. Gardens will be very fine."

From Sutton I hear that "all the growers in this district appear to be thoroughly satisfied with their plants and the promise they hold out of good blooms for the first week in July. A late start was followed by forcing weather, and at the present time the plants are on the forward side. I certainly anticipate a very fine show on the 3rd."

Hertfordshire.—From the headquarters of the Rose in this county I had a long letter; a brief extract says: "We think the present season will prove one of the finest Rose seasons of late years. The early species and garden Roses are finer than usual; colours are particularly intense. The exhibition sorts are opening most promisingly, and only require a good rain to be quite first-rate. Maiden plants are exceptionally vigorous. There are very few blind shoots."

From Berkshire and the Reading district the story is equally satisfactory. Oxford writes: "Hybrid Perpetuals are rather late, but garden Roses are coming into bloom fast and are very satisfactory. Teas, too, will, I think, be just about right for the 3rd, and Roses generally should be at the zenith of their glory."

Further west our leading amateur in this part of the country writes me: "My Roses are looking exceedingly well and should be quite ready for the London show. The Teas are much more forward than at this time last year and all are looking strong and well. I notice particularly how deep the colour is in most flowers seen up to now."

From the Midlands: "Hybrid Perpetuals are late, so are the maidens. Gardens promise unusually well. No May frosts of consequence; Teas are therefore much better than usual. You should have an excellent show on the 3rd, judging from appearances here."

From Peterborough: "The National Rose Society's exhibition on July 3 promises to be the best yet held by the society. Roses in this district are well forward and look more vigorous than for some years."

I will conclude with extracts from a letter from Mr. Edward Mawley, who writes: "My Roses are looking most promising and were never at this season more free from green fly. The temperature the last few weeks has been very changeable, but at no time have the spells of cold weather lasted sufficiently long to arrest the growth of the flower-buds. There is every prospect of our National Show in the Royal Botanic Gardens, on July 3, being an exceptionally fine one."

In conclusion, I may say not since I started making these enquiries some four or five years ago have I received such unanimous replies from my correspondents; there is not a single unfavourable reply from any quarter. May I take this opportunity of thanking all of them for their prompt replies to my enquiries.

Purley.

HERBERT E. MOLYNEUX.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

June 30.—Sonthampton Horticultural Society's Exhibition; Canterbury and Kent Rose Society's Exhibition.

July 3.—National Rose Society's Metropolitan Exhibition, Regent's Park.

Hemerocallis Dr. Regel.—This somewhat new variety of Day Lily is a beautiful addition to the early-flowering section of herbaceous plants, and one that should find a place in all good collections. Although it only makes growth of moderate size the flowers are

large, of good substance, and the colour a deep golden yellow. If a small group is planted in the border, a much better method than "dot" plants, a good display is obtained, for though the individual flowers are short-lived, the plants produce flower stems over a considerable period. I find that a partially shaded position is preferable to one in full sun. The Hemerocallis are easily propagated by division of the roots in autumn or early spring, and this variety is quite happy in a loamy soil, though after being split up it must be allowed one season to become re-established.—A. E. THATCHER.

The National Rose Society's Metropolitan exhibition.—This, the leading Rose show of the season, which will be held on Friday, July 3, in the beautiful gardens of the Royal Botanic Society, Regent's Park, promises to be one of the finest the National Rose Society has held for many years. The previous weather conditions which, as a rule, mar most Rose shows are late spring frosts and a long continuance of cold weather in June. This year both of these conditions have been absent, for seldom has there been so few frosts late in the spring, while during the present month the cold periods have never lasted more than a day or two, so that the growth of the plants has at no time received any serious check. Among other interesting new features of this exhibition will be competitive groups of the varieties which obtained the first, second and third places in the recent ballot for the best dwarf and climbing Roses for ordinary garden cultivation.—EDWARD MAWLEY, *Hon. Secretary, National Rose Society.*

The Neill prize.—There will be general approbation of the award made of the Neill prize of the Royal Caledonian Horticultural Society which has just been announced by the council. It has been given to Dr. John H. Wilson, the talented lecturer to the University of St. Andrews, and a celebrated botanist who has done much practical work in investigating the diseases of certain plants valuable to horticulturists and in conducting a remarkable series of experimental work in hybridising. Dr. Wilson's early days were spent among horticulturists, and after some time at St. Andrews he was for some years in the Edinburgh Botanic Gardens, and since that time has filled several prominent posts in connexion with botanical and horticultural studies. His work in hybridising has gone on for a number of years and the Royal Horticultural Society awarded him a Banksian medal for this as far back as 1899. The Neill prize consists of the interest of a fund left by the late Dr. Patrick Neill, and is awarded to men distinguished for their work in horticulture and botany. It has been held by some of the most able men of their day in Scotland, but none will rank higher than the present recipient, Dr. J. H. Wilson.

Gardens in general.—Seldom of late years have gardens generally looked fresher or more beautiful in the middle of June than now. A really glorious steady downpour of rain lasting for twelve hours during the night of the 16th and morning of the 17th inst. so thoroughly refreshed all vegetation that everything seems green, vigorous and full of beauty. The grass is rich in colour, dense and charming to look upon. Trees are in glorious leafage; shrubs the same; Roses clean and full of large buds. Hardy flowers of every description seem to be specially luxuriant. Sweet Peas have made remarkable growth of late, and already are blooming abundantly. Fruit trees and bushes carrying what promises to be excellent crops are, in spite of complaints as to insect pests, yet looking remarkably well, and Strawberries promise a grand crop of fine fruit. Vegetables of every description promise well, and rarely have looked better. Such is the general condition of gardens in Surrey. I trust the description may fit gardens elsewhere. In spite of some early climatic drawbacks gardening this year promises well.—D.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Sproughton hoe.—Your correspondent "Suburban" need have no fear in using this most excellent tool; of all the hoes on the market, for Rose culture at any rate, it has no superior. It loosens the top surface expeditiously and thoroughly, and it is, from its very shape, difficult to drive deep enough into the soil to injure the fibrous roots. Its only weakness is a tendency to bend at the neck, which must be rectified at once if the work is to be done properly. If only everyone would banish the hose and use the Sproughton hoe or any other hoe for that matter the gain to their gardens would be tremendous.—H. E. MOLYNEUX.

Hoes, rakes and Roses.—Your correspondent "Suburban," in THE GARDEN for the 13th inst., asks about the proper use of the Sproughton hoe. I have used it regularly for many years and never imagined "the long dagger-like blade" could be considered dangerous. It is not intended to stab the ground, but to be pushed or drawn through the surface soil after the manner of using a Dutch hoe, with the advantage over that hoe of being able to draw it towards you as well as push it from you. Having a support only on one side of the blade it can be easily worked all round the bushes. The sharpened point is very useful for breaking up any hard lumps of earth that are brought to the surface. After reading in THE GARDEN about the Gayton rake I sent to Cheltenham for one. I think it will prove a useful tool when the top of the ground is caked after heavy rain. Hitherto I have used for this purpose a homemade tool, which is simply an old worn-down four-pronged digging fork fixed to a long handle, with the prongs bent at a right angle to form a drag rake with teeth about 3½ inches long. It does the work in a capital manner, but I find that the Gayton rake, being so much lighter, is less fatiguing to use and gets over the ground quicker. So far the Rose season here in Worcestershire has begun exceedingly well with the climbing and pillar Roses. Fortune's Yellow, on the south side of a low stone wall, had eighty blooms out at once in the early part of June. L'Idéal, on the south wall of the house, has finer blooms than I have seen for the last three or four years. The more easily grown Roses, like Mme. Alfred Carrière, Bardou Job, Carmine Pillar, Ards Rover and Claire Jacquier are doing as well as possible.—JOHN J. BURTON.

Destroying queen wasps.—A determined attempt has been made to destroy queen wasps at Great Limber, in North Lincolnshire, this spring. Two years ago the fruit in Mr. A. G. Soames's garden was nearly all destroyed by wasps, and Mr. A. Dutton (Mr. Soames's head-gardener) received instructions to pay 2d. each for queen wasps during the months of April and May, and the number of queen wasps killed amounted to 1,518 this spring; the number brought in last year amounted to 450. As this reward was only paid for wasps caught within a radius of two miles, the figures given are very striking. Have any of your readers known of queen wasps in such large numbers being caught in one locality before; and can any state if it is probable that they would all be produced in the immediate neighbourhood, or would they be likely to keep coming into the district to supply the deficiency caused by the disappearance of queens in this particular locality?—A. D.

Wellingtonia struck by lightning.—A singular incident took place at Whitbourne Hall, Worcester, on the 3rd inst. During the terrific thunderstorm a large Wellingtonia about 70 feet high was struck. The tree is one of a row on the east side of the grounds at the bottom of a slope. On the higher ground there are several large Oaks—one fine tree about 50 feet away from the struck

Wellingtonia; not one of the Oaks are damaged. The lightning appears to have struck the Wellingtonia at the very top and run more than half way around the tree in its descent; the bark is thrown several yards away, and, as far as I can tell, the wood is uninjured. It is the first tree of the kind I have ever known to be struck by lightning.—J. WILLIAMS.

Wall gardening.—In passing Crossgar Railway Station, County Down, one can notice in the wall there several bunches of Red Valerian; the roots have got well into the chinks between the stones, and seem to derive sufficient nutriment from the mortar to sustain them. There were also many Snapdragons and Wallflowers growing in the same wall. The Valerian, therefore, should be noted as a wall plant.—WALTER SMYTH, *Holywood, County Down.*

Dimorphothea aurantiaca.—No doubt many very beautiful and simple plants suffer from hard, long and difficult to pronounce names. This plant is one most certainly, and doubtless it is yet little known. I saw a batch of it in pots, raised from seed sown under glass early in the year, flowering abundantly at Long Ditton just recently, and of all single Marguerite bright rich yellow flowers those of this plant, borne on long stems, are the most perfect in form and the most beautiful. It should make a charming pot plant for any purpose, but without doubt will bloom and do well outdoors during the summer. It is an annual from Namaqualand, and its average height in bloom is 12 inches. The plants need ample sunshine. Just what the red or similarly-coloured flowers of Gerbera Jamesoni are in form and grace and beauty, so are the rich yellow flowers of this lovely annual. It badly needs some common name.—A. D.

Lilium giganteum in New Zealand.—I am sending with this a photograph of a *Lilium giganteum* grown here in Mr. Percy Smith's garden. It was a very beautiful sight, the leaves being almost as much admired as the flowers. I thought you might like to see it, even if it will not reproduce. We very much enjoy THE GARDEN, besides getting many useful hints from it.—ROSE E. PATON, *Momona, New Plymouth, New Zealand.*

Destroying Daisies.—Now that the Daisy season is again with us, perhaps you will allow me to let your numerous readers know how to get rid of them, for, although they are very nice in their own place, in lawns and greens they are a terrible nuisance and eyesore. One of the main reasons why Daisies and other weeds are so generally found in lawns is poverty of soil, caused by cutting the grass year after year, without in many cases even the thought of applying nourishment to the distressed lawns. Another prominent reason is that the Daisy multiplies at an enormous rate by self-sown seed and delights in poor land, so that to have our lawns renewed without disturbing the turf, something that will kill the Daisies, enrich the starved land and nourish the grass is the ideal that is wanted. Fortunately, that ideal can now be easily procured. Some years ago I was at my wits' end. The lawns then under my charge were in a fearful state with Daisies and other weeds, especially Daisies, and every year getting worse. We got a trial order of Climax Lawn Sand, and it proved so surprisingly successful that we put on 40cwt. of it that year with the most flattering results. I am using a large quantity of the sand on the lawns here this spring. I consider May the best month to use it, as the grass quickly recovers from the temporary browning at this time. I also believe in putting it on rather heavier than the makers state in their directions, as, although it adds somewhat to the cost, it makes a surer job and saves any trouble for years; in fact, till the soil begins to get poor again. I shall be pleased to answer any enquiries in the matter, provided a stamped addressed envelope is enclosed.—C. T. COLE, *The Gardens, Craighead, Bothwell, N. B.*

Increasing double Daisies.—I thank you for the article in THE GARDEN for May 30 on the Daisy subject. It was the very thing I wanted to know, and was thinking of writing to Messrs. Barr (from whom I had my seed of their giant double, which has turned out splendid) to know how best to continue the perfection, by slips from old roots or to sow seed annually? After reading your article, I shall try the offset way of increasing, or rather in my case decreasing, but continuing my stock for next spring. I only had a small packet of seed; they soon came up, and as soon as I could handle them I thinned into wider spaces. Through the summer, and as soon as I could in the autumn, a few at a time, I got them permanently placed in a border all round my beds, consequently there is at least 100 feet of nearly a foot wide of blossom now. They are a sight worth looking at, as is shown by the admiration evinced by passers-by. Personally, I should say the seed sowing is quite as easy, but I shall this year try your method; I shall put the offsets at once into



A GOOD SPECIMEN OF LILIUM GIGANTEUM AS GROWN IN NEW ZEALAND.

permanent quarters. I am also so glad to read about the subject of Polyanthus culture; I want to increase my small stock of the good ones I have. I must tell you I only put one Daisy root at intervals of about 4 inches, and yet there is this splendid show. I think my borders are likely to set a taste for Daisies. If Mr. Barr reads this I am sure he will be pleased.—M. CLOKE.

WHAT AN ARTIST NATURE IS!

EVERY uncultivated and wild place, every spot left entirely to her, if only man keeps his rough hands off it, she decks forthwith in the most tasteful way, clothes it with plants, flowers and shrubs, whose unfettered growth, natural grace and charming grouping are evidence that they have grown up not under the disciplinary rod of the great egoist, but that Nature has here had her own free way. Every neglected spot, however small, becomes forthwith beautiful. Hence is derived the principle of English gardens, which

is, to conceal art as much as possible, so that they may look as if Nature had here been allowed her own way. For only so is she perfectly beautiful, *i.e.*, does she most clearly show the objectification of the still unconscious Will-to-live, which here displays itself with the utmost naiveté, because the forms are not determined—as in the animal world—by outside aims, but solely and immediately by soil, climate, and that mysterious third thing which imparts such diverse forms and characters to the many plants that owe their origin to the same soil and the same climate. The great difference between the English (or more properly, Chinese) and the old French gardens—these are now becoming rare, though a few fine examples are still to be found—lies in the last resort in this: that the former are laid out in an objective, the latter in a subjective, spirit. In English gardens the Will of Nature, as it objectifies itself in tree, shrub, hill and stream, is brought to the purest possible expression of these her [Platonic] ideas—that is to say, of her very essence. In French gardens, on the contrary, is reflected only the Will of the owner, which has subjugated Nature and made her wear not her free ideas, but badges of slavery, forms forced upon her by the owner's whims—clipped hedges, topiary work, straight avenues, pergolas and so on.—SCHOPENHAUER ("World as Will and Presentment," Chapter XXXIII.).

WATERING.

WHAT TO DO AND WHAT NOT TO DO.

IT goes without saying that on most soils some watering must be done in any ordinary summer, though its necessity may be very much lessened by a proper system of deep cultivation. In one dry summer I had a bed of herbaceous Phloxes, moisture-loving plants, which stood the whole of the drought without flagging, though they were never watered, simply because the bed had been dug right out the previous autumn to a depth of 2 feet, thus giving them an extensive root run. In another part of the garden of similar aspect and with similar natural conditions, except that the ground had not been so treated, the leaves of some clumps of Phloxes hung limply down the stem for a good part of July and August. This practice will obviate the necessity of watering most herbaceous plants, but of course it is not always practicable.

Annuals and bedding plants generally, however, are different, and, whatever method of cultivation is practised, they will suffer from a severe drought, though good cultivation is helpful. In addition to deep digging, a gentle hoeing or loosening of the surface checks the rise of moisture from below and consequent evaporation. This is just the reverse of what happens when surface watering is practised, when, all the water being in the top 2 inches or 3 inches of soil, which is of close nature, it is rapidly evaporated by the sun's heat. The obvious inference from this is that the best thing to do is to water seldom, and only when absolutely necessary, and then do it in such a way that the soil is saturated to a depth of at least a foot—deeper if possible.

This can be done, as regards beds and borders, in two ways. The soil can be very lightly loosened at the surface, and the water put on with a fine rose at intervals of half an hour during a long summer evening, the intervals giving the water time to percolate down, and lessening the liability of the soil to run together. The alternative is to cover the soil with a layer of short manure and half turn it in, when, the soil being in such a rough state and kept open by little pieces of very porous stuff, it will absorb any amount of water, which may be potred on with as coarse a rose as you possess, the manure feeding the plants at the same time. This is a more satisfactory method than the former, and scarcely takes up more time, while the ground can be watered so thoroughly that it will need no more

water for two or three weeks, perhaps not again during the summer if an ordinary amount of rain falls. For Marrow beds, outdoor Cucumber beds, clumps of Sweet Peas, Dahlias and other

MOISTURE-LOVING PLANTS.

a different course can be adopted. If a flower pot is sunk in the ground up to the rim with a few pieces of broken pot underneath, water can be poured into it even with a pail and it will run into the ground, and there is the satisfaction of knowing that nearly all the water will be absorbed by the roots, very little of it being evaporated from the surface of the soil. This is a specially advantageous practice where the ground has been raised to make a bed, as, for instance, a Marrow bed. For some special things which it is desired to water occasionally, such as Lilies, a mulching round the stems with light manure partly turned into the surface soil is the best practice, as it lets the water run quickly into the soil, and has not the unsightliness of a flower-pot let into the ground, which, however, does not show among the Marrows or underneath spreading things like Dahlias.

Where rain water is available it should by all means be used, hard water, especially very hard water, not only not helping to dissolve the food material of the soil, but caking the ground together to a worse extent than rain water, and shutting out the air, the carbonate or sulphate of lime in the water solidifying between the particles and cementing them together, thus forming a hard crust, in pretty much the same way as the inside of a kettle becomes encrusted by the boiling of hard water, the pure water going off as steam and the solid matter in the water remaining.

A. P.

THE FRUIT GARDEN.

THE SUMMER STOPPING OF THE SHOOTS OF VINES.

FAILURE in the growth of good Grapes by amateurs is often caused by the want of knowledge of how and when to stop (meaning, to cut off) the young growth on the green shoots of Vines in early summer when growth is so active. So rapid is the growth of the Vine at this time of the year that, if the work of stopping is neglected, the roof of the vinery soon becomes one tangle of useless and wasteful shoots, shutting out light and air so necessary to the well-being of the Vine and to the success of the crop of Grapes, and at the expense of uselessly wasting the energies of the Vine. This subject of stopping the Vine is so simple and entails so little labour that, once well understood, a child could do the work without trouble, so that there is no sort of excuse for its being neglected. The new shoots which emerge in spring from the shoots of last year's growth, which were pruned back in winter, should be 15 inches apart (on both sides of the Vine) on Vines of moderate growth such as Black Hamburgh, Muscat of Alexandria, Foster's Seedling and Buckland Sweetwater, and 18 inches on the stronger-growing sorts such as Gros Colman, Gros Maroc and Alicante.

The bunch of Grapes on these shoots generally appears after the third leaf of the shoot has been developed. As soon as three other small leaves have been formed above the bunch is the time to stop the shoot by pinching out the point or heart

with the finger and thumb. This will leave six primary leaves on the shoot, which must be guarded and kept healthy until the crop is ripened and gathered, as on the health and vigour of these leaves the success of the crop greatly depends. The result of stopping the shoots will be that several other small shoots will emerge from the axils of the leaves below. These in their turn, as soon as they have formed two leaves, must be stopped in the same way, and so must also all the young shoots which will emerge from the stopping of these sub-shoots, which are termed laterals. By the time this third stopping will have taken place, growth of foliage will be on the wane and the Grapes colouring, and then this lateral growth may be permitted more freedom, with advantage, stopping them at the sixth leaf instead of the second. This summer stopping of the shoots is of the greatest importance, and amateurs

frequently err in either not doing the work properly or leaving the growths alone. I hope, however, the few notes I have made will be helpful to readers of THE GARDEN. Vine-growing is very interesting, and, when the simple rules of culture are observed, it is not difficult. Some varieties, of course, are more easily managed than others.

OWEN THOMAS.

THE CULTIVATION OF THE STRAWBERRY.

(Continued from page 299.)

FORCED STRAWBERRIES

REQUIRE careful management, and the earliest runners that can be procured should be selected for this purpose. Many growers now layer the young plants at once into their fruiting pots, and experience teaches that this plan answers admirably. No intermediate shift is needed, and less labour is required in their preparation. Suitable sized pots are those measuring 7 inches in diameter; these must be clean and well drained. Place a sprinkling of soot over the drainage and fill the pots to within an inch of their tops with the best loam procurable. A 7-inch potful of bone-meal may be added to each barrowload of the loam and thoroughly mixed. The soil must be made very firm in the pots. When layering endeavour to leave the space between every alternate row of plants quite clear; by attention to this plenty of room is afforded for the convenience of watering and cleaning, and the beds will also present a better appearance when the work is completed. Never allow the plants to suffer through becoming dry at the roots.

When the young layers become established in the pots they may be detached from the old plants and the pots arranged on a bed of ashes in an open and sunny position, where they may remain until the end of October. The best place for the plants during winter is in cold frames, where the pots may be plunged in ashes, which will prevent them becoming injured during severe frost. Air must be admitted whenever the weather permits. Strawberries must be forced slowly; to place the plants direct from the frames into a high temperature is to court disaster. A temperature of 45° to 50° is suitable for a start, gradually increasing this to 60° as the flowers open. As the plants are removed from the cold frame a top-dressing of loam with a teaspoonful of some approved fertiliser (Clay's and Willis's Universal have proved excellent) should be applied to each pot. Six or seven berries are enough to allow on a plant, and when these have formed the remaining flowers should be removed. At this stage a temperature of 65° by night, rising to 70° during the day, should be maintained. Weak manure water at this time should be applied to the plants about three times during the week.

As the berries swell and commence to colour the temperature during the day may, with the aid of sunshine, rise to 80°, but this should not be exceeded in any case. The flavour of the berries is improved if the plants are removed into a slightly lower temperature just before they are thoroughly ripe. The plants must always be kept close to the glass, and will require abundance of water; if the leaves are allowed to flag they seldom recover. It is a good plan to place a layer of half-rotten manure on the shelves and stand the plants on this as an aid in keeping the roots moist, but even then frequent waterings are necessary.

Morden Gardens, Watford.

C. RUSE.

CATTLEYA MENDELII QUEEN ALEXANDRA.

THIS Orchid is a very chaste and beautiful form of the old *C. Mendelii*. In addition to its excellent size and form the labellum is pure white ornamented with a central marking of soft rosy purple. It was exhibited by Messrs. William Bull and Sons of Chelsea at the recent Temple Show, when it attracted much attention,



CATTLEYA MENDELII QUEEN ALEXANDRA. (Much reduced.)

THE ROSE GARDEN.

PROPAGATING ROSES BY SOFT-WOODED CUTTINGS.

NOW that the propagating cases are comparatively empty many who have such at their disposal and who also have Roses that they wish to increase the stock of may, with interest and profit, devote some time to the propagation of these subjects by means of cuttings formed from half-ripened wood. Such cuttings of many of the species and most of the rambler varieties root readily, and doubtless Teas, Hybrid Teas and Hybrid Perpetuals might also be propagated in this manner.

The operation is a simple one. Secure some 5-inch or 7-inch pots, place crocks in them to one-third of their height and then fill in to within half an inch of the rim with rather finely-sifted soil that contains a good percentage of coarse but clean sand. This soil must be made moderately firm, and before inserting the cuttings place a thin layer of sand on the surface. It is in the selection and preparation of the cuttings that the greatest amount of care must be exercised. Shoots 6 inches to 9 inches long that do not terminate in a flower-bud are best, and these should be detached with the thinnest possible heel of the older wood adhering. Smooth over the base and remove a few of the lower leaves with a sharp, clean knife, and also remove the very soft tip so that when finished the cuttings will be from 4 inches to 6 inches in length, these being the most convenient sizes. Care must be taken not to let these cuttings flag in the least before inserting them in the pots, rapidly in gathering, making and planting them being an important point.

A 5-inch pot will take comfortably five cuttings, and a 7-inch will accommodate two more, the best way being to place them near the edge. A point where many fail is in planting the cuttings too deeply; those 6 inches long may go 1½ inches deep and the longer ones 2 inches. It is absolutely essential, as in the case of all cuttings, to make the soil quite firm at the bases of the shoots, otherwise roots will certainly not be omitted.

After inserting the cuttings give them a gentle watering in through a rosed can and then plunge the pots to their rims in Cocoanut fibre in the propagating cases and shut them close. The temperature, if the weather is warm, may well be a natural one; or if a slight bottom-heat can be afforded rooting will be considerably facilitated, but excessive heat must at all times be avoided. Each morning the glass of the lights should be wiped dry and a chink of air left on for about half-an-hour so as to dissipate any superfluous atmospheric moisture. Any dead or decaying leaves must be promptly removed. If the soil shows signs of becoming dry water is necessary; but care must be exercised in applying it, as wet soil is not desirable. It is necessary to keep the fibre moist. Rooting will be effected in from two to three weeks, and as soon as growth is noticed as being active the pots may be removed from the cases and stood on a shelf near the glass, taking care to avoid cold draughts or mildew will sure to appear. After-treatment will consist in the general routine of watering and gradually inuring the young plants to a cooler and drier atmosphere, so that they are quite hardened off for planting out in nursery beds in the autumn.

By adopting the above system of propagation nearly a year is saved, as the plants by this time next year will be nearly as forward as are those from cuttings inserted last autumn. Even those who do not possess the orthodox propagating cases might try this system, using deep boxes partly filled with fibre for plunging the pots in and covering them with sheets of glass. F. W. H.

ROSA MOYESII.

THIS is a very delightful new single Rose from China, giving one the impression of an exceedingly thorny, vigorous-growing species. The colour is very exceptional and of a ruby red tone, much more intense in the opening flowers. The blossoms are about 2 inches across and the petals of very firm texture. The leaves are also of firm

The plant is in a fairly sheltered corner that gets the benefit of all the sun that is to be had up to midday—and what a dainty little flower it is, not only the flower, but the whole plant is unique; the flower, of a pure satiny white, is interesting because it has only four petals arranged in the form of a Maltese cross, the plant is unusual because, first of all, the enormous thorns on the young wood are blood-red in colour; and,



A NEW ROSE SPECIES: ROSA MOYESII. (Natural size.)

texture, long, usually eleven lobed, the lobes oblong, ovate, dark green and thorny on the under sides. Should the plant prove to be a free bloomer it will create a sensation in the garden, and in any case it will be of inestimable value to the hybridist for some time to come. Exhibited by Messrs. James Veitch and Sons, Limited, Chelsea, before the Royal Horticultural Society on the 9th inst., when it received an award of merit.

EARLY-FLOWERING ROSES.

YOUR correspondent "M. P. H." on page 286 thinks a few notes on the above might interest some of your readers, and I have much pleasure in sending you the following. At the same time, situation of the Rose garden, as well as of the particular plant in it, may easily make all the difference between an early and a normal blooming period. For early-flowering Roses we have to depend largely on the species and one or two hybrids; by early flowering I mean May. The season this year, at any rate in the early part of May, was late (practically ten days, or a fortnight possibly); but, nevertheless, my first Rose flowered earlier than usual—two days earlier than last year, and, curiously enough, on a plant that, although early, is generally a good way down the list that I generally keep. *Rosa sericea pterocantha* occupies the place of honour this year, and its first flower opened on May 9.

secondly, because the leaves are produced in such a way as to have a delicate, almost fan-like, appearance. Altogether the Rose is entitled to a high place among the interesting Roses. Only two flowers made their appearance on the date named, and the month was drawing to its close before the plant was in full flower, but they were sufficient. *Alpina*, which for years has always been the first Rose to flower, waited until the 12th before it opened its first bloom—one day later than in 1907. It is quite regular in the habit, and has never failed to produce flowers with me before the end of the second week in May. The plant, however, refuses to grow very much, and is not much bigger than when planted some six or seven years ago. Naturally smooth wooded, under cultivation this Rose occasionally produces thorns. Why, I wonder? The 15th saw two more species join in the race—*Altaica*, sometimes called *Spinossissima maxima*, surely one of the most beautiful of these early-flowering Roses, and a single yellow form of one of the Scotch Roses. By the 20th the bushes of *Altaica* were in full flower and covered with hundreds of beautiful blossoms; it makes a fine hedge, and, unlike most of the early Roses, gives a few flowers again in the autumn. *Nuttalliana*, the first pink Rose came out on the 18th; it is very beautiful, its large single flowers freely produced of a most pleasing shade of soft pink with golden stamens,

making a fine contrast. Virginiana variety Moodsii, Xanthina, Harrisoni, Copper Briar, and several varieties (white, pink and yellow) of the Scotch Roses were all in flower by the 24th. On the 25th Conrad F. Meyer opened its first flower, and what a glorious Rose it is. I cut over fifty flowers of it on May 30, and they literally perfumed the house. The great branches seemed overweighted with the enormous flowers, and had to be staked well to prevent them doing themselves irretrievable damage, the thorns literally tearing the foliage and flowers to pieces where this is not done. Some dozen varieties of Rugosa were in full flower by the end of the month, notably Blanc Double de Coubert, Mercedes delicata, Chedane Guinoisseaux, Rose Apples, &c. No Hybrid Perpetuals favoured me in May; but the following Hybrid Teas were all in flower before June 1: Gustave Regia, Antoine Rivoire, Grace Darling, Viscountess Folkestone, Amateur Teysier, Lady Ashtown, Betty, Lady Waterlow and Climbing Mrs. W. J. Grant. Sinica Anemone was not out on June 1, and since then my garden is getting quite gay. Jersey Beauty and Gardenia among the wickurianas; Leonie and Eugénie Lamesch, Petit Constant and Kleiner Alfred are in full flower of the Pompons. Teas are quite plentiful and too numerous to mention. Rosa canina and arvenais are just coming out in the hedges, and are a little later than last year; all of which forces one to the conclusion that my garden is earlier than most. As to the prospects of the coming Rose season, I hope to write you next week; at the moment they are excellent.

H. E. MOLYNEUX.

THE FLOWER GARDEN.

WATER LILIES AND THEIR CULTURE.

I AM well within the mark in ascribing to the Water Lily a charm and grace such as few other plants dare hope to equal, much less excel. Being aquatics the cultivation of the many varieties necessitates the existence of water of suitable depth, and the greatest measure of success follows when the plants can be planted out and permanently established, as neither the foliage nor the flowers are so freely produced when the plants are in confined areas. Such marvellous lives have even the



ONE OF THE MOST BEAUTIFUL OF NYMPHÆAS—N. CAROLINIANA PERFECTA.

choicest hybrid Nymphæas that small basins or submerged tubs will sustain the plants in vigorous health for several years with ample remuneration in flowers, but whenever a paucity of bloom becomes evident no time should be lost in renewing the compost in which they are planted. This may consist of two parts old maiden loam to one part of thoroughly decayed manure, the whole to be carefully mixed before using.

May is the best month for planting Nymphæas, but as most dealers in water plants hold their stock of these in pots amateurs may safely plant up to the end of June; at the same time there is some advantage in planting at the latter date, as then one may see the earliest flowers of the season and choose such colours as appeal to the individual taste, for though no Water Lily may be said to produce flowers of a doubtful colour yet their variety is exceedingly great, and the combinations which occur in some of the flowers really require seeing, as words cannot adequately do justice to their rare beauty.

For practical purposes Nymphæas are grouped according to the depth of water in which they are found to succeed in best. Pygmea and Helvola are miniatures for planting in shallow water of a depth of 12 inches or so; all the others

succeed in water 2 feet to 4 feet deep, though only the most vigorous need be given the latter depth. One of the salient points in successful Lily culture is the temperature of the water, which in the open depends upon solar heat for its warmth, and as this never becomes excessive in our climate every ray should be husbanded and the water inlet to the pond be governed, where possible, by a niggard hand.

Water Lilies revel in abundant sunshine, so that little or no good can be expected from them when planted in positions overshadowed by trees or buildings; under such conditions leaf growth is excessive and the flowers are few and imperfectly coloured.

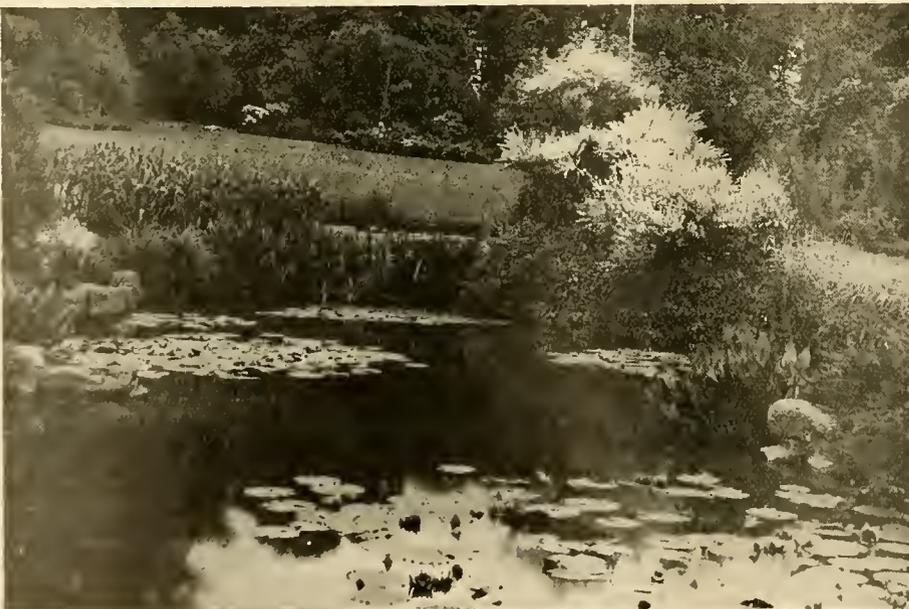
THOMAS SMITH.

Walmgate Gardens, Louth, Lincs.

PERMANENT EDGING PLANTS.

WE possess a number of plants that are eminently adapted to form permanent edges to large beds and shrubberies. In large gardens and parks, whether private or public, enormous quantities of edging plants are required annually, and their production entails no inconsiderable amount of time and labour. I do not wish to infer that the majority of the beds should be planted with a permanent edging; but one-third may be so treated, which will both lessen the work and add variety. I have found that two rows of *Megasea cordifolia* planted 9 inches apart each way speedily form a splendid belt, handsome at all times and strikingly beautiful when in flower. *Funkia subcordata grandiflora* is a superb subject as an edging to a large foliage or sub-tropical bed, and if Winter Aconites are planted on either side of them the edging at least is permanently furnished.

The Golden Ivy is not appreciated as it should be, and a 1 foot wide belt kept strictly in position and clipped each spring is nearly as effective as the golden-leaved Creeping Jenny (*Lysimachia mummularia aurea*). In planting the last named the ground should be raised 2 inches from 1 foot to the outer edge and sloping towards the edge. *Antennaria tomentosa* should be similarly treated. Bare patches will occur during winter, especially if we experience excessive rain and fogs; but this is easily remedied by the removal of a few tufts from the well-furnished portion or with plants from the reserve garden. The variegated form makes a very handsome edging, and should be pegged in position. The golden-foliaged Stonecrop is very fine; small tufts or even single growths planted 2 inches apart over a 1 foot wide surface of well-manured soil will develop into a dense carpet the same season, and now is the time to carry out the work. *Heuchera sanguinea* makes a bold diaply as seen in a 15-inch belt, and it is



AN EFFECTIVE GROUPING OF WATER LILIES, PORTUGAL BROOM AND ARUNDO DONAX.

hardly necessary to dwell upon the extreme beauty of the plant.

If less desirable, the old and persistent *Armeria maritima* is not to be despised, and small pieces afford a dense edging with astonishing rapidity. It is superfluous to speak of *Cerastium tomentosum*, and failure to clip it at the proper time will account for the straggling masses often seen in amateurs' gardens. Drastic measures must be employed, and as soon as the flowers fade it should be cut off to the ground level and subsequently clipped to maintain a fairly compact habit or appearance.

Many of the *Saxifragas* lend themselves to this work and are effective when planted on a raised and sloping surface, and, perhaps, *S. hypnoides* is as good as any. It is literally smothered with dainty white flowers in summer, while it presents a very cheerful and fresh appearance during the dull season. *Alyssum saxatile compactum* is useful as an edging to *Rhododendron* and shrub beds; an important point is to remove the flower-spikes as soon as they fade, as the ripening of the seeds induces a weedy and undesirable habit. The improved forms of Pinks yield a wonderful harvest of inflorescence when employed in this way and fully exposed to light and sun, and, provided the ground in close proximity to them is richly manured each season, many years will elapse ere they exhibit signs of deterioration. *Iberis sempervirens* forms a fine white mass, and the best way to keep it in order is to clip back sharp after flowering and encourage new growth by an application of artificial manure.

WALTER H. AGGETT.

IRIS CARTHUSIANA.

THIS is a beautiful cross-bred variety, said to have been raised from a cross between an unnamed species collected near Mardin in Syria and the handsome Flag Iris *I. pallida dalmatica*, the latter being the pollen parent. The subject of our illustration most closely resembles the pollen parent, except that the blossoms are of a more uniform character, while the rich golden colour of the beard and the reticulations near the base of the falls also render it distinct. The prevailing colour is bluish mauve, and the variety possesses all the good attributes of the *I. pallida* set, the fine stature and generally bold appearance. In this way it is a useful addition to a family already endowed with many excellent garden plants. It was exhibited by Mr. J. W. Marshall, Charter House, Godalming, before the Royal Horticultural Society on the 9th inst., when it received an award of merit.

Though during the past season there may not have been any very marked advance in new seedling Daffodils, there have been some very striking flowers exhibited. Besides the beautiful collection of Mr. J. C. Williams at Truro, some new and distinct flowers were shown by Mr. P. D. Williams of Lanarth. Among these were, notably, a lovely *Poetaz*, with pure white petals and a large scarlet eye. The petals were flat and evenly overlapping, and the eye was of almost pure scarlet, brighter in tint than any other known variety. This flower was named *Sparkling Beauty*. *Inga*, also raised by Mr. P. D.

balanced flower, with white petals evenly overlapping and an eye of pure orange buff. *Jasper* was a flower of similar shape, but with yellow petals and a very deep crimson eye. *Marshallight* is a flower that should in time take the place of *Lucifer*, with a cup of intensely deep orange scarlet. The stock is, however, very small, and I understand that Mr. P. D. Williams does not intend to part with it. No doubt this will be an extremely valuable flower for the purpose of the hybridiser. *Aphrodite*, which created such a sensation at Birmingham last year, was not ready, nor was it in time for the Birmingham show this year, but, notwithstanding this, Mr. Williams was able to annex the Bourne Cup. *Bernardino*, an enormous *Lulworth* seedling raised by Mr. Worsley, was a very striking flower on Mr. C. Dawson's stand. This flower was also exhibited by Mr. Dawson in fine form in London at the Royal Horticultural Society's Show at Vincent Square on April 14, as was also *Victory*, which is probably the largest *incomparabilis* ever shown. *Pearl Diver*, also exhibited by Mr. Dawson in London, was pronounced to be the whitest flower yet produced. It was raised by Mr. Dawson. Another flower of the same raiser's is *Redcap*. This puts *Will Scarlet* altogether in the shade and is an infinitely better-shaped bloom. This appears to be a flower that hybridists would do well to secure.

The beautiful *Buttercup*, figured in THE GARDEN on page 229, was shown in London by Mr. Dawson, and the same blooms were also exhibited at Birmingham and yet again at the Royal Horticultural Society in London on April 28, this speaking volumes for the stamina of the flower. This variety was originally raised by Mr. Engleheart, but I understand that the entire stock has been acquired by Mr. Dawson, and the manner in which this variety is grown at Rosemorran is a proof of the robustness of the plant. Space does not permit of a description of the many fine varieties growing at Rosemorran, but among the best may be mentioned such as *Cossack*, *Home-spun*, *Imari*, *Incognita*, *Moonbeam*, *Pilgrim* and *Tennyson*, with fine beds of *Weardale Perfection* and *Mme. de Graaff*, before alluded to. Many beds of three, four and five year old seedlings must prove of intense interest in the future with their infinite possibilities of success and failure, for the anticipation of their flowering has to recognise the possibility of disappointment as well as of good fortune, and probably but few out of the many will attain a standard of the highest excellence. Mr. Crosfield at Birmingham showed many beautiful seedlings, and doubtless this raiser has as many surprises in store for the lover of *Narcissi* as anyone. The season has been unfavourable to many and Mr. Engleheart has been severely handicapped, having been quite unable to stage exhibits of his usual phenomenal quality, and the same remark applies to Messrs. Pearson and Sons.

South Devon. S. W. FITZHERBERT.

Clipping evergreens.—Where evergreens, such as *Box*, *Yew* and the like are used as hedges, or as solitary specimens clipped into shape, this will be a good time to commence the summer clipping. *Box* may safely be clipped fairly hard now, as the new growth will have time to ripen before winter, but any subsequent operations should be confined to keeping stronger growths within bounds, for in cold districts new growth made late in the year often suffers badly in winter.



A NEW HYBRID IRIS: I. CARTHUSIANA. (Two-thirds natural size.)

Williams, was a most refined flower that justly received first prize as the best of the *Parvi-Coronati* in the show. It is a most perfectly

CORNISH DAFFODILS.

DURING a spring visit to Cornwall visits were made to some of the leading Daffodil gardens in the county. At Ludgvan Rectory *N. cyclamineus* in the rock garden was a beautiful sight. Large clumps were in full bloom, a sheet of bright yellow. Here it seeds itself freely, and numbers of self-sown seedlings are springing up around the parent plants. An early white trumpet Daffodil, somewhat after the style of *Mme. de Graaff*, but far more precocious, was noticed. In Mr. C. Dawson's garden at Rosemorran King Alfred was in fine bloom, and *Mme. de Graaff*, of which Mr. Dawson holds by far the largest stock in England, was looking very healthy.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE WINDOW GARDEN. — Those who have not yet replenished their window-boxes with summer-flowering plants should see to this without further delay. Our window-boxes were completed in this respect two or three weeks since. Among the many plants that succeed in such are Pelargoniums, Petunias, Heliotropes, Marguerites, Fuchsias, Lobelias, Tropæolums, Calceolarias and Ivy-leaved Pelargoniums, the latter so useful for overhanging the sides of the boxes. Our boxes of Pansies have always been admired. We plant the last-mentioned in soil of a rich and lasting character and persistently remove the spent blossoms; by these means the display is maintained over quite a long period. Window-boxes in sunny aspects should be watered in the cool of the evening. Watering in such positions in the morning is of little value. Well-established plants should be occasionally watered with liquid manure. I find this acts as a splendid stimulus to the plants.

the frames are in a better state of preservation for the winter season. My Carnations that are growing in rather deep frames in pots have been carefully staked and tied. Their appearance has been improved of late by frequent syringing with clear water; I much prefer rain water, and use this daily in this way when the weather is warm. I am expecting a beautiful display in late July and August. Cucumbers in frames must have constant attention. Growth is very rapid just now owing to the warmer weather. Plants bearing fruit quite freely should be assisted with frequent applications of manure water.

The Vegetable Garden.—I made my last sowing of Short Horn Carrots and Parsley for winter supplies a short time since, but it is not too late to make a sowing even at this period. I am busy putting out all kinds of winter greens, giving the plants plenty of room and watering them in with copious applications of water. Celery and Leeks should be planted; the sooner they are in their permanent quarters the better. Tomatoes, both outdoors and in the greenhouse, are receiving special attention just now. The plants are progressing rapidly; I am therefore removing all side shoots, keeping the plants to single stems. So many beginners keep the soil too moist, which promotes unnecessary and undesirable growth. Keep the soil on the dry side and apply manure water when the fruits have set, which will assist the fruits to swell.

The Fruit Garden.—Strawberries should be layered at once. I prefer to layer my plants in pots, as they are so much better handled when severed from the old plants after rooting. Cherries should be netted where the fruits are beginning to ripen, otherwise the birds will soon spoil the crop. Remove suckers of Raspberries, except those that are to be retained for next year's canes. Plums that have set their fruits freely need looking after. Fruits that are beginning to swell where they are crowded should be thinned out to some extent, in this way ensuring the development of a goodly number of fruits of better quality. D. B. C.

LAYERING STRAWBERRY PLANTS.

STRAWBERRIES are increased by runners that are rooted in June and July, and the earlier this work is done the better, as by these means strong plants are developed which should produce fruits in abundance next summer. There are various methods by which the plants may be layered, and that the beginner may understand what a runner is and when it is time to deal with them, Fig. 1 gives a very good indication of the character of an old Strawberry plant during June. Thereon will be noticed numerous runners, each of which has a small Strawberry plant actually developing at its end, and which may be rooted with comparative ease.

The young plants may be layered either in 3-inch pots or in the open ground, or on pieces of turfy loam 3 inches or 4 inches square, and this kept moist throughout the rooting period. Any of these means may be used by those who desire to increase their stocks; but the more popular method is that of layering these plants in pots, as they may be detached without injury from the main plant when properly rooted.

Fig. 2 shows the same plant as represented in Fig. 1, with two or three pots brought into use, on which the runners are layered. This is very simply done. All that is necessary is to place the end of the runner on soil that has been properly prepared, and maintain this in position by placing on the runner itself a small stone,

which will not only assist to keep the soil moist, but will also keep the plant sufficiently rigid. The same rule may be observed with pieces of turf cut in round or square fashion, and on the same old plant there will be noticed two illustrations of runners pegged down to these. When the layers are well rooted they should be severed from the old plants. It is important, however, to remember that the soil must be maintained in a moist condition, otherwise the progress of the plant will be retarded and their future well-being to some extent jeopardised. Fig. 3 shows a plant that has been severed from the old plant after becoming well rooted. It will be observed in this case that small runners are already developing in the crown of the plant. These should on no account be allowed to remain, but must be pinched off in order that the energies of the roots may be concentrated on the development of crowns of promising nature.

The plant in Fig. 4 is one of the runners that were rooted from the plant in Fig. 1. Note the healthy character of the plant and its strong-



1.—OLD STRAWBERRY PLANT, SHOWING RUNNERS SUITABLE FOR LAYERING.

Most plants in pots will derive considerable benefit from an application of manure water twice a week at this season.

The Flower Garden.—This is, perhaps, the busiest period of the whole year in the flower garden. Weeds are a constant source of trouble; on no account must they be allowed to develop unchecked. I make a rule to go through the border at least once a week, doing the weeding thoroughly and going through the border systematically. Most plants need to be staked and tied, otherwise the growths may fall over and assume anything but a pleasing appearance. When staking the plants see that the stakes are of a suitable length for the respective subjects, that they may not become an eyesore. Also endeavour to preserve the natural beauty of the plants. This may be done by avoiding overnight tying, and in some instances, such as in the case of the Michaelmas Daisies, thinning out the weak and attenuated growths. I am continuing to thin out the more crowded annuals; it is a great mistake to allow the plants to remain in the border so close to one another. For a display next spring I am just now pricking off in prepared beds seedling Wallflowers; it is astonishing how much the young plants progress when treated in this fashion.

Garden Frames.—As opportunities offer I have the necessary painting and reglazing done, so that



2.—THE SAME PLANT WITH RUNNERS LAYERED IN POTS AND ON PIECES OF TURF.

rooting character. This is in an ideal condition for planting outdoors or for being potted up into pots in which they are to flower and fruit. In this case, too, the runners are observable evolving from the crown. These should be pinched back to within 2 inches of the crown of the plant, in order that the plants with crowns of ideal character may be developed.

QUARTERS FOR STRAWBERRY PLANTS.

Many people labour under the mistake that the Strawberry is a shallow-rooting subject, but we are quite convinced that this is an erroneous impression. They delight in soil that has been deeply dug and well manured, and we have never had any hesitation whatever in trenching the ground fully 2 feet deep, breaking up the soil thoroughly and incorporating with it a very heavy dressing of partially-decayed manure. This is left in the rough for some little time previous to planting, and subsequently the surface soil is broken up, levelled and made ready for planting the recently-rooted plants.

Fig. 5 shows how the planting should be done, August or September being the best months. Plant in rows 2½ feet asunder, and the plants 18 inches apart in the rows. Take out a good hole, so that each plant may be properly embedded and so that the soil is quite level with the crown of the plant. Press the soil well round the ball of soil of the embedded plant. Arrange



3.—STRAWBERRY RUNNER ROOTED IN A 3-INCH POT AND RECENTLY SEVERED FROM THE OLD PLANT. THE SMALL "WIRE" ON THE RIGHT SHOULD BE REMOVED.

the plants in the rows alternately. Fig. 5 gives a clear indication as to how this should be done. By planting alternately in the rows the plants are able to take full advantage of the space allotted to them, and are less crowded in consequence. Subsequent to planting out in the Strawberry bed give the plants a thoroughly good watering, so that the ball of soil and roots is quite moist.

ABOUT DAHLIAS.

A DAHLIA plant will grow in comparatively poor soil and bear flowers freely, but it will not withstand a prolonged period of drought without showing signs of distress, notwithstanding the fact that the tubers are fleshy and full of moisture. Thousands of amateurs grow Dahlias and carefully preserve the tubers during the winter time. Some persons like the show Dahlia best, others prefer the Cactus and single-flowered, and Pompon types find favour with some. Every year there are fresh recruits being added to the ranks of growers, and where exhibiting is the chief object in view the inexperienced person is often at a loss to determine the features which mark the different types and make mistakes in the selection of the blooms. The following notes will prove useful to intending exhibitors:

Show Dahlia.—This is a large double self-coloured flower, or the base of the florets may be of a light colour edged with a darker shade. In the latter case the flower is called edged.

Fancy Dahlia.—This is similar as regards size and form, but has two or more colours or florets tipped with a lighter shade.

Bedder.—This is a show type, dwarf, with erect flowers.

Pompon.—The Pompon resembles the show and fancy type in shape, but has much smaller flowers and is very free.

Cactus.—A true Cactus Dahlia should have long, narrow, pointed spiral florets which radiate from the centre.

Decorative.—These are distinguished from the Cactus by being flatter in both the florets and the flower.

Single.—The single Dahlia consists of but one row of flat florets evenly arranged.

HINTS ON GROWING AND EXHIBITING GARDEN PRODUCE.

(Continued from page 293.)

In continuing my remarks on this subject, I will deal with those kinds of flowers, fruits and vegetables that require special treatment during their early stages of growth in order to have the very best produce when the crops are matured. Of course, all kinds require good treatment, but the following will be worthless as regards showing—if they are neglected in the least now.

Pansies.—It is always a pleasant sight to see our Pansies in full bloom; but if large flowers

are required, the earliest buds must be removed so that the plants will grow strongly and not become exhausted through bearing many blooms. Fancy plants will continue to flower throughout the season if all faded blooms are regularly picked off; but to obtain large flowers of great substance it is a wise plan to remove the earliest buds, and, later on, about one month before the cut blooms are required, to also disbud, that is, leave one bloom on each strong shoot and remove the others. Before you allow the flower-buds to develop put on a rich top-dressing of loam and rotted manure and loz. of superphosphate to each square yard of ground. Furthermore, keep the soil in a moist condition. If allowed to become very dry the blooms will be small.

Window Plants.—A nice, well-balanced specimen is more likely to secure a prize than a tall, ungainly plant. Foliage plants, of course, must possess fine leaves of good substance, so, also, should the leaves of flowering plants be large and healthy. But in growing the two different kinds the same treatment does not exactly answer our purpose. The foliage plant should not be permitted to get too much pot-bound, else there will be more difficulty experienced in keeping the leaves healthy than while the roots are still feeding on new soil; but manure water and artificials should not be given until the pots are well filled with roots. A flowering plant, such as a Zonal Pelargonium or a Fuchsia, should be



4.—YOUNG PLANT ROOTED IN A PIECE OF TURF EY LOAM READY FOR PLANTING OR POTTING UP.

retained in as small a pot as possible consistent with getting a fully-grown plant by at least one month from the date of the show. If such a plant is somewhat pot-bound at that period flowers will be produced in profusion, and feeding may be done with grand results. A teaspoonful of superphosphate will be sufficient for three plants in 6-inch pots, and the same quantity to the same number of pots of nitrate of soda will prove beneficial in the case of foliage plants. A dose once every ten days will be ample.

(To be continued.)

GREENHOUSE MANAGEMENT IN SUMMER TIME.

AMATEURS often experience some difficulty in keeping their plants throughout the winter on account of excessive moisture in the greenhouse. In summer time, however, the interior of the house is kept too dry for the plants to do well in it. Furthermore, they are subjected to extreme heat and sudden chills, and the

result is scorched foliage and rapid spread of insect pests.

Ventilation.—It is not possible to admit air in the morning too early. By slightly opening the top ventilators very early—before the sun shines on the house if possible—and gradually increasing such ventilation, then also opening the front ventilators as the sun gains power, the temperature will not become almost unbearable. When it does, be quite sure that the conditions are unsuitable to plant life. The safety valve in ventilating a greenhouse in summer time is the leaving of the top ventilator open slightly all night. It is better to err in keeping the house a little too cool than too hot at this season. In the afternoon, according to the state of the weather, the ventilation should be gradually reduced. If the weather is very hot and the house is in an open position, five o'clock will be soon enough to commence the reduction. If cool and the house be in a partially shaded position, reduce the ventilation at four o'clock.

Atmospheric Moisture.—Of course plants which are suitable for the greenhouse do not require as much atmospheric moisture as stove plants do. But it is a mistake to think that the atmosphere in a greenhouse should be kept quite dry. Such plants as Fuchsias, Tuberos Begonias and even Zonal Pelargoniums thrive better when the atmosphere is moderately charged with moisture than when it is absolutely dry. Of course one must have some guide as to what amount of moisture is desirable. To the novice this is a difficult problem. The solution is best given to such a person as follows: Damp down the floor and under the stage before eight o'clock in the morning, again at ten o'clock, once more at noon, and finally in the middle of the afternoon on a hot, bright day. Two dampings will be sufficient on a day of moderate brightness, one on a rather dull day, and not any in showery weather.

Watering.—This is another important matter, and requires much careful thought. One examination of the pots each day is not sufficient in summer time. The plants should be examined three times during the day, namely, in the morning, at noon, and in the evening. In this way the soil will not be allowed to get too dry. Do not feed newly-potted plants, but only those specimens which have filled their pots with roots. It frequently happens that plants which have been recently repotted droop their leaves during the hottest part of the day, and this is taken as a sign that they need water. This is not always the case, as the soil may be quite moist; in such instances give a light syringing overhead with a slight shading.

AVON.



5.—SHOWING HOW PLANTS SHOULD BE ARRANGED ALTERNATELY IN THE ROWS WHEN PLANTED OUTSIDE.

THE TOWN GARDEN.

PINKS FROM PIPINGS.—There are few plants which make a more delightful border in the town garden than white Pinks, for the flowers are exceedingly useful for cutting and the fragrance is charming. Unfortunately, some town gardeners appear to think that when once the plants have been placed in position they do not demand any further attention; this is quite wrong, and the man who would have really gratifying results quickly learns that the management entails regular attention in maintaining the soil in good condition and in the renewal of the border at least once in three years. This can be effected by division if preferred, but it is more satisfactory to raise entirely fresh stock from pipings, and the present is an excellent time to take them. Clean, healthy, flowerless growths should be chosen and drawn out of their sockets by a sharp upward pull; if they are inserted in light, sandy soil firmly they will root quickly and grow into splendid little plants with which a new border may be formed in the winter or spring according to convenience. It is an advantage either to insert the pipings in a cold frame or place a hand-light over them for a time if they are in the border. Her Majesty is a grand variety, but it has not yet succeeded in ousting the old favourite, Mrs. Sinkins, from our gardens, and it is not likely to do so for some years.

SWEET PEAS.—Where the young plants received correct attention in the early stages, the Sweet Peas are now looking the picture of health and the promise of abundance of excellent flowers a little later on is rich. Buds will have been in evidence for several days, and it is now that the grower can commence feeding with every prospect that the food supplied will prove beneficial to the plants. No doubt many people have had recourse to special feeding before now, but the policy is not good and is quite unnecessary where the soil was efficiently prepared at the outset. It is far better to wait until the plants are well in bud and have made sound growth before manures are used, for they are always apt to cause the growth to become soft and sappy, and, as a consequence, unable to develop flowers of the finest size and substance. In feeding, the conveniences of each grower must be considered, and it really does not make any material difference what is used, provided that as many changes as possible are afforded and that whatever is applied is not too strong. In any case clear water should be given between every two applications of liquid manure and the quantity should be sufficient to soak down below the roots—say, from three gallons to five gallons to the square yard, according to the nature of the soil, more being wanted on a light than on a heavy land. Soot water is excellent as an alternative to other things.

HEDGES.—If it is desired that these shall present the brightest possible appearance throughout the summer months it is important that they shall not be too closely cut from now onwards. If the shears are allowed to go down into the hard wood it is a considerable time before this again breaks freely, and the result is that the hedge looks brown and bare, but if the cutting is restricted to the removal of shoots that are advancing too rapidly, the hedge will always be green and attractive. It is excellent practice, where it is possible of adoption, to thoroughly soak the soil in which the roots are working about once in every ten days, and if it is convenient to apply weak liquid manure a few hours after the watering, the results will be all the more satisfactory. For this particular purpose I have not found anything more generally useful than guano water, but if this is not at command, liquid manure from any natural excrement can be pressed into service. A hedge is always pleasant to see when it is well cared for, not otherwise.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

THIN out the weak growths of such plants as Allamandas; these are now showing fine flowers. Give manure water occasionally, as this will assist to prolong the flowering period till well into the autumn. Clerodendrons should have the dead flowers taken away when all beauty has passed. Stephanotis may be cut back now that flowering is over. Pot on Gloxinias, Begonias and similar plants that were raised in February; these will make good successions to those that are flowering now. *Azaleas and Camellias*, where grown under glass, may now be placed outside under a north wall on a bed of ashes, or stand the pots on planks: this is to keep worms from getting into the pots. Keep them well supplied with tepid water and syringed twice daily in hot weather, in order to keep down thrip and promote healthy growth.

Pitcher Plants (Hepenthes).—Afford these tropical heat and plenty of moisture and syringe twice daily. Pot on such plants as *Jacobinia chrysostephana*, *Plumbago rosea*, *Thyracanthus rutilans* and *Gardenias* for autumn and winter. *Gloriosa superba* and *G. grandiflora* should have the run of a pillar or wires under the glass roof, when they will prove most useful and interesting. *Eucharis* that have been flowering should be rested for a month or six weeks.

Cyclamen ought now to go into the flowering pots; use the best loam and leaf-soil obtainable, with plenty of sharp sand. Do not bury the corms too deep in the soil, about half being the best system. Pot firm and shade from bright sunshine, and syringe well under the foliage in sunny weather to keep down thrips.

Tree Carnations.—Pot the last batch for winter flowering into the final pots. The tops may yet be pinched to make them bushy. Pot into 2½-inch pots *Primulas* of all sections. Sow more *Cinerarias*. Pot winter-flowering *Geraniums* into the flowering pots and stand in the open on a bed of ashes, and do not over-water till the roots have found and got well hold of the new soil.

FLOWER GARDEN.

Keep this department smart and as gay as possible, and let soft colours be the leading feature; these are more pleasing to the eye and more artistic. All dead and decaying foliage must be picked off and herbaceous plants nicely staked before they fall about, taking care to hide the stakes as far as possible. Rock, alpine and aquatic gardens should be kept free of weeds and as far as possible each plant free of its neighbour.

HARDY FRUIT.

Continue to pinch or prune trees against walls or fences, and keep them free from aphid. Tie in the growths of Peaches and Nectarines, but not more than is required for next season's crop. Layer Strawberries for the earliest crop, rooting them in small pots being the best method. Keep the plants well watered and they will soon grow away. Gather Strawberries early in the day or late in the afternoon, as they can then be sent to table in much nicer condition than when gathered in the heat of the day.

KITCHEN GARDEN.

Lute Peas.—Mulch and stake these, and if required run a string along each side of the rows to guard against damage by wind. Continue to pick out Broccoli, Cauliflowers, Leeks, Savoys and finally plant out all Brussels Sprouts. Sow Endive, Lettuces, Turnips and Dandelions for winter salad. Thin Seakale heads to one crown. Plant out Celery now in quantity, first

placing plenty of well-decayed manure at the bottom of the trenches. Cease cutting Asparagus and tie up any large growths as they appear, so that they are not broken by the wind. Sow Beans for a late crop; Canadian Wonder and Ne Plus Ultra are the best varieties.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)

Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

SHOW PELARGONIUMS.—As these plants go out of bloom they should be placed in a cold frame or in the open air in a somewhat sunny position to ripen the wood. Water should be withheld, so that the wood may become hardened and in a condition to make cuttings. If placed round the sides of pots filled with a sandy compost and kept in a cool frame and shaded, so that the soil does not dry rapidly, the cuttings soon root, when they can be potted singly into medium-sized pots, using a compost containing leaf-mould and sand. Winter the plants in a greenhouse.

Greenhouse Rhododendrons.—The present is a very good time to propagate these Rhododendrons by means of cuttings, which are not at all difficult to root, all that is needed being to form the cuttings of the half-ripened shoots; finish them at the base with a rather sloping cut and then dibble them into pots prepared for that purpose. The pots should be well drained and filled firmly with very sandy peat. Care must be taken that the soil is well pressed around the cutting, especially guarding against any cavity at the base of it. After being watered they must be placed in a close propagating frame in an intermediate house temperature, and in this way they may be struck, potted into small pots and established before winter.

Chrysanthemums.—Now that the plants are all in the pots in which they are to flower, provision must be made for getting them into their summer quarters without delay. Usually at potting time they are stood close together in a sheltered corner until all are potted. By that time the most forward will have become nicely established in their large pots and will be ready to undergo the usual routine of summer management. A position sheltered from the south-west and the full blaze of the midday sun, and as long as it can be obtained during the other parts of the day is the best that can be chosen for the plants. The best position of all is beside paths near the water supply, where abundance of light is assured.

FLOWER GARDEN.

Pinks.—Cuttings of these may now be put in as the different varieties go out of flower. A bed should be prepared at once for them, and I prefer to make it in an extemporised frame, where they may be shaded for a time if necessary, or get the benefit of all the sunshine available should the weather prove dull and showery. Soil turned out of pots and boxes at the time of planting out summer bedding stuff will do very well for the cuttings of Pinks, Violas and alpine Phloxes. If the soil be dry it should receive a good soaking of water the day before the cuttings are inserted, previously adding a little fresh leaf-soil and sand, and incorporating the same with the old potting soil. Some 4 inches of soil resting on a hard bottom is much better for cuttings of the above plants than to allow a considerable depth. Under the latter conditions the roots will ramble far afield and the plants suffer proportionately when they are lifted to other quarters. The Pink is one of the most welcome of summer flowers, and such varieties as Mrs. Sinkins produce a wealth of blossom at this time.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Carnations dying (*Dunruadh*).—There is no disease in the Carnations sent. In every collection a few will die off in a similar manner. It is generally attributed to over-watering, or allowing the plants to become dry and drenching them with water afterwards.

Iris for name and treatment (*C. E. Branton*).—The Iris of which you send a flower and foliage is the pretty *I. sibirica*. You give us no indication of the treatment that you have accorded it. This Iris thrives best by the side of a pond or pool of water where the roots are partly submerged. Given such a position it is not at all fastidious as to soil, and will produce an abundance of its pleasing blue flowers.

Hyacinth bulbs diseased (*Suffolk*).—Your bulbs are badly cankered at the base, and the whole of the area from which the root-fibres are usually emitted is extended and deepened in a most unusual manner. The general appearances of the bulbs, too, display something of a prior grossness of growth, and we are disposed to think that you have poisoned the soil by the very "large proportion of bonfire ash" you have used. We have known instances where the soil by similar applications has been for years rendered unfitted for the cultivation of bulbous plants, and we strongly recommend you to refrain from such free applications of these things in future. When the bulbs are more fully matured, lift them, and when dry endeavour to divest them of the cankered part and replant at the proper time in fresh soil quite free from the burnt ash. It is doubtful whether such bulbs as those you send will ever pay to grow again. Your soil also appears to be infested with slugs and other ground pests, and you should use Vaporite or Kilogrub to clear them out. These are not the primary cause of the trouble, however. The Star of Bethlehem (*Ornithogalum umbellatum*) appears to be suffering from some fungoid attack, but the leaves were quite rotten when received.

Double Tulip to name (*Mrs. Paterson*).—We regret to say we are unable to name the variety sent. We have seen similar doubles or semi-doubles growing in old gardens; but as they were small, like yours, and not of any striking shade of colour, they have never been cared for. It is exceedingly improbable that the variety is in commerce; and if this is so, it follows it would have no generally recognised name.

Tree Peony diseased (*Hampshire*).—The stems and leaves are affected by a fungus, and you cannot do better than cut away and burn all diseased portions at once. Then if you write to Messrs. Cammell, Swanley, for a supply of their fruit tree wash, and use it according to directions about once a month, you may, in a year or so, get the upper band of the disease. A north-east position for these plants is about as bad as could be chosen, and one facing south-west would be far better. The best time for replanting is at the end of August.

Three Tulips for naming (*Colonel J.*).—No. 1 (pink) is one of the many Darwin varieties, but it is a small flower. We have compared it with a good many, but cannot find any absolutely the same. It is exactly the same shade as Parthenope, but the base is rather more white. Still, for practical purposes they might be considered the same in a garden. No. 2 (white, tinged green). It is a pity that a perfect flower was not sent,

for the green in the petals is a defect. It is an old garden variety very seldom seen nowadays called Alida. No. 3 (yellow, edged red). This is the good old variety called Golden Crown. A larger pink Tulip of the same shade as No. 1 is Kate Connor. It is one of the old English breeder or mother Tulips, and has an excellent constitution. Another which is of a similar shade but with a more pronounced paler edge is the Darwin Mrs. Krelage. This is a fine handsome flower.

Information about Anemones (*Mrs. S. I. W. S.*).—Anemone apennina can be procured in roots or tubers from any of the bulb dealers, and the variety purpurea from Mr. C. G. Van Tubergen, jun., Zwanenburg, Haarlem, Holland. He has also some of the varieties of *A. nemorosa*, mentioned in the article to which you refer, and it is possible that you may get tubers of some of the newer ones from Mr. T. Smith, Daisy Hill Nursery, Newry, Ireland. The latter can supply you with *Omphalodes verna* and with seeds and plants of a number of the wild Pinks.

Tulips and Daffodils (*A Constant Reader*).—The fading blossoms of the Tulips may certainly be removed with impunity, but most of the varieties shed their petals naturally about the same time. It is the seed-pods maturing that are calculated to most weaken the plant. There is not the smallest reason why the Tulip and the Daffodil may not revert at times, but wholesale reversion is by no means usual. The Daffodils are apparently passing a stage in the evolution of the flower which is not "turning back to doubles," but, from your remark, the reverse order of things. You do not say whether during this change the bulbs have remained planted or have been lifted and cultivated in the usual way. The Lily of the Valley could only be cultivated in full sunshine with success if planted in rich and quite moist ground. In any case the plant delights in shade and produces in such places and under the best treatment its finest spikes of blossoms. Some of the finest we have ever seen were growing in a Thames side garden, where the river at high tide occasionally overflowed its banks and flooded the garden. The plants were in deep soil and had the thin shade of Apple and other trees.

ROSE GARDEN.

Remedies for Rose mildew (*F. A. N.*).—We have found that this fungus can be checked, if not actually cured, by syringing the plants with a solution of carbolic soap, half a bar of Lifebuoy soap being dissolved in three gallons of soft water and applied with a very fine sprayer, such as an Abol syringe. It must be remembered that the young soft foliage is always susceptible to mildew, so that as fast as it appears it should be sprayed. In the excellent little work entitled "The Enemies of the Rose" the authors recommend spraying Roses with sulphuric acid (commercial), one part to a thousand parts of water. Constant spraying is needed to keep the pest in check. It is a good plan to spray the plants three days in succession and then follow this up by spraying once a week. Use a very fine sprayer. This is important, as we want the liquid to remain on the leaf, not to drip off, as it will do if applied with a coarse sprayer. Wherever any variety such as Her Majesty and Killarney are observed to be specially addicted to mildew such plants should always be under observation and sprayed whenever required, for insects have the power of transferring the mildew spores from infected to healthy plants.

Rose bushes planted last autumn (*E. H. A.*).—Providing the plants are growing well there is no reason why they should not be allowed to bloom. As soon as the flowers have faded they should be cut off about 1 inch below the seed vessel, for if allowed to seed a great and unnecessary task is imposed upon the plants. Any small plants should have all the flower-buds removed from the present time until the end of July. After this, if perpetual varieties, they would doubtless be strong enough to carry a few autumn flowers.

FRUIT GARDEN.

Vines in small vinery unsatisfactory (*F. P., Monmouth*).—The chief cause of the failure of your Vines in bearing fruit must, we think, be attributed to the fact that the roots are far too close together, especially as you say that they are mostly strong growing. Sixteen rods in the space of 24 feet is contrary to all successful experience and good practice in Grape culture. We advise you to take a bold course and reduce the number of rods by as many as will increase the distance between each Vine to at least 2½ feet. As your rafters are so short (only 7 feet) it would be better to cut out altogether one or more of the most unsatisfactory

varieties rather than reduce the number of rods on so short a rafter—Duke of Buccleuch, for instance. To grow this grand Grape successfully it should have a house to itself, where it can be grown and pruned on the extension system. It will not fruit satisfactory if spur-pruned, and one or two of the least satisfactory of the others might be sacrificed in the same way. We have no doubt that the increased exposure to light and air, which would result from this thinning-out process, with the admission of abundance of air into the vinery during late summer and autumn to properly ripen the wood, would result in inducing your Vines to bear fruit freely.

Gooseberry diseased (*C. B., Henbury*).—The American Gooseberry mildew is not present, and it would seem, from the symptoms described and the appearance of the lower part of the dead shoot, that the cause of the shrivelling of the branches as they appeared was traceable to some wrong condition at the roots.

Grape Madresfield Court scalding (*Geo. Tucker*).—This grand Grape is subject to this complaint. The way to stop the malady is by admitting more air into the vinery during the day, and to have a little on as well, back and front, all night until the Grapes are ripe, with just a little heat in the pipes to keep the air moving. This Vine succeeds best under what is termed the cool system of Vine culture.

Nectarines falling to swell (*Norfolk*).—The cause, in our opinion, of your Nectarines falling to swell is to be found in the fact of the trees being weakened by the heavy crops borne last year (as you state). Nature will have her revenge, and you may depend upon it that if you take too heavy a crop one season you will not have the chance of doing so in long succession. The better way is to secure a moderate crop every year by judicious thinning. In this way better fruit is secured and disappointment at the loss of an occasional crop avoided.

Strawberries mildewed (*D. P. S.*).—This has been an unfavourable spring for the forcing of Strawberries in consequence of the long continued cold and sunless weather we have had. In your case the attack of mildew was most likely brought about by suddenly exposing the plants to too much cold air, causing a chill to the foliage and thereby courting an attack of mildew. This is the most frequent cause of attack, both in forced Strawberries and Grapes in spring. Yes, we think *Omphalodes verna* would answer the purpose you wish fairly well. St. John's Wort is also an effective plant for this purpose, but the best plant of all for carpeting the ground under such trees is *Eunymus radicans variegatus*. In spring it is clothed with small foliage of the colour of green and gold and in late summer and winter green and silver. The plant grows from 5 inches to 7 inches high. It does not produce flowers of any value.

Rust on Strawberries (*J. B.*).—This mildew is a terrible scourge when it attacks this fruit, either in the open air or under glass, and what is worse, the injury is inflicted so quickly and is so fatal to the quality of the fruit that, once the attack has taken place, nothing can be done to save it. The only thing is to avoid creating conditions surrounding the growth of the plants which are known to favour its attack. The long continuance of dull, cold weather such as we have had for a long time past has, no doubt, encouraged its presence, especially in creating cold draughts by incautious ventilation. Another frequent cause is to be found in the night temperature being too cold after the foliage has been excited into growth. Still another cause, as you suggest, is to be found in the too wet and sodden condition of the roots, as also in the opposite extreme of over-dryness at the roots and in the atmosphere. But the most common cause of its existence is to be found in the fact that the mildew is often present on the foliage before the plants are taken under glass. The remedy here is self-evident; examine the plants carefully, and if mildew is suspected dredge the plants heavily with flowers of sulphur. There is no other known remedy.

MISCELLANEOUS.

Grubs for inspection (*Anxious*).—The grubs you sent are those of a two-winged fly, one of the drone flies belonging to the genus *Eristalis*, which you often see in gardens and sometimes on the windows of houses. To the uninitiated they are often mistaken for bees. The grubs are perfectly harmless to plants. They live in stagnant water and breathe through pores at the end of their long, rat-like tails. I cannot say what is the cause of your young Pears dropping without seeing them and some of the shoots which bear them.—G. S. S.

Grub for inspection (*J. C. L. Du C.*).—The grub you forwarded is that of the daddy-long-legs. They are most troublesome pests, as most insecticides have little or no effect on them. They will ruin any plant on whose roots they feed. Sometimes they can be trapped by laying bricks, tiles and pieces of board or turf near the plants they are attacking as they will often hide under such things at night. Vaporite mixed with the soil in which they are said to kill them. You might try it by making four holes with a stout stick, say, 6 inches deep round the plant, placing some Vaporite at the bottom of each, and then filling up the holes again. The gases emanating from the Vaporite will kill the grubs in the surrounding soil.—G. S. S.

Destroying Polygonum (*E. K.*)—The plant of which a specimen is sent is one of the annual Polygonums, commonly called Pink Persicaria. It is, botanically, Polygonum Persicaria. It should, to destroy it, be pulled up so soon as seen, as it seeds freely. With respect to the perennial Polygonum, which grows so plentifully in your pond or on its margin, have it chopped down and removed to a heap to decay so soon as new growths or suckers appear. Keep them cut down hard with a sharp hoe. Persist in that course, never allowing the growths to make leaves, and in time the plants will disappear. You can, of course, use salt freely after this cutting down, but, because the roots run deep, we cannot say that such dressing will destroy them. Lime will not harm them. If you were to remove much of the surface soil and give the roots a good dressing of liquid wood-killer, that may destroy them, replacing the top soil again. Still, in any case, persist in preventing suckers from growing.

Cactus flowers (*Mrs. K. E. J.*)—Although the Cactus flowers cannot be regarded as superior to, or even the equal of, some of the existing varieties, they are very pretty and especially interesting as the result of intercrossing the two flowers whose blooms you send. When the plants flower another season you will probably find them considerably improved from this year, as they are rarely at their best the first time. If in your place, we should await the flowering of the others with especial interest, for the variability that occurs in seedlings, even when raised from the same pod, is very great.

Names of plants.—*W. A. C.*—Your Larkspur is *Delphinium consolida*.—*Miss J. M. L.*—*Meconopsis racemosa*.—*Ponderer*.—The plant you send is *Smilax maculata*. *Dracena godsolliana* is a native of the West Coast of Africa.

SOCIETIES.

FLOWERS, FRUIT AND VEGETABLES AT THE YORK JUBILEE GALA.

A GREAT EXHIBITION.

THE horticultural exhibition held in connexion with the York Jubilee Gala on the 17th, 18th and 19th Inst. was a great success, despite the very heavy and continuous downpour of rain which occurred on the opening day. Flowers generally were very good, the large groups arranged for artistic effect being mostly of high order. Fruits were moderately good, but vegetables on the whole were poor and but sparsely shown. New plants were very disappointing. A deputation of the Royal Horticultural Society visited the exhibition on the first day and granted silver cups and medals to various exhibitors.

COMPETITIVE SECTION.

SPECIAL JUBILEE COMMEMORATIVE CLASSES.

Four classes were arranged for in this section, a special cash prize being offered in each case. In Class A, for the most imposing and meritorious floral display (on ground) of plants and flowers grouped for effect, size 30 feet by 14 feet, three competitors entered, and Mr. W. A. Holmes, West End Nurseries, Chesterfield, appropriated the first prize of £40 with a marvellous combination of grandly-grown plants. Tall Palms formed a background, and then rambling Roses, pyramidal Crotons, a few Japanese Maples and Dracenas were stood rather thinly in front. Among these, and forming a sort of carpet, were Verbenas, dwarf Crotons, Coleuses, Ferns, Caladiums, Orchids, Carnations, Lilies of the Valley, scarlet Anthuriums and similar things, the whole being most artistically combined for colour effect. The second prize fell to Mr. Joseph Pickersgill, Barton Hill, Westwood, Leeds (gardener, Mr. J. Donoghue). Here Roses were used in profusion, the long branches of the ramblers being trained to canes in pendulous fashion. Two baskets filled with spikes of *Odontoglossum* were suspended from tall semi-arches, excellent plants of Crotons, various Orchids and Dracenas being freely employed. Mr. William Vaise, Warwick Street, Leamington, was awarded the third prize, this group also being a good one but rather densely arranged.

In Class B, for the most meritorious combination display of horticultural products, arranged for effect and instruction, on table, space not exceeding 20 feet in length by 6 feet in depth, one frontage, height unlimited, there were three entries, and the first prize went to Mr. C. E. Simpson, 21, Spurlingate, York (gardener, Mr. F. Nutbrown). This was a wonderful combination of artistic skill and good culture, the whole exhibit being of a unique and high order. White and rose-coloured Pinks were placed on wire frames to form Prince of Wales's Feathers, a huge cross, wreaths and a miniature font. Then Grapes, Cherries, Peaches and Nectarines, Pine-apples, Melons, Hammas and Tomatoes were most beautifully displayed with a few out flowers and foliage. Quite different in style and contents was the second prize group, arranged by Messrs. William Artindale and Son, Sheffield. The centre-piece was "gates ajar," formed of Roses and white Stocks. Flanking this on the right was a large herb composed of deep lavender Sweet Peas, and on the left vases of Carnations. Baskets, wreaths and other designs formed the background. The third prize went to Messrs. J. Backhouse and Son, Limited, York, for a very fine display of flowers and fruits, the lady's hat and muff, composed of white Stocks, Statice and Roses, attracting much attention.

In Class C only one exhibit was staged, and this was only considered worthy of fourth prize.

In Class D, for gardeners and amateurs resident Yorkshire only, for the best and most meritorious display of the produce of Yorkshire gardens, the only exhibit came from Lord Londesborough, Market Weighton (gardener, Mr. J. C. McPherson), and this received second prize. It contained good Grapes, medium Peaches and Nectarines, Carrots, Beans, Tomatoes, &c., with Crotons and *Selaginella* for a background.

In Class 1, for a group of miscellaneous plants in or out of bloom, arranged for effect, there were five entries, the first prize being awarded to Mr. J. W. Conlthurst, Gargrave House, Leeds (gardener, Mr. M. Skinner). This group was composed of large Crotons, Hammas, two good specimens of rambling Roses, Hippeastrums and Orchids, a small pool of water being in the front. The arrangement was rather heavy and sombre, and the colours not at all well balanced. The second prize went to a much brighter group staged by Mr. J. S. Sharp, Valley Nurseries, Almondbury, Huddersfield. The general comment was that this group fully deserved the premier award. Certainly it was a most tastefully-arranged exhibit, and the variety of plants used was excellent. Mr. James Blacker, Thorpe Villas, Selby (gardener, Mr. Walton Curtis), secured third prize with a good display; and the fourth award went to Messrs. R. Simpson and Son, Brook Street, Selby.

In Class 2, for a group of miscellaneous plants in or out of bloom, arranged for effect, artistic arrangement being considered the chief point, the display was very good indeed. "The finest exhibit in the whole show" was the verdict of the Judges concerning the magnificent first prize group staged in this class by Messrs. J. Backhouse and Son, Limited, York, and consequently it was granted the special Jubilee gold medal offered for the best group. Mere words fail to describe the magnificence and artistic ingenuity displayed here. Generally speaking, a huge bay some 10 yards long and 5 yards wide was formed, with large rocks placed in a natural, irregular fashion. In the front and bottom of the bay the faintest of water-gardens was arranged, with stone steps leading through a charming little bog garden to it, with a small shell path running round the base of the cliff at the back. *Primula sikkimensis*, *Ranunculus acris*, *Delphinium grandiflorum*, *Dianthus neglectus*, with early Orchids and many other choice alpine and rock plants freely draping the rocks, made this group one that was full of interest. The second prize went to Messrs. Artindale and Sons, Sheffield, this exhibit also taking the form of a rock garden, with a beautiful display of herbaceous and rock and alpine plants intermixed. Mr. J. Wood, Boston Spa, York, was third with a very attractively-arranged rockery and water garden; and the fourth prize went to Mr. G. Cottam, Alma Gardens, Cottingham.

GREENHOUSE AND STOVE PLANTS.

In Class 3, for nine stove or greenhouse plants in bloom, distinct (Orchids excluded), Messrs. Cypher and Sons, Cheltenham, secured the first prize with magnificent specimens, including *Erian ventricosa magnifica* over 4 feet in diameter; *E. cavendishiana*, 6 feet in diameter, and a plant of *Bougainvillea sanderiana*. The same firm also took several firsts in the single stove plant classes with really wonderful specimens.

For a group of *Fuchsias* in flower, arranged for effect, Mr. William Kettlewell, 41, Horner Street, York, was first with some very good well-flowered pyramid plants, the double-flowered varieties being particularly good. The second and third prizes went respectively to Mr. J. W. Clarke, Chilton, York, and Mr. George Lee, York.

For a group of Carnations in bloom the first prize was secured by Mr. Joseph Pickersgill, Barton Hill, Westwood, Leeds (gardener, Mr. J. Donoghue), with some well-grown specimens of *Malmalson* Carnations. Messrs. Walshaw and Son, Scarborough, were second with good plants rather loosely arranged, and the third prize went to Mr. J. E. Skaffe, York.

ORCHIDS.

In the class for a table of Orchids, 12 feet by 5 feet, Messrs. J. Cypher and Sons, Cheltenham, almost, if not quite, created a record in first prizes, this firm securing first prizes in four classes. The specimens staged were very fine indeed, especially the *Miltonias*, *Cattleyas* and *Vandas*, huge plants of these really covered with flowers being freely displayed.

Messrs. J. W. Moore, Limited, Rawdon, Leeds, were equal first in the above class with Messrs. Cypher. It is rarely that such a tie occurs, especially in a class of this description. The arrangement in this case was very good, tall pillars being freely bedecked with Orchids in flower. All the specimens were excellent, and evidently the result of good culture.

The magnificent group staged by Lieutenant-Colonel G. L. Holford (gardener, Mr. H. G. Alexander) was admittedly one of the finest ever seen. In addition to the special gold medal offered by the York Gala committee the deputation of the Royal Horticultural Society also awarded it a gold medal and the first prize for a collection of twelve Orchids exhibited by an amateur. *Miltonias*, *Cattleyas*, *Cypripediums*, *Vandas* and, indeed, practically all Orchids now flowering were incorporated, the plants being the picture of health.

ROSES.

Generally speaking the Roses were not good, owing probably to the early date, many collections contained a few good flowers and a host of inferior blooms.

In Class 32, for a collection of Roses, in pots or ent blooms, arranged on table, there were four entries, Mr. George Prince of Oxford coming out a good first with a very charming exhibit. Roses of all sections were most tastefully displayed and the condition and form in which they were displayed left nothing to be desired. The second

prize group staged by Messrs. W. and J. Brown was also a very good one and came in close to the first prize group; the arrangement, however, was rather crowded. Mr. George Mount of Canterbury put up the third prize group, in which were excellent blooms of Richmond, Frau Karl Druschki and Joseph Lowe.

In Class 33, for a collection of Roses in bloom in pots, grouped for effect, the competition was good, and some excellent groups were displayed. Mr. J. E. Skaffe, Barton Lane, York, was the champion with a very pretty exhibit. Crimson Rambler formed an arch at the back, Hybrid Perpetuals and Hybrid Tens being placed in the foreground, surmounted with a small standard of Dorothy Perkins. Mr. William Todd, 19, Vyner Street, Haxley Road, York, secured second honours with well-grown plants that needed at least another week to develop their flowers. The third prize went to Mr. George Mount, Canterbury, for a very pretty group composed of Polyantha varieties.

Class 34, for a group of Roses in bloom, not less than twenty pots, the competition was rather keen, some very nice groups being staged. Mr. W. Langstaffe, Sydney Street, York, won the first prize in good style, his group comprising well-grown plants of Polyantha and other Roses. Mr. J. E. Skaffe, York, was second, his plants carrying blooms of much substance. The third prize went to Mr. H. Pybus, Wormald Green, York, the plants here being rather backward.

In Class 40, no less than seventy-two Roses, single blooms, not less than thirty-six varieties, were asked for. Messrs. D. Prior and Sons, Colechester, were the champions in this class, their good blooms fully deserving the first prize. Marchal Niel, Mildred Grant, Mrs. John Laing, Captain Hayward and Mme. Jules Gravereux were the best. The second prize was withheld, but Messrs. B. R. Cant and Co. of Colechester secured the third. We noticed good flowers of Mrs. E. Mawley, Aimée Cochet and Maman Cochet. The fourth prize was allotted to Messrs. Harkness and Sons.

In Class 47, for forty-eight Roses, single blooms, not less than twenty-four varieties, Mr. George Mount of Canterbury was awarded the premier position for a good lot of large blooms. Rev. Alan Cheales, Mrs. John Laing, Aimée Cochet, Richmond, Captain Hayward and Frau Karl Druschki were some of the best flowers. The second prize went to Messrs. D. Prior and Sons, Colechester; and the third to Messrs. B. R. Cant and Co., Colechester.

Class 48, for thirty-six Roses, single blooms, not less than eighteen varieties, was well contested, hence Messrs. Harkness and Sons, Hitchin, may be congratulated on winning the first prize. The blooms here were a uniform lot and good all through. White Lady, Lady Ashtown, Mrs. David McKee and Mrs. E. Mawley were very fine. Blooms of fair quality were staged in the smaller classes, but lack of space forbids detailed mention of these.

HARDY CUT FLOWERS.

Class 55 was the principal one in this section, a collection staged on a space not exceeding 15 feet by 6 feet being asked for. Messrs. G. Gibson and Co., Leeming Bar, Bedale, Yorks, were first here with a fine exhibit, the splendidly-grown blooms being staged in first-class condition and comprising such things as Irises, Pyrethrums, Peonies, Poppies, Lupines and Columbines. The second prize went to Messrs. Harkness and Sons, Hitchin; and the third to Messrs. William Artindale and Sons, Sheffield.

FRUIT.

Class 67 was a most popular one and was very keenly contested. A decorated table of ripe fruit, not to exceed fourteen dishes nor less than ten dishes, and not more than two distinct varieties of a kind, was asked for. The first prize here went to His Grace the Duke of Portland, Welbeck Abbey (gardener, Mr. J. Gibson). This was a very fine exhibit, first-class Melons, Peaches, Strawberries, Cherries, Figs and Grapes being most artistically arranged with suitable foliage and flowering subjects. The second prize went to the Earl of Harrington, Elvaston Castle, Derby (gardener, Mr. J. H. Goodacre). The fruit used here was very fine indeed, the Peaches and Figs being splendidly finished. The third prize was won by the Marquess of Northampton (gardener, Mr. A. R. Searle).

Class 68 was for a collection of fruits, ten kinds, only two sorts of Grapes, two bunches of each, being allowed. Lord Londesborough, Market Weighton (gardener, Mr. J. C. McPherson), was first here with a good collection containing very fine Strawberries, Grapes and Pine-apples. The Earl of Harrington (gardener, Mr. J. H. Goodacre) was second, and we specially noted a good dish of early Green Gage Plums in this exhibit. The third prize went to Messrs. Colebrook Brothers, Burton-on-Trent.

The smaller fruit classes were generally well contested, especially those for Grapes and Melons, the quality being of a very fair order considering the early season.

VEGETABLES.

These classes were poorly contested, but some moderately good produce was staged. For a collection of vegetables to be grown from seeds supplied by Messrs. J. Backhouse and Son, Limited, the Marquess of Northampton was first and Mr. P. Neville second. For a similar collection grown from seed supplied by Messrs. Sutton and Sons the Duke of Portland was first and the Earl of Lathom (gardener, Mr. B. Ashton) second; and for a collection grown from seeds supplied by Messrs. Webb and Sons the first prize went to the Hon. Viary Gibbs, Aldenham House, Elstree, Herts (gardener, Mr. E. Beckett). Pea Stourbridge Marrow, Tomato Webb's Sensation and Carrot Webb's Prize-winner were superb here. The second prize was awarded to the Marquess of Northampton and the third to the Earl of Lathom.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

HISTORY AND CULTURE OF A BEAUTIFUL FLOWER. LONG-SPURRED COLUMBINES.

HISTORICAL NOTES.

THE Columbine (Aquilegia) has been an inhabitant of British gardens for at least 350 years; it may be for an even longer period. In the days of herbals almost every part of the plant was thought to be efficacious for some particular complaint, and this was very likely one reason why it was included among cultivated plants in those early days. Once introduced, it would soon be noticed how much seedlings varied from each other and from their parents, and thus it would become a source of interest to watch the first flowering of a young plant. It is certain that there were a large number of garden varieties in the early years of the seventeenth century. As the rage was then for double flowers, we find numerous double forms depicted in the old flower books of that period. Two in particular are worthy of mention, and seem to have been highly prized: (1) *Aquilegia flore roseo multiplici* (double Rose-like flowered) and (2) *Aquilegia degener virescens* (degenerate Columbine). They were both spurless, and the former was like a double Larkspur or tiny double Rose, and the latter something after the style of those Anemones which have an outer circle of larger petals filled in with a number of smaller and narrower ones in the centre.

All these were forms of the common Columbine (*A. vulgaris*). No long-spurred varieties were known for many years afterwards. *A. canadensis* was introduced from North America in 1640 by John Tradescant, but although it has longer spurs than the old-fashioned *A. vulgaris*, it cannot be said to be really long spurred. This modern garden type of flower had its origin in (1) *A. cærulea*, introduced in 1864 from the Rocky Mountains; (2) in *A. californica* from North America; (3) in *A. chrysantha*, introduced in 1873 from California.

These different varieties seem to cross with one another very freely, so that it has become impossible to say where one begins and the other ends. They are all distinguished by their very long spurs, and in *cærulea* types the prevailing tones are blues, lavenders, purples and pinks, in *californica* red shades, and in *chrysantha* yellow and white (?) shades. Most seed lists catalogue *Aquilegia cærulea hybrida*, and a considerable number *A. californica hybrida* and *A. chrysantha hybrida*. Purchasers, however, should remember that owing to their freedom of intercrossing and generally unstable character these definitions and distinctions are only approximately true.

THEIR USEFULNESS.

Columbines are an indispensable adjunct to the flower border in June, "that season affording few other flowers," as that keen gardener John Rea observed so long ago as 1665. When Tulips are over we want something to take their place, and I would urge that there is no more graceful or easily-grown plant for this purpose than this comparatively modern race of long-spurred Columbines. They vary very much in their colouring. We get deep purples and pale lavenders, delicate pinks, bright reds, rich yellows, blues of many shades, and all borne in good strains on long, graceful stems, which in their turn spring from a nest of lovely Fern-like foliage. They are excellent as cut flowers. They are so elegant in themselves that they want but little arrangement, only a few of their own large leaves put in the bottom of the bunch. They are equally adaptable for large and small vases. And last, but by no means their least qualification, is that they last well. I tried some myself this year, and found that three vases of flowers which were put on my dining-table at midday one Wednesday remained quite fresh until the following Sunday, and then when I had cut a few old blooms away, went on for another two days. The only thing that was done to them was the keeping the vases full of water.

CULTURE.

The long-spurred race is not quite as robust as the old short spurred; still, it is quite hardy, and not at all fastidious about soil, provided it is not too light and dry. They enjoy a cool, damp-rooting medium, and although they will do well and flourish quite in the open, if they can be put where they will get a little shade from the hot afternoon sun their colouring will be more delicate. The one thing they dislike, and from which they must be protected, is wind. If they can be given a sheltered position, well and good; but if not the wise gardener will put strong, short stakes to support the flower-stems before the first bud begins to colour, otherwise, such is the brittle nature of the base of the stems, there will be breakages and unsightly plants before the flowering season is over.

Seed may be sown in gentle heat in mid-February and the seedlings pricked out in pans or boxes when they have made two or three proper leaves. They must be kept growing on in cold frames until towards the end of May or early June, when they should be nice sturdy little plants and may be safely transferred to a shady nursery border. Here they can remain (due attention being paid to watering and weeding) until September, when they can be planted in their permanent quarters. The following spring they will flower, but it will be nothing to what we may confidently expect the next year. I would advise everyone to have a few plants in a spare nursery bed, so that failures or poor flowers can be replaced after the first flowering. Personally I seldom keep any plants more than four years, often only three—new-raised seedlings are so much more vigorous and satisfactory. Seed should accordingly be sown every second year. If there is no accommodation for raising the young plants under glass, seed may be sown in a shady border in the open in well-prepared

fine soil any time after the severe frosts are over. It must, however, be remembered that, compared with that of many other plants, Columbine seed takes a long time to germinate, and one must not too hastily conclude, if it does not come up as soon as one expects, that it is no good. A similar routine of pricking out and planting must be followed with these open air seedlings as with those raised under glass.

Some firms now, such as Messrs. Dobbie of Rothesay, Messrs. Veitch and Sons, Chelsea, Messrs. Barr and Sons and the King's Acre Nurseries of Hereford make a speciality of these long-spurred varieties, and plants obtained from them in the autumn are sure to give good results if raising one's own seedlings is impossible.

AS POT PLANTS.

I have grown from twenty to forty Columbines in pots every season for the last few years, and each succeeding spring I seem to appreciate them more than the last. This is what I do: Early in September I get some good strong two year old plants and pot them up in ordinary good garden soil with some bone-meal with it. I cut all the yellow and dead foliage away, and when the operation is complete I stand them under a north wall, and there they remain until November or even December, when they are cleaned again and top-dressed and put into cold frames. I am careful to keep out frost, and about mid-February I bring the first batch into gentle heat. After a time, when they have well started, they are put into a warmer house. They are slow creatures to move, and I find they take at this early period of the year from six to eight weeks from the time they are taken out of the cold frame till they bloom. Green fly are very fond of the young growths, hence occasional fumigating is almost sure to be necessary to keep them in perfect health. As a rule, we put one plant in a 7-inch pot or three in a 9-inch or 10-inch, but, of course, everything depends on its size. Anyone who has had one year's experience will soon get to know what is best to do in this matter.

I cannot too strongly urge everyone who has not done so to give these long-spurred varieties a trial as pot plants. For cut flowers, as specimen plants in rooms or as a decoration for the conservatory or winter garden they are splendid, and their cheapness and the ease with which they are managed only need to be more widely known to make them more largely grown. J. JACOB.

PRIZES FOR READERS. JULY.

BOTTLING FRUITS AND VEGETABLES.

A First Prize of **FOUR GUINEAS**,
A Second Prize of **TWO GUINEAS**,
A Third Prize of **ONE GUINEA**,
And a Fourth Prize of **HALF-A-GUINEA**
are offered for the best essays on the above subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Tuesday, July 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

July 7 and 8.—Royal Horticultural Society's Great Summer Show at Holland Park, High Street, South Kensington (by kind permission of Mary Countess of Ilchester).

"The Garden" Flower Show.—We draw our readers' attention to the entry forms for our show which appear on another page. It will help us considerably if intending exhibitors will kindly fill them in and post them as soon as possible, and also if all rules are strictly observed. Judging by communications received the exhibition will be a most interesting one, and we hope as many readers as possible will exhibit and also attend the exhibition at Vincent Square on the 29th inst.

Flower notes from the Franco-British Exhibition.—In the French Garden and the Elite Gardens there is a goodly array of plants of various kinds from well-known French exhibitors, although in some cases the plants, especially Roses, Clematis, Gladioli, &c., were not yet in evidence. Messrs. Moser and Son of Versailles have several lots of Rhododendrons and Azaleas, among which we noticed in good form among the former Mlle. Therese de Vilmorin, Duc de Montpensier, M. Ch. Girault, Mme. Felix Guyon, M. Ch. Seguin, Claude Monet, Jacques Moser, M. Albert Viger, Ampère, Arago, Bengali and many others. Azalea pontica was represented by a number of President Carnot, Azalea hybrid de mollis by M. Hardy. Some fine plants of Azalea glauca stricta and Kalmia Pavardi were also included in the groups. Messrs. Millet et Fils of Bourg-la-reine showed Pæonies in goodly numbers; Albert Crousse, M. Calot, Mlle. Dessert, Marie Deroux, Flambeau, Emile Bourbon, M. de Chaunay, Pauline La Coquette, Louis Van Houtte, Mlle. Louise Calot and many more beside. The same firm showed an immense variety of Iris grandiflora. We can only note a few of them, Goliath, Druid, Virgilius, Edina, Empruss, Nigea, Sceptre, Verdita, Juliette, Haydeé, Aspaie, Calypso, Actéon, Bacchus, La Baronne, Louis Meyer, Justinian, Chloris, Orpheus, Alice, Soliman, Pajols, Victorine, Florentine, Amabilis, &c. M. Goyer of Limoges has a large display of Cannas, Roses and Clematis. At the present moment we can only note Pelargonium Paul Crampel and P. Alphonse XIII. The exhibits from other French nurserymen must be noted later in the season.—C. H. P.

Roses and Sweet Peas at Kew.

No matter at what season of the year one visits the national gardens at Kew something of interest is always to be found and just now Roses abound everywhere. The sunk garden—appropriately known as the Rose Dell—that is situated close to the Pagoda, is at present a veritable dream of loveliness. Rose species and the stronger growing ramblers present themselves in the utmost profusion, that lovely variety Alberic Barbier being exceptionally good. Then the beds round the Palm House, wherein are planted those varieties of Teas, Hybrid Teas and Hybrid Perpetuals best suited for garden decoration, are a blaze of colour and a great centre of attraction. When one has had a surfeit of these, a short walk will bring the visitor to the pergola situated between the herbaceous ground and the rock garden. Here festoons of bloom present themselves in endless array, the colours in most instances being admirably blended. In the herbaceous border skirting the T range excellent clumps of Sweet Peas are producing their brilliant and fragrant flowers, and when one has tired of these a visit to the Barberis Dell is well worth while. Here huge spikes of variously coloured Foxgloves are towering over the blushing Pæonies, the rich colours of both these plants being admirably toned down by the purple and variously shaded green hue of the Barberries. Altogether

Kew is a place to live and be happy in at the present time, and this blending of the florists' and botanists' arts is a most pleasing and healthy sign of horticultural advancement.

COLOURED PLATE. PLATE 1351.

THE YELLOW PÆONIAS.

(WITH A COLOURED PLATE OF P. DELAVAYII.)

FOR a number of years admirers of the brilliant Pæonia, than which there is no more handsome ornament to the flower garden, have desired one with yellow flowers. The species which for long most nearly approached that colour was P. wittmanniana, but it has not been found one of the best of growers with many, and it has also proved somewhat shy in blooming in many gardens, while its colour is not bright enough to meet the desires of those who sought for a really yellow flower in the race. We owe, however, largely to the researches of the Abbé Delavay in Yunnan the introduction of some species which give us flowers of a truer yellow, and these plants, first sent to France, have found their way into the British Isles, although only to be met with in the gardens of a few of the most enthusiastic seekers after new flowers. P. lutea, which was found in Yunnan in 1882, was sent to the Museum of Natural History in Paris, and has since been distributed, although still scarce and expensive. It has good yellow flowers, but it is in this respect surpassed by the variety major, which has more intense colouring.

Still another yellow Pæonia has been introduced, but under the cumbersome name of P. Makosewitsii, one sufficient to debar the plant from any garden were it not for its pleasing flowers. This, like the others named, has been cultivated in the garden of Mr. W. E. Gumbleton, Belgrove, Queenstown, to whom we are indebted for the flowers of Pæonia Delavayii, illustrated in the coloured plate, one of the latest to be introduced and also one of the best of its colour. Mr. Gumbleton is one of the most discriminating of flower lovers, and as he has made a special study of the yellow Pæonias for some years, it must be gratifying to him to have this species figured from flowers grown by him. The coloured plate speaks for itself and shows the beauty of this species, which, like several others, comes from China.

These yellow Pæonias require much the same cultivation as the ordinary herbaceous and Tree Pæoniae, and prefer a rich soil and an open position, although they will also thrive in one which is shaded or semi-shaded. S. A.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Primula obconica outdoors.

Having read in your "Answers to Correspondents" for June 20 a note on planting Primula obconica out of doors, it may interest you to hear that in the spring of 1906 I planted out in a border facing north two of these plants which had been flowering indoors. This was done experimentally, and I did not expect them to live through the winter, but both plants survived the winter of 1906-7, and when I was last at home I noticed that one of them was not only alive, but making fair growth and showing bloom. The position was fairly sheltered, but more exposed to a north-east wind than any other. The garden I am speaking of is that of Overbury Hall, Layham, Suffolk, and stands on rising ground exposed to the east and south, but is fairly sheltered by trees. T. H. DIPNALL.

Ants in gardens.—Referring to the note on the above subject in THE GARDEN of the 20th ult., it may be of use to some of your readers to know of a simple and effective way of exterminating these pests. I got the idea a year or two ago on a fruit farm at the Cape, where the ants were playing havoc among the tender young shoots of newly-planted Vines. We took a quantity of bran, sweetened and moistened it with golden syrup and water, and stirred in a small quantity of Paris green. This mixture we distributed among the Vines, putting about a teaspoonful at the foot of each. The ants quickly took to this pleasant mixture and—passed away! We prepared our mixture from no special recipe, but, as far as I can remember, used about half a medium-sized tin of golden syrup to a bucket of bran, with about two tablespoonfuls of Paris green and enough water to make all moist and crumbly. Here in England it might be advisable to protect the poison mixture, lest dogs, gardeners' children or birds should be tempted to eat it. At the Cape it was used quite freely in the open, and, as far as I remember, we had practically no fatalities, human or otherwise. As a matter of fact, for the killing of ants the Paris green may be used sufficiently diluted, and the mixture distributed sparsely enough to make the work of collecting enough to harm a child or a dog hardly worth while. Having seen the havoc ants will work among Peaches on a wall, I make no apology for sending this note.—CLARENCE ELLIOTT.

NEW ORCHIDS.

ODONTIODA × WICKHAMENSIS.

THIS is a very pretty little bigeneric hybrid, the result of crossing *Odontoglossum crispum* with *Cochlioda sanguinea*. It has rosy mauve flowers measuring about 1½ inches in diameter. The sepals and petals are ovate lanceolate, the rosy mauve ground colour being freely dotted with carmine spots. The flowers are produced rather loosely on a slender stem. Shown by Mr. G. W. Bird, Manor House, West Wickham. Award of merit.

ODONTOGLOSSUM CRISPUM PRINCESS OF WALES.

THIS is a very fine variety of a most popular and variable Orchid, and has exceedingly large flowers of grand substance resembling somewhat in form the variety Prince of Wales. The sepals and petals are broadly ovate, the latter being beautifully serrated at the margin. The white ground is daintily suffused with purple. The labellum is of medium size, with dull, blood red and yellow markings. The habit seems very vigorous, the large flowers being placed rather thickly on a stout stem. Shown by Baron Schröder, The Dell, Egham. First-class certificate.

DENDROBIUM JERDONIANUM.

A very pretty and rare member of this family, the deep golden yellow flowers being produced in rather dense clusters at the tops of erect, stout stems. The petals and sepals are very narrow and acute, and the labellum is nearly the same shape, but delicately crimped at the edges and of a deeper orange hue. The brownish grey stems are thinly clothed with rather small leaves. A handsome, well-grown and sweet-smelling plant. Shown by Sir Trevor Lawrence, Bart, K.C.V.O., Burford, Dorking. Award of merit.

EPIDENDRUM VIRENS.

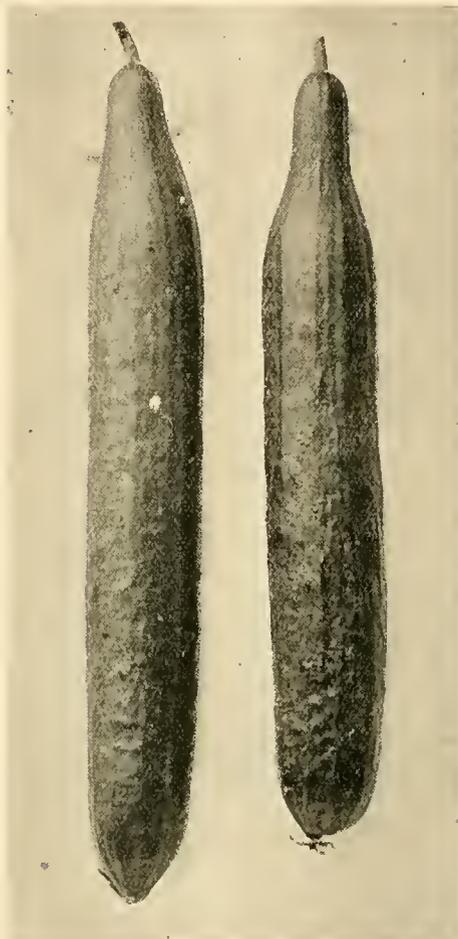
THIS, as its name implies, is a green-flowered Epidendrum, and it is also exceedingly free-flowering, the plant shown having four large compound racemes very freely clothed with medium-sized flowers of a pale green hue. The labellum is dull white, with faint, dull crimson pencillings. Shown by Sir Trevor Lawrence, Bart. Award of merit.

BULBOPHYLLUM FUSCO-PURPUREUM.

A very curious little Orchid, the small purple and almost black flowers being borne on a pendulous stem. The sepals are comparatively large and very acute, the colour being dull purple. The two petals are represented by tiny thread-like organs, the blackish crimson labellum being the most conspicuous. Shown by Sir Trevor Lawrence, Bart. Botanical certificate.

EULOPHIA NUDA.

A curious plant somewhat resembling a *Calanthe*, but with differently-shaped flowers. The rather small sepals and petals of these are bright green, and are erectly held. The lip is of medium size and white, with crimped or waved



TWO GOOD NEW CUCUMBERS: FAULTLESS AND EVERGREEN. (See page 324.)

margins. Flowers are placed rather thinly on stout, erect stems. Shown by Sir Trevor Lawrence, Bart. Botanical certificate.

PHALENOPSIS LINDENII.

The plant shown was a well-grown specimen, and had a large, pendulous raceme of its pretty little purple and white flowers, which contrast well with the reddish brown line of the stem. Shown by Messrs. Charlesworth and Co., Bradford. Botanical certificate.

LYCASTE TETRAGONA.

THIS has very curiously coloured flowers that are borne in a dense raceme on a short stem quite close to the soil, the large, erect leaves standing well above them. The dorsal sepal is very large and pouch-like, the large pitcher-shaped labellum resting snugly in this. The

colour of the sepals and petals is pale green, faintly marked with dull crimson, and the lip is cream and purple outside and rich purple inside. Shown by Messrs. Charlesworth and Co. Botanical certificate.

VANDA PUMILA.

As its name implies, this is a very miniature member of the *Vanda* family. The plant shown was only a few inches high, and had two of its pretty little cream and purple flowers, the latter colour being represented by bright and distinct striations on the comparatively large lip. Shown by Messrs. J. W. Moore, Limited, Rawdon, Leeds. Botanical certificate.

All the above were shown before the Orchid committee of the Royal Horticultural Society on the 23rd ult., when the awards were made.

“THE GARDEN” FLOWER SHOW.

THE PACKING AND TRANSMISSION OF FRUITS, FLOWERS AND VEGETABLES.

THE date of THE GARDEN Flower Show, which is to be held at the Royal Horticultural Society's Hall, Vincent Square, Westminster, on Wednesday, July 29, is drawing near. Readers who intend exhibiting their produce at this exhibition will now be very busy making their final preparations. Many will be obliged to send their produce by rail; others will bring it with them and remain to enjoy the floral feast provided; but to all intending exhibitors the following hints will be of much service:

In the first place, I would impress upon them the advisability of carefully reading and complying with the rules printed for their guidance. By strictly adhering to these the exhibitors will benefit as well as the promoters of the show, the former by having their produce placed before the judges in good condition, and the latter by being able to devote equal attention to all exhibitors. If, for instance, some exhibitors fail to enclose their names and addresses with their exhibits, the officials would be put to much unnecessary trouble—trouble which can be avoided.

- The following points should be remembered:
1. Strictly observe the rules.
 2. Use stout, but not cumbersome, wooden boxes for packing the produce in.
 3. Pack all goods firmly, so that they cannot move about and get bruised during transit.
 4. Do not use cotton wool for packing cut flowers.
 5. Do not pack flowers, and especially Sweet Peas, when the blooms are damp.
 6. Have all packing material quite clean.
 7. All boxes should be plainly labelled, “This side up, with care,” and addressed to “The Manager, THE GARDEN, Royal Horticultural Society's Hall, Vincent Square, Westminster.”
 8. Boxes taken by the exhibitors themselves should be as carefully labelled, and every care taken to prevent mishaps.
 9. See that each card is fastened to the particular exhibit for which it is intended, and do not lay the cards loosely in the boxes.
 10. Do not put up five varieties nor seven where six are required. Put in the exact number specified, otherwise the produce may be disqualified.
 11. Send the best produce, having regard to quality rather than mere size; but if you can combine the two, so much the better.
 12. Consult time-tables and railway officials, and so be quite sure of having your goods at Vincent Square in good time.

Cut Flowers in Water.—Where cut flowers, such as Roses, are placed on show-boards in cups of water, care should be taken to prevent any water spilling. To this end the cups must not be filled too full, nor too little put in, as it would become exhausted during a long journey.

The Condition of Flowers when Gathered.—If a Rose bloom be cut on the morning of July 28, it should be in such a condition that by

the following morning it will be just sufficiently developed to show all its good points. If it is sufficiently developed on July 28, it will be too much developed on July 29. I simply mention this one case, but exhibitors would do well to apply the principle to all cut flowers.

Selecting and Cutting Flowers.—The early morning is the best time to cut flowers. The plants have been feeding and absorbing moisture during the night, and are much fresher than at the close of the day after exposure, maybe to brilliant sunshine. Cut all flowers with long stems attached at first, and place them in vases of water immediately in a darkened room which is cool. Do not place the vases on the floor, as there is a draught there, but on a table. Boxes painted green or black or brown attract the sun's rays, and then the flowers inside suffer more or less. Unpainted wood is best in summer time. If your boxes are painted any of the above colours, cover them with holland cloth.

Fruit and Vegetables.—It would be quite useless to send over-ripe fruit, as it would not be fit to stage on arrival at Vincent Square, but it should be as ripe as possible consistent with carrying well. Gather the fruits with their stems attached, and pack all in single layers in small, flat boxes, and then securely pack the latter in the travelling boxes. The small ones should not be nailed down—that is, the lids—but tied firmly with stout twine. Less trouble will then be experienced on arrival at the show building, and the contents will not be injured by the knocking in and taking out of nails. Use green leaves for packing the fruit in such as Gooseberries, Raspberries, Currants, Strawberries and Cherries. The first and the two last named should be placed each berry in a leaf. Plane, Fig, Vine and Lime leaves are suitable, also Strawberry leaves. The shallow boxes should be lined with leaves, and sufficient placed on the top so that when the lid is put on the fruit will be kept firmly in position. If possible, gather the Currants in clusters and deftly place leaves between each cluster. Apples, Plums, Pears and similar fruits should be wrapped singly in clean tissue paper and placed in the boxes, all vacant spaces being filled with cotton wool, and a layer of the same material put on prior to the fixing of the lid.

Although vegetables may be sent long distances by railway without being damaged, specimens intended for competition at a flower show should be as carefully packed as the most tender fruit or flower. It must be remembered that many persons are competing, that each one is sending up the best produce, and so every care should be taken to stage your vegetables in the best possible condition. For instance, as regards quality, certain dishes may be equal, but the one that is cleanest and freshest, being free from any bruises and discolouration, will be awarded first honours. So the difference between first and second prizes, and so on, may be determined by the packing.

Selection and preparation of the vegetables are two very important matters. The skins on Potatoes should be firm, not loose. When lifted expose the tubers to the air for one hour, then gently sponge off the soil and, directly they are dry, wrap each one in clean paper ready for the packing. Undue exposure to the sunshine and air would cause the skin to turn green. Turnips and Carrots should be raised from the soil with the aid of the garden fork. If violently pulled up the Carrots would be scratched by the stones in the soil. Sponge off the soil, do not use a brush. Leave the taproot on Turnips and some of the top growth as well, also on Carrots. Onions should not be peeled, simply remove the soil. Gather Peas early in the morning and pack the pods in boxes by themselves. Tomatoes should be packed similarly to Strawberries. Heavy vegetables, such as Carrots, Turnips and Potatoes, should be packed in the bottom of the box, and lighter kinds, such as Peas and Tomatoes, at the top. Do not confuse kinds and varieties. Avon.

THE KITCHEN GARDEN.

THE FRENCH SYSTEM OF GROWING VEGETABLES IN GLASS FRAMES AND UNDER BELL-GLASSES.

(Continued from page 300.)

ANOTHER method of preserving and protecting Lettuces in frames for winter use is to take up the full-grown plants with a bole of soil to the roots at the end of October and plant rather close together in these frames. By attention to picking off dead leaves and protecting from hard frost these Lettuces can thus be kept in fresh condition for months. A good way of obtaining an early spring crop of Cabbage Lettuces is by sowing early in January in pans or boxes, placing these in a heated frame or on the shelf of a greenhouse near the glass. Immediately the young plants are large enough to handle they should be transplanted 4 inches apart into these frames, which have been previously placed on a border in a sunny position, but not necessarily with a hot-bed under, where they will soon make good progress. Before the young plants touch each other every other one should be taken up carefully, with soil attached to its roots, and transplanted to a warm position on a rich border out of doors. Those left in the frame will soon make rapid progress, and be fit to cut early in May; those of the same age transplanted out of doors will soon follow. By sowing again at the end of January in a frame and pricking out on a warm border outside 5 inches apart as soon as large enough to handle, transplanting every other one before they touch each other as before, an unbroken supply can be obtained until Lettuces may be had in plenty in the open quarters. Half of the last sowing should be Cos Lettuce.

Lettuces on Hot-beds in Winter.—From the foregoing it will be seen that a long succession of Lettuce may be had in the course of the year in warm and sunny positions out of doors with the aid of these glass frames and bell-glasses alone. The time of most difficulty in obtaining a supply is from January to the end of April, and this is the time they command the highest price, for the production of which recourse must be had to the assistance of hot-beds and glass. The middle of November is a good time to commence the formation of these beds. They should be made up of fresh stable manure (well shaken and mixed beforehand) to the depth of 2 feet and 7 feet in width (2 feet wider than the frames are long) to allow of linings of warm manure in cold weather. The length of the beds will be determined by the number of frames used, allowing a space of 1 foot between each frame for lining. The frames are chiefly used for Cabbage Lettuce and the cloches for Cos varieties. The frames being 20 inches deep, the bottom part to the depth of 6 inches may be filled with the same manure as that forming the bed, treading it hard down and placing on this 7 inches of light soil well enriched with rotten manure, pressing it slightly down to plant the Lettuces in, thus bringing them within 7 inches of the glass and close to the light.

The seeds intended for this first winter crop should have been sown early in October in frames, and the young plants transplanted as soon as large enough, as recommended before, so that by the time the frames are ready they are good sturdy little plants, and if carefully planted 8 inches apart with a body of soil to the roots, they will immediately start into growth under the genial influence of the heat of the hot-bed, which should range at this time from 55° Fahr. to 58°, and to prevent its falling at any time below 50°, recourse must be had to filling the spaces round the frames with fresh manure as linings, and to covering the frames with mats or litter at night. More care is needed in the growth of these Lettuces than of those spoken of

before, on account of the moist heat in which they are growing and the susceptibility of the leaves to damp off. To prevent this a little air must be admitted on every favourable occasion and decayed leaves picked off as soon as discerned. In planting it is important to select the plants all of one size as near as possible; by doing this they are fit for cutting at the same time, and the frame immediately ready to receive another crop.

The seed for the next crop should be sown about October 20 in one of the frames on the hot-bed, and treated as before described, sowing again the middle of November and early in December for the last time.

The preparation of the beds should be the same for cloches as for frames, leaving spaces of 10 inches between each for linings. These linings may be planted in spring with Cos Lettuces when no longer wanted for warmth. The most common way of planting the cloches is with one Cos in the centre and four Cabbage Lettuces round it; these are fit to cut before the Cos, thus making room for it to develop into a large specimen.

The crops in the frames are over by the middle of May and occasionally before, and the question now arises what crops to grow in them to the best advantage during the summer and autumn. Melons, I think, are the most popular, and when well grown are as remunerative as most fruits. Two plants should be planted in each frame, and each plant stopped at the fourth leaf to induce it to form side shoots; two of the strongest should be selected and encouraged to grow prostrate on the soil. Each of these shoots (there being four from the two plants) should produce two fruits each, giving, say, from six to eight fruits to a light, and as it is quite possible to produce two crops of Melons before the end of October, each frame is capable, in experienced and industrious hands, of producing sixteen Melons, which at 2s. each and the value of the Lettuce crops would amount to a considerable sum. Those who are curious in the matter may find out for themselves approximately the returns which can be had from these crops under this system by finding out the number of frames it takes to cover an acre. OWEN THOMAS.

(To be continued.)

TWO GOOD NEW CUCUMBERS.

It is seldom that we see two such excellent Cucumbers as those illustrated on page 323, and this pair is particularly interesting on account of their parentage. The one on the left is named Faultless, and is the result of a cross between Market Rival as the seed parent and Improved Telegraph as the pollen parent. That on the right is named Evergreen, and in this instance the same parents were used but the process of crossing was reversed, *i.e.*, Improved Telegraph was used as the seed parent, the pollen being obtained from Market Rival. As will be seen, Faultless is rather the longer of the two, but both are of excellent shape. They were raised by Mr. S. Mortimer, Farnham, Hants, and shown by him at the meeting of the Royal Horticultural Society held on the 9th ult.

THE FRUIT GARDEN.

LATE MELONS.

WELL-GROWN late Melons are generally much appreciated, and when one has suitable convenience for producing them special efforts should be put forth to ensure a supply during September and October. Generally speaking it takes from three to four months from the time the seed is sown till the fruits are ripe, according to the season and the methods under which they are grown. Probably no fruit varies so much in quality as the Melon, and practically everything

depends not so much on the variety but on the cultivation, for unless the fruit is properly matured and well ripened the flavour will be indifferent. Some of the oldest varieties are, in my opinion, quite equal to many of the newer sorts when grown to perfection, and though I do not wish to say one word in disparagement to those who have done so much in introducing the newer varieties, I am anxious to point out that however good these may be they are inferior when cultivated in an unsatisfactory way to the older varieties when well treated. In my opinion the chief causes of failure may generally be attributed to insufficient drainage, soil too close in texture and allowing the plants to become infested with insect pests such as mealy bug, red spider and black aphid. These are sufficient to account for deficiency in flavour and that highly finished appearance which all experts in Melon culture are only too well familiar with.

RAISING THE SEED.

Seeds should be sown singly in well-drained, clean 3-inch pots, and raised in a gentle heat. Immediately the young plants have made their appearance through the soil place them on shelves near the glass, and after the second rough leaf is made pot on into 5-inch and 6-inch pots; bury the stem to the seed leaf and make moderately firm. Place a neat stake to each and give the plants all the light possible to encourage a stout, short-jointed growth. I cannot say how long Melon seed retains sufficient vitality to germinate, but when kept under proper conditions I have known it to do so after fifteen years, but the older the seed the more care will be required in making it grow and little water must be given.

STRUCTURES.

Though Melons are a success both in heated pits and portable frames on hot-beds far better results are assured when suitable three-quarter or span houses are available, specially during late summer and early autumn, as the days get shorter and the sun-heat less.

COMPOST.

Few gardeners, and specially the less experienced, are fortunate enough to be able to say that they have never been troubled with what is known as canker or the rotting of the stem. This may occur in any part of the plant, either at the base, quite near the soil, or on any of the leading branches, and this generally happens about the time when the fruits are in the final swelling. Many remedies have been suggested as a cure, but I have never met with anything effective, the result being that the fruits, if sufficiently advanced, are prematurely ripened and are practically worthless. All sorts of causes are attributed to this, the chief one being the indiscriminate use of water, and many people take the utmost pains not to let any go near the base of the plant, but I have long been convinced that the chief and practically only cause is insufficient drainage, and especially a non-porous state of the soil. In my younger gardening days this troubled me considerably until an old gardener friend, who was a most successful cultivator and exhibitor, gave me some advice, which I have never failed to follow. Use plenty of drainage at the bottom of the bed, and instead of having all loam have one-half of this and the other half of river sand with a little finely broken charcoal added. Since then canker has never troubled us. The plants at first may not grow so strong but the fruits will set more readily, the water passes away quickly and when a good crop is assured feeding will soon put sufficient size and vigour both into foliage and fruit. The soil should never be allowed to become dry except in the last stages of ripening, the fruits being supported with either suitable nets or small wooden supports looped up to the wire at each corner. Every means should be taken to keep the foliage and growths clean and healthy till the ripening is completed.

Herts.

E. BECKETT.

THE FLOWER GARDEN.

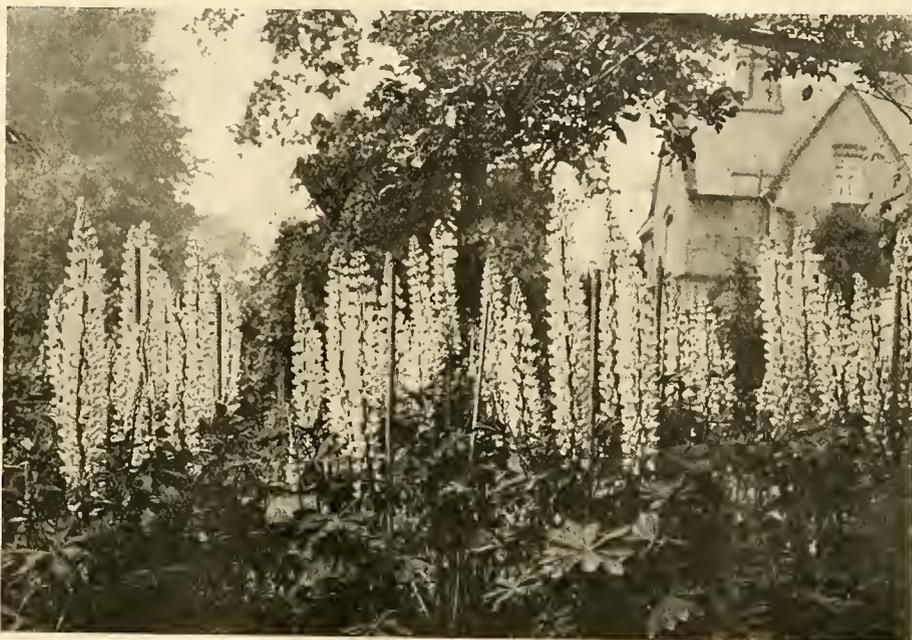
THE LUPINES.

BROADLY speaking, the Lupines may be divided into three groups, viz., annuals, perennials and those of a shrubby character, each alike valuable. The number of sorts met with under cultivation in gardens is comparatively few, those most frequently seen being either annuals or perennials. Taking them all in all, not only are they a beautiful and interesting, not to say useful, group of plants, but they are all of them of easy cultivation in any good garden soil. Especially beautiful and varied are the numerous varieties of annuals, which may briefly be described as among the most ornamental of summer-flowering plants. These may be sown in the open ground in March or April, or in successional batches in both months, where they are intended to flower, or they may be sown thinly in pots and transplanted. The perennial sorts are also among the easiest plants to grow, and given a good depth of soil

The shrubby sorts are of equally easy culture, and may be increased freely by seeds or by cuttings slipped off with a heel attached in summer time and inserted in sandy soil in a cold frame. In this way *L. arboreus* roots freely, or self-sown seedlings may be obtained in the vicinity of the old plants.

L. arboreus (the Tree Lupine) is a native of North America, from whence it came to our gardens just a little more than a century ago. The pale yellow and fragrant blossoms of the type are abundantly produced, and when the plant attains to a good size it is most effective either in the shrubbery or as an isolated specimen. When fully grown it is several feet high and often 6 feet through, while its silvery and somewhat downy leaves render it quite distinct. It is also an excellent plant against a wall having a western aspect. The best known of the perennial varieties are:

L. polyphyllus, shown in the illustration, a bold, free-growing perennial attaining 4 feet to 5 feet high and having handsome spikes about 2 feet or more in length, of blue, lilac, purple or white flowers. Raised from seeds this is a some-



LUPINES IN MR WILLIAM HUDSON'S GARDEN AT SUBBITON.

into which they may root freely, they quickly form handsome bushes. These when in flower are most effective. The perennial varieties are readily increased by division and also by seeds. When dividing the plants it will be found a good plan to pierce the prong of a small hand fork into the woody rootstock and then wrench the plants asunder. This is a safer method than using a knife for many things, the latter often causing the loss of many valuable roots. In the case of a good strain of *L. polyphyllus albus*, for example, division is the only certain way of increasing it. Notwithstanding, good white strains are obtainable from seed, and though the white *polyphyllus* may easily be distinguished by the foliage alone, there is a good deal of variation in point of purity in the flowers.

It is a good plan with these late spring-flowering plants to propagate them by division early the previous autumn. By so doing they gather strength before flowering time comes round. There are few perennials capable of producing a finer effect in the garden than well-growing and equally well-flowered examples of this white Lupine. An old and common plant it may be, but one of the finest notwithstanding.

what variable plant in point of colour, while *L. grandifolius* is a distinct large-leaved form of this plant, also known as *L. macrophyllus*.

L. nootkatensis is a plant of dwarfier and more compact growth, seldom more than 2 feet high. The predominant colour is blue, mingled with more or less intense purple, with veins of a deeper hue. A neat and showy border plant.

The above are those most frequently met with in cultivation, while such sorts as *laxiflorus*, *leucophyllus* and *sub-carnosus* deserve to be more frequently seen than now. Among the more tender varieties *L. mutabilis* is deserving of notice as worthy of cultivation.

ZEPHYRANTHES AUREA.

This is a very beautiful species from Peru, with erect, funnel-shaped blooms nearly 3 inches across and of a rich golden orange colour. The solitary flower is produced at the summit of a scape 1 foot high, having a slightly glaucous tendency. The narrow, deeply channelled, acutely-pointed leaves are about 1 foot long, shining, distinctly lined above and glaucous beneath for about half their length when this

characteristic passes away. The plant was originally received from a friend in Peru by Sir Trevor Lawrence's son in South Africa, and by him sent to England. At its first flowering the plant was leafless, while the example exhibited before the Royal Horticultural Society on the 9th ult. was well equipped with the foliage already described. It was shown by Sir Trevor Lawrence, Bart., Dorking, and given an award of merit.

VIOLA ELATIOR.

A CHARMING *Viola* as yet but little known, although not by any means new to British gardens, is *Viola elatior*, a native of Northern Asia and the Orient, which must not be confounded with another *V. elatior*, now referred to as *Viola canina*. The true *V. elatior* is a very distinct and beautiful species, which I had for some years, but lost accidentally, and was glad to replace a couple of years or so ago. My own plants are in a semi-shady place, partly beneath the branches of *Cornus sibirica flavi-ramea*, and in the half-shade the *Viola* is charming with its soft green foliage and delicately-coloured blue flowers with a little white in the centre. It is an erect grower and is of slender and graceful habit, and with me at present is about 9 inches high. *Viola elatior* does not seem to be at all common in the nursery trade, but it is a plant worth looking after by amateurs and also by dealers in hardy flowers.

Dumfries. S. ARNOTT.

PRIMULA SIEBOLDII OUTDOORS.

THE group of *Primula Sieboldii* illustrated on the opposite page is growing in Mrs. Jessopp's garden at Forty Hill House, Enfield. The soil there is deeper and more retentive of moisture than in my garden, and many plants that love cooler conditions flourish there in a manner that astonishes me and often makes me somewhat envious. Erythroniums, *Violas*, Irises of the Juno section, *Narcissus cernuus fl.-pl.* and many forms of *Primula Sieboldii* all show a degree of luxuriance and a tendency to increase quite unknown, unfortunately, on this side of the road.

The group shown is one of several broad bands edging herbaceous borders. It is composed of the varieties known as Miss Ryder and Bruce Findlay. They have been planted about five years and face the south-east, but after midday they are shaded from sunshine by some stable buildings and sheds. Miss Jessopp tells me she gives these groups a good top-dressing of leaf-mould annually, preferably in autumn, but if not convenient at that season it can be deferred till spring. Other varieties that are doing equally well are Ware's White, Maiden's Blush and Lilacina. E. A. BOWLES.

GLASNEVIN NOTES.

CALTHA POLYPETALA.

THIS plant is a native of Asia Minor, and stands out as a giant among the Marsh Marigolds. Disparaging remarks may already be heard about *Caltha polypetala*, which shows it is not a plant for everyone, but if seen under favourable circumstances, as at Mr. Walpole's garden in County Wicklow, one must acknowledge the plant is all

that it claims to be, *i.e.*, a bold, handsome and magnified version of the common Marsh Marigold.

At Glasnevin the plant grows very freely, but does not flower so profusely as the common one. It is planted in good rich soil in a bog bed, where it is often flooded during the winter, so there should be no doubt of its hardiness. The flower-stem reaches about 3 feet in height, bearing flowers of a bright golden yellow from 2 inches to 2½ inches in diameter. After flowering a great amount of growth is made, and some of the leaves are now 10 inches by 12 inches in width, rising on stout petioles to nearly 3 feet in height.

There is a peculiarity about the flower-stem which is worth noting, for it will be seen that



A NEW ZEPHYRANTHES: Z. AUREA. (Natural size.)

the nodes, where the stem branches, seem to emit roots with great freedom. Last year the flower-stems were pegged down and covered with soil, and from each node thus treated leaves appeared, and eventually young plants were formed, which have grown strong enough to flower this spring.

Seed was also saved and sown here last year, and a nice young batch of plants was obtained. Careful watching is needed to gather the seed, for the follicles split while almost green. The seed should be sown, soon after gathering, in pots placed in a cold frame, and if it is good the seedlings should appear in about six weeks. C. F. BALL.

THE ROSE GARDEN.

SECRETS OF ROSE CULTURE.

ROSES that are let severely alone during summer will not prove glorious bloomers, and any autumn varieties among them will be especially unsatisfactory. It is necessary to give Rose trees food and drink, protect them from weather ravages and free them from insect pests, also sometimes cure them of diseases if they are to yield plentiful and perfect flowers. During the warm months the culture of Teas and Hybrid Teas is identical with that of Hybrid Perpetuals, Polyanthas and the various hardy Roses; it is only in winter that the delicate types require to be sheltered with Bracken Fern, moss litter, branches, sacking or other methods. Because Roses have been autumn planted in well-manured soil it does not follow, as is often believed, that they can do without feeding when they are lavishly producing buds and opening blooms. There are various encouraging kinds of artificial manures that do wonders when applied in April; but if this work has been neglected we must fall back upon other kinds that are suitable for use alternately twice a week until the end of August, or I should say until the middle of September, since our seasons appear to be changing and there are now prolific Rose displays during October.

A splendid liquid manure can be made with half an ounce of nitrate of soda dissolved in a gallon of water, and this is so simple that its concoction will not bother the least experienced gardener. More elaborate, but almost essential, is another made of half an ounce of superphosphate of lime, a quarter ounce of sulphate of iron, a quarter ounce of sulphate of ammonia, in 2 gallons of water. To use these alternately, one on Monday and one on Tuesday, will produce splendid results, or a reliable fertiliser will do as much service perhaps as the second of these manures prescribed if used at the rate of half an ounce to 1 gallon of water. Liquid manure must never be applied to dry soil, as its action will be scorching and far too powerful. If rain enough has not fallen to saturate the earth thoroughly, a canful of water, rain water preferably, should be given to each Rose, two canfuls or a pailful not being too much for a strong standard, large bush or tall climber. After the soil has dried up almost on the surface the liquid manure should be given, and will then go straight to the nourishment of the roots. I always employ soot water once a week in addition to manures, because I think it helps the foliage to maintain a healthy green and also sweetens the earth, ridding it of many insects.

It will generally be found that a fine autumn crop of Roses is gained from trees that have been copiously cut during the summer. There are two recognised pruning seasons, the end of March or early April and October, but I am of opinion that Hybrid Perpetuals and Teas cannot be expected to go on blooming well until the coming of winter unless they are considerably cut about the middle of August, or rather earlier, after the first blooming is done and the second has not commenced. As stated above, if the Roses have been freely cut, with long stems as

they look best in our vases, the trees will be in a fine healthy state to begin making new flower-shoots, and no summer pruning should be done. Some Rose lovers will not allow their flowers to be gathered, only snip off short-stemmed dead blooms, and are then foolishly surprised because there is no luxurious autumn harvest. Frequent hoeings of the soil are necessary to keep it from being baked hard by the sun.

As for watering Roses, it is essential; trees may live through spells of drought, but their productiveness is checked and their health ruined; they become liable to many kinds of disease and will soon be covered with vermin. Merely wetting the soil of a Rose bed does more harm than good, but twice a week at least thorough root soakings should be carried out and the liquid manures given afterwards.

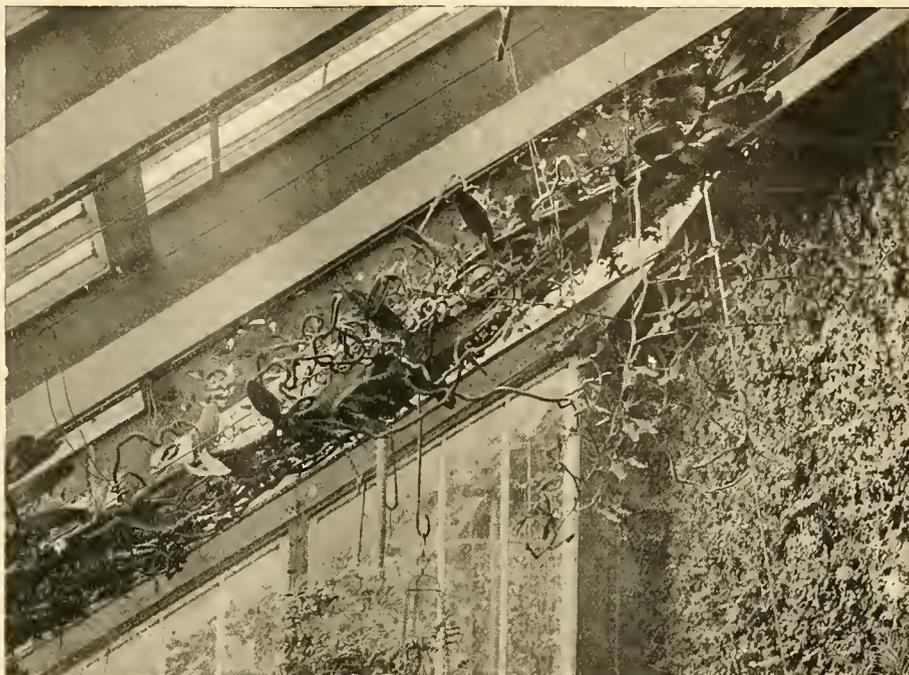
Without making a profound study of Rose diseases the amateur gardener will be able to see when mildew has attacked foliage; every fragment of spoilt foliage should be picked off and burnt, not cast on the ground at the foot of the bush. There are plenty of good insecticides advertised, and to wash the leaves and stems with these often frees them from every sickness and pest for a whole season. Syringings are resorted to in large gardens, because washing every leaf and stem would be so great a work, but I believe the more thorough method proves less time-occupying in the long run, and ensures that no buds or blooms are spoilt by the liquid. The attacks of green fly are bound to come with the summer; the daily use of an aphid brush is the best remedy for this. The Rose maggot is equally sure to put in an appearance, but as it shows his presence by curling up some leaves, it can be easily detached and destroyed.

Growers of exhibition Roses take care to limit the number of buds and also of branches, because the nourishment that will produce enormous thick-petalled fully double blooms will not suffice to feed innumerable quantities of stalks and leaves as well.

J. D.

ROSE BLOOMS WITH GREEN CENTRES.

We are receiving many complaints this year of Rose blooms coming with green centres. In our opinion they are the result of late frosts affecting the buds when in embryo. One remedy against this is to prune late, and when pruning cut past all forward shoots to good dormant eyes. Some Roses are specially given to these green centres, Annie Wood being notably so, and many of the



A CURIOUS ORCHID, RENANTHERA COCCINEA, AS GROWN BY MR. CHARLES HICKS, PATCHING, WORTHING.

very double Roses are prone to it. Sometimes indiscreet disbudding is responsible for the malformation. Obviously if the sap that supports five or six buds is suddenly diverted to one bud by the removal of the others, this sudden influx of sap is liable to cause distortion. Where the soil has been heavily manured we have found many blooms become ill-shapen, and we also think the trouble may be caused by the late spring frosts, although the flower-buds coming among the green centre points to a soil too rich for the plants. We advise the removal of the buds as they show these green centres and trust to the second crop of blossom for better results.

ROSE CONRAD FERDINAND MEYER.

ONE is constantly receiving excellent accounts of this grand hybrid rugosa Rose, and all who

know it must admit that it is a very fine variety, worthy of extensive planting. As an individual bush it is fine, especially where the last year's wood has not been pruned back very hard; but it appears best in a large mass in the wild garden, or anywhere in the garden where a bold, tall mass of colour and beautiful foliage is desired. I believe Dr. Müller first raised a seedling from a cross between Gloire de Dijon and Duc de Rohan, and this seedling was employed as pollen parent upon the rugosa Rose Germanica, a variety of Dr. Müller's raising, so that we have quite a mixed parentage. There can be little doubt that this sort of crossing and recrossing has given us some of our best recent novelties, and I believe Grüss an Teplitz originated in the same way.

In a very able paper read before the American Rose Society on March 27 of this year Mr. Alexander Dickson gives a most interesting account of some of his experiments, mentioning among other facts that Mildred Grant originated from a seedling which was obtained from Niphotos and Mme. Willermoz in the first instance and afterwards crossed again with another seedling not in commerce. M. Pernet-Ducher informs me that some of his wonderful coloured productions have been obtained by using as pollen parents one or two specially good seedlings from a colour point of view. This all goes to prove that there is much more in the cross breeding of Roses than one might imagine. P.

RENANTHERA COCCINEA.

THIS beautiful and curious Orchid is not met with very frequently, owing possibly to its being somewhat difficult to cultivate. As may be seen by the accompanying illustration, it is of a rather straggling habit and needs to be trained up the roof or on an old Tree Fern stump or similar support. It requires an even, warm, moist temperature with a light position. The beautiful and curiously shaped blood-red flowers are very attractive, and the long aerial roots give the plants quite a distinct appearance. The plant was introduced to this country from Cochin China in 1816. We are indebted to Mr. Charles Hicks, Patching, Worthing (who grew the plant), for the photograph from which our illustration was prepared.



PRIMULA SIEBOLDII, GROWING IN THE OPEN IN MRS. JESSOPP'S GARDEN AT FORTY HILL, ENFIELD.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

ROSSES.—Constant attention is required at this period. Small details, such as removing deformed flower buds, carefully overlooking the plants for grubs and caterpillars—and this should be done pretty frequently—and thinning the more crowded clusters of buds. I am applying liquid manure in the case of all Roses that are well established. Should the weather be wet and showery, I invariably apply a light dressing of some reliable concentrated guano or manure instead of using manure water. Shoots that are infested with aphides should be syringed with quassia and soft soap solution. Another remedy is to boil for fifteen minutes 1 lb. of soft soap in a gallon of water, then add a pint of paraffin oil and thoroughly stir the solution so that the whole of it is well mixed. When ready, place in a large air-tight vessel and use as required. A pint of the solution mixed with 7 gallons of water makes an excellent insecticide.

The Flower Garden.—Watering is important during spells of hot dry weather. Not only should the plants receive copious applications during these periods, but each should be followed with an equally free supply of manure water. Such attention assists the plants considerably during an important and trying season. Let the watering be done always in the late afternoon or evening; staking and tying must be observed continuously. As one subject succeeds another in the hardy flower garden, its requirements in this respect must be anticipated, otherwise the growths will soon become unruly and many shoots be broken and thereby lost. Dahlias need plenty of water just now, and to be staked and tied regularly. Take note of the better Pinks at this season, marking those it is desired to increase. The Pinks are increased by simply pulling the old plants to pieces in September, taking care, however, to retain a small portion of the old, firm wood. Plant these pieces firmly where they are to flower if convenient, and they should produce a beautiful display next season. Stake Carnations before they get unwieldy and difficult to control. Leave the tie loose though quite securely attached to the stake. Many hardy annuals may still be sown to flower in the late autumn. The Aquilegias (Columbines) and Wallflowers may be sown at the present time for flowering next year in the early summer. These



2.—DIVIDED PORTIONS OF THE PLANT SHOWN IN FIG. 1.



1.—PLANT OF A TYPICAL VIOLETTA, SHOWING ITS STURDY, SHORT-JOINTED GROWTHS AND IDEAL TUFTED HABIT.

plants prefer a sunny border outdoors, just covering the seeds with soil and maintaining the latter in a slightly moist condition during the period of germination. Mulch Phloxes, Starworts and other equally vigorous growing things.

Trees and Shrubs.—Privet hedges so frequently met with in suburban gardens are making rapid growth just now; for this reason see that they are trimmed pretty frequently and kept well under control. Laurels and Hollies need to be pruned at this season. Do not make the common mistake of using shears, but prune them into shape with a knife. Climbers on walls and fences should be properly trained and this work done in good time, otherwise the growths will get hopelessly entangled and the general effect spoiled. Cuttings, 4 inches to 6 inches in length, of the variegated Privet, if inserted now in a rather shady border, will root quite readily and make nice little plants by the autumn. Remove spent blossoms and seed-pods from the hardy Azaleas and Rhododendrons without further delay. Shrubs that have been growing in pots for window decoration should be plunged in their pots in the garden, taking care, however, to place a piece of slate or some other hard flat substance underneath them to prevent the ingress of worms through the hole in the bottom of the pots.

The Vegetable Garden.—The free use of the hoe is invaluable at this period, by these means keeping the weeds under and aerating the soil which promotes growth.

The Greenhouse.—Cyclamens that were sown at the close of last summer in boxes and subsequently pricked off into other boxes, then into 3-inch pots, are now being placed in those 5 inches in diameter, in which they are to flower.

Suitable soil for these plants consists of two parts good fibrous loam, one part leaf-mould, with plenty of coarse silver sand to make the compost porous, and a 5-inch potful of guano to every bushel of soil, all well mixed. Cinerarias and Chinese Primulas do well in similar soil. Shade flowering plants from bright sun or their display will be very short lived. D. B. C.

HOW TO INCREASE THE VIOLETTAS.

The Violettas or miniature-flowered Tufted Pansies are a race of plants of which comparatively little is yet known, but which are so very beautiful and interesting that there is no reason why all interested in the hardy flower garden should not acquire a collection and make the most of the present season's opportunities. These miniature-flowered Tufted Pansies are the result of a cross made with the ordinary garden Pansies and *Viola cornuta* of the Pyrenees, the result of this cross giving us now quite a wide range of colours and flowers that in form are identical with the parent plant, which was named *Violetta*, and others differing in a more or less degree. These plants are specially well adapted for the rock garden, where, if planted in colonies of a dozen to twenty or thirty plants in each and the colours grouped with some consideration for colour effect, their beauty is most pronounced. They are plants of the simplest possible culture, and may be increased and perpetuated with comparative ease.

As an instance of the method by which they may be increased, the illustration portrayed in Fig. 1 shows a small plant that has been lifted from the open border, in which are revealed several sturdy, short-jointed growths. These



3.—VIOLETTAS GROWING IN A SEED-PAN.

plants may be propagated at almost any period, provided means be taken in the hot midsummer season to shade them from the trying sun and keeping the soil moistened immediately subsequent to the division of the old plant. We prefer to divide the old plant to any other method of increasing them, as by these means numerous pieces are obtainable from each plant, each shoot having roots adhering, which ensures speedy progress and the development of a useful plant in a comparatively short time. It is a simple matter to divide the plants, as they may be broken asunder quite easily, as the illustration in Fig. 2 aptly portrays. Here will be seen several pieces in various stages of development, some individual shoots, others with two or three sturdy shoots in one piece, and quite little tufts



4.—ROBBIE JENKINS, THE SMALLEST VIOLETTA IN CULTIVATION. THE FLOWER IS LESS THAN AN INCH IN DIAMETER AND OF SPLENDID FORM.

in others. Should stock be scarce and the grower desire to make a number of plants of any particular variety, each little shoot may be torn asunder from the main plant and will most assuredly root, and that quickly. The *Violettas* delight in soil that has been well tilled, and also well broken up. The plants desire a free root-run, and for this reason the ground should be trenched, if possible, and plenty of gritty substance worked into the soil, together with a good quantity of well-rotted manure. The plants may also be grown successfully in pans of deep structure; and Fig. 3 well portrays a number of specimens that are growing quite satisfactorily in a pan that was planted a few months since. These plants are so hardy and take so kindly to division and removal at almost any period of the year that pans may be made up at any time.

The illustration here referred to shows how free-flowering the plants are and their dwarf and sturdy growth, with the flowers carried well above the foliage. The soil should always be maintained in a cool condition, and the plants in pans will then continue to flower over quite a long period. If slight shade from the hot midday sun can be afforded, this will be greatly appreciated by the plants, no matter where they are growing.

In Fig. 4 we give an illustration of what is really the smallest *Violetta* in cultivation. It is distributed under the name of Robbie Jenkins, and is a free flowering dainty little plant. We have this growing in pans, and the appearance is something quite unique. The flowers are highly perfumed, and growing on the rock garden the effect is very sweet.

The following varieties are some of the most interesting: *Cynthia*, a pale blush lilac of oval form; *Diana*, a pretty primrose flower; *Eileen*, a charming deep blue flower; *Estelle*, the smallest of the miniatures, pure white; *Grace*, purest snow white flower; *Lavinia*, a beautiful blush lavender, veined a deeper shade; *Miss G. Jekyll*, a dainty little bicolor, orange and primrose; *Mona*, a charming little deep blue flower; *Olivia*, an interesting flower, colour white, tinted lavender blue; *Proserpine*, palest blush, almost white; *Purity*, an improved form of the original *Violetta*; *Queenie*, white, broadly margined, bluish lavender; *Robbie Jenkins*, one of the smallest *Violettas*, white, flushed yellow; *Rock Blue*, charming little deep blue flower, rayless; *Rock Yellow*, dense yellow; *Sweetness*, another minute blossom, white, tinted blush; *Thisbe*, beautiful pale blush flower; and *Vestal*, beautiful flower of the purest white.

THINNING AND STAKING HERBACEOUS PLANTS.

Now that growth is very active among the stronger-growing herbaceous plants the task of thinning and staking the growths is one of the utmost importance, yet it is one that the beginner in gardening is frequently apt to overlook until much irreparable damage has been done. If we examine a vigorous specimen of perennial Sunflower, Michaelmas Daisy or similar plant at the present time we shall find a host of growths pushing their way upwards towards the light as best they can, and we shall also find that many of them have already become weak and attenuated and in risk of being entirely overwhelmed by their stronger brethren. Obviously it is useless to retain these weak shoots, as they will never be capable of producing flowers worthy of the name, and the nourishment they require for their sustenance may with advantage be diverted to the strong ones allowed to remain.

Just how many shoots should be left will depend, of course, on the individual plant, but for most subjects three, four or five growths to a clump will be ample. In any case, each growth that is left should stand quite clear of its neighbours, so that it has a good opportunity of developing its best traits. In removing weak and other shoots not required it is best to cut them just below the surface of the soil. Even then some kinds are apt to sprout again; but by the time they do so the growths left will have made such headway as to render these secondary shoots of little consequence.

Staking is an absolutely necessary adjunct to thinning, and it must be performed at a comparatively early stage of the plant's career if the subject dealt with is to derive the full benefit of the supports. Although staking has been written about very frequently indeed, one still encounters bad examples of such work, hence no apology is needed for describing it again. It will be obvious, even to the veriest tyro in gardening, that it is useless to thin out the growths of plants and then tie those that remain into a bundle that resembles more than anything else the umbrella so consistently carried by the famous Sairy Gamp, yet this is what frequently happens. A stake is thrust into the centre of a clump and all the shoots are drawn up rather tightly to it, with the result that growth is impeded to a very serious extent.

Far better is it to place a neat stake to each growth so that it may remain in as natural a position as possible. This system has its drawbacks on account of the number of stakes required, but it pays in the end. Those who live in the country may easily make one stake, or at the most two, suffice for each clump, but the right sort of stake must be selected. Where hedge-wood is available it will be a fairly easy matter to secure stout stakes that have rather thick lateral growths, and these latter should be cut so as to leave 6 inches or more of each on the central stake. When one of these is thrust firmly into the centre of the clump the lateral growths are splendid for tying the shoots of the plant to without unduly crowding the latter.

All supports should be so placed as to render them as inconspicuous as possible, as a garden in which stakes overwhelm the plants is most unsightly. Tying is another point where many amateurs go astray. Frequently one meets with plants which have been tied so tightly to the stake that the tying material is cutting into the growths. It should always be remembered that shoots

swell and lengthen, and room for this natural function must be afforded. With such things as Carnations there is a danger of the stems buckling seriously owing to tight ligatures, the leaves getting caught as the growth extends upwards. During recent years raffia or bast has been superseded by raffiatape, an excellent green material that has all the advantages and none of the disadvantages of raffia.

Unless early staking and tying are resorted to, the stems of plants will take a more or less recumbent position, after which it is well-nigh impossible to get them in presentable condition. All supports should be thrust firmly and deeply into the ground, and in wind-swept situations it is an advantage to place them at the opposite side of the plant to that from which the strongest winds blow.

THE CARE OF LAWN MOWERS.

The frequency with which one encounters these useful machines creating a noise that is far from musical, and certainly altogether different from the smooth, humming noise a properly managed mower should make, leads one to reasonably assume that the amateur, as a rule, gives very little attention to his or her machine, with the result mentioned above, coupled with inferior work. Consistent attention to a few small details will make all the difference in the running and life of a lawn mower, hence no apology is needed for drawing attention to them.

In the first place, the blade and knives must be set so even that one almost, but not quite, touches the other. There is no more important item in connexion with a lawn mower than this, but owing to the numerous makes of machines now on the market it would be useless to give detailed information on how to set the knives or blade. What the amateur should avoid is any tinkering about with these parts of a mower when the latter is performing its work satisfactorily. Should the knives or blade get out of gear it would well repay the inexperienced to get some practical gardener to readjust them.

Then, again, every time the machine is used each part ought to be thoroughly cleansed so that it is free from all dust, grass or other substances. An old spoke brush is very useful for this purpose, and after removing dirt all bright parts should be rubbed over with an oiled rag. All bearings, too, must be oiled and the quality of the oil used will make a considerable difference in the running of the machine. Only that of the finest quality should be used, and it will be found to keep the bearings much cleaner if a little paraffin is added to it. To get the best possible work out of a lawn mower the handle or handles should be movable, so that they can be adjusted to suit the height of the person using it.



5.—A NUMBER OF VIOLETTA FLOWERS, SHOWING THEIR DIVERSITY OF FORM.

THE TOWN GARDEN.

DEAD FLOWERS.—To speak of dead flowers will, perhaps, cause some of my readers to think that we are approaching the end of the season instead of being on its threshold, but it is so important that they shall be removed early and regularly that the matter is referred to now. The rule should be to cut off every flower as soon as it has passed the zenith of its beauty, so as to preclude the possibility of any seed pod formation. Of course, this is more important with annual plants than it is with any others, but no exception ought to be made, for if the seeds do not materially prejudice the longevity of the plant's beauty they always create a more or less untidy appearance in the garden; therefore remove every one and do it early. On the score of neatness dead or decaying leaves should be similarly dealt with, and it is quite certain that the grower will find the time devoted to the operation generously repaid.

LEAF-MINER IN MARGUERITES.—This is one of the worst pests with which the grower of the graceful Marguerite has to contend. The grub tunnels in the tissues of the leaves and does serious injury by preventing the foliage performing its proper functions, as well as by making the entire border or bed in which the plants are growing look untidy and unkempt. It is not an easy enemy with which to deal, as when once the egg has been laid on the leaf it is impossible to apply anything that will be perfectly certain of destroying the egg or the maggot without at the same time damaging the leaves themselves. Prevention is indisputably the best course to pursue, and fortunately it is not difficult to manage, provided that the measures taken are followed up consistently. The grower can safely rely upon the popular soft soap, quassia and paraffin emulsion, or he can have recourse to a mixture of soot and wood ashes. The former should be applied through a spraying syringe and the mixture must be directed to the under as well as the upper surfaces of the leaves, while the latter should be thrown into all parts of the plants when they are damp either with rain, dew or artificial watering. In the latter course the cultivator must be especially persistent and put on fresh dressings after every rain, as the material used is quickly washed off. Where the maggot has hatched out, the only course open for adoption is to crush it between the thumb and finger.

SHRUBS.—These are most desirable in town gardens, but the atmospheric conditions are not favourable to their successful culture. The whole of the leaves become coated, both above and beneath, with sooty accumulations, and the pores are thus so closely sealed that they cannot perform their functions. It is, however, possible to considerably reduce the harm which accrues thereby if a hose and a plentiful supply of water are at command. Every evening after a hot, dry day the hose should be turned on to the leaves and stems of the shrubs, and it will be found that they can be comparatively easily cleansed, with the result that they grow more freely and healthily, and remain ornaments to the garden for a much longer time. It is also excellent practice to loosen the soil above the roots, apply water heavily, and subsequently to again prick over the surface. In some circumstances liquid manure may also be given, but it should always be in a weak state.

CANTERBURY BELLS.—There are few more desirable plants for town gardens than the single Canterbury Bells, for they grow and flower magnificently, either in pots or in the border. The present is an excellent time to sow the seeds thinly on a specially prepared bed on a cool border. The soil should be well dug and have plenty of leaf-mould incorporated into the top 3 inches or 4 inches before the surface is made firm and level, and the seeds are distributed evenly over it.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FRUITS UNDER GLASS.

TEMPERATURES.—Little fire-heat should be used now. When the heat can be kept up to 70° the fires may be dispensed with, but up to the present the nights have been cold. Melons require a warm temperature to finish. Muscat Grapes need a fairly high temperature, and where quantities are grown it is necessary to always maintain a steady supply of artificial heat.

Vineries and Peach Houses.—Where these are cleared of the fruit throw the lights open and expose the plants as much as possible, but do not neglect the watering. This is the season when Peaches get neglected, and consequently bud-dropping occurs in the spring. Avoid this by syringing twice daily and giving a thorough watering whenever necessary.

PLANTS UNDER GLASS.

Chrysanthemums.—Finish potting these as soon as possible, as plants that become pot-bound soon begin to deteriorate. All tall-growing varieties should have good stakes and be tied up straight. Do not put the stake in the pot and then tie it up to the wire to make it straight, else when taken down the plants will require to be restaked. The staking of plants cannot be too carefully done at this time. Allow each plant in the line room for proper development, and if the compost was enriched at the potting no manure will be required for some time.

Callas planted out in the open should be left severely alone till the foliage gradually dies away, when it may be cut off and the plants encouraged to grow by damping over with a fine-rosed water-pot in the afternoon.

KITCHEN GARDEN.

Continue to plant out crops that are fit, such as Celery, Cauliflowers and early Broccoli, and sow more Turnips, salads and a good border of Parsley for winter and spring use. A sowing of Cabbages now will provide nice dishes in the autumn. Sow good breadths of Coleworts for winter use, also curled Endive in quantity.

FLOWER GARDEN.

Violets.—Keep the hoe among the plants, and do not allow them to become dry, or they will get an attack of red spider, which, in order to get the best results, must be strenuously avoided.

Shrubby Plants that have flowered well should now be looked over and pruned. *Clematis montana* and its variety *rubra* has been a mass of flowers. The growths should now be pruned, the old flowering wood cut out and the new trained up.

Flower-beds must have the proper attention at the right time. Carpet or designed beds should have the growths pinched and the designs made quite clear, or all beauty is lost. Old flowers of Geraniums should be gathered and the beds kept smart. Intermediate and other Stocks may now be sown to flower in the winter and spring; there are some good varieties of these now, from which an excellent selection can be made.

HARDY FRUIT GARDEN.

Peaches and Nectarines.—Early varieties must have the fruit exposed in order to get a good colour. Water the roots copiously, giving some Le Fruitier at every other watering, and syringe the foliage well twice daily.

Summer Pruning.—Continue with this, but do the work carefully. Cut the shoots clean and just above an eye. Tie in all young shoots in the direction they are intended to go. Thin Apples and Pears, especially on cordon-trained trees.

See that all trees growing on walls have plenty of moisture.

W. A. COOK.
(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

GLOXINIAS.—Those that are now coming into flower should be removed to cooler quarters, for if allowed to remain too long in a high temperature the stems become drawn and the flowers will require staking. Spring-sown seedlings should now be ready to pot into 5-inch pots, then grown on a shelf well up to the light.

Exacum macranthum.—Spring-sown seedlings will now be ready for transferring into 2½-inch pots. This beautiful biennial does not require coddling. An airy intermediate house, with plenty of moisture on the staging and paths, suits it admirably. Soil of a free, open nature is necessary, while overwatering in the early stages of growth means certain failure.

Zonal Pelargoniums.—These should now be finally potted for winter flowering; after this has been done ten days or a fortnight an outside sunny position will be best for them. Keep all flower-buds removed as fast as they appear and see that there is no stagnation of water about the roots.

FLOWER GARDEN.

Poppy Anemones.—The present is a good time to sow seeds of the Poppy Anemones. In all instances the seed should be sown in the open ground in well-enriched soil of good depth. Select a somewhat sheltered position, such as a shady border, and sow the seed thinly either in drills or broadcast. Should the soil be dry, a good soaking may be given after the drills are drawn. Draw the drills at 8 inches apart, selecting a calm day for the sowing, and should the seeds be at all lumpy take a handful of sharp sand or fine earth and, mixing with the seed, rub them through the hand till separated, afterwards sowing soil and seed together in the drills.

FRUIT HOUSES.

Muscat Grapes.—The bright sunshine which we had during a greater portion of last month was very favourable to the ripening of Muscat Grapes, and those having them at that stage ought not to experience any difficulty in maturing them properly. Muscats require a high temperature, with plenty of light to finish the fruit perfectly. At the same time they must not be exposed to the direct rays of the sun, or the berries will scald. Where the foliage is robust and shades the bunches too much, they should be tied back to admit more light. If the atmosphere of the house be kept too dry, red spider sometimes attacks the foliage, causing much annoyance. The only way I find to get rid of this is to sponge the leaves with clean water, taking care not to touch the berries.

KITCHEN GARDEN.

Turnips.—Sowing may now be carried out more extensively than has been advisable up to date; the weather will in all probability be more conducive to the production of roots of good quality. I, however, advise rather small sowings for private use, for the quickly-grown roots that are not allowed to stand long after they have become full grown will invariably be found of better quality than those which are older. I also find that we get excellent roots from sowings made towards the end of July or any time up to the middle of August.

General Work.—Tripoli or other autumn-sown Onions which have not yet commenced ripening the top growth should be broken down at once preparatory to their being pulled and stored. If allowed to grow any longer, mildew is sure to attack them.

T. B. FIELD.
(Gardener to Baroness Berners.)
Ashwellthorpe, Norwich.

THE EDITOR'S TABLE.

FLOWERS FROM LOUTH.

Mr. Smith sends from Walmgate Gardens, Louth, Lincolnshire, an interesting collection of flowers with the following notes: "I send you a few flowers of the following delightful plants which make the rock garden a veritable shrine of beauty in June, in the hope that fresh votaries may come to worship. I append the following notes. Taken in alphabetical order:

"*Allium acuminata* is a dwarf member of the Onion tribe, bearing rose-lilac flowers in umbellate heads which are carried by stout 18-inch stems.

"*Androsace lanuginosa* is singularly effective draping a rock, the myriad heads of bright Primula-like flowers are produced right into autumn.

"*Asperula hirta*.—This dwarf species of Woodruff flowers freely in sunny positions.

"*Armeria splendens* produces the deepest-coloured flowers in this family, and yields them over a long season.

"*Antirrhinum glutinosum* is one of the best of dry wall plants; flowers lemon and white on creeping downy stems.

"*Ethionema grandiflorum* makes a small bush smothered with long stems bearing carmine-red flowers.

"*Dianthus cæsius*, *D. alpinus* and *D. neglectus* form a well-known trio of beautiful dwarf rock Pinks. None of them exceed 6 inches in height, and the flowers are various shades of rose.

"*Erigeron aurantiaca* gives an uncommon colour among the rock plants; the flowers are large and bright orange.

"*Gypsophila repens monstrosa* is a magnified and vigorous form of the type.

"*Hypericum fragile* is a beautiful dwarf St. John's Wort. The individual flowers are very large and are produced on the terminal points of prostrate shoots. It make a capital subject for draping small rocks.

"*Lynchnis pyrenaica* is a very small species, bearing white flowers upon erect wiry stems.

"*Lithospermum graminifolium* is a rare plant, which forms a charming group when liberally planted. The flowers are a fine shade of blue and are borne upon graceful arching stems some 9 inches in height.

"*Ononis rotundifolia* makes one of the finest rock garden shrubs, compact in growth, free in flowering, and a lovely shade of pale pink; the leaves form a trefoil, and are elegantly toothed and waved along the margins.

"*Onosma taurica* is the well-known Golden Drop.

"*Phlox canadense Laphamii* makes a first-rate garden plant, yielding sheets of colour with the charming pale lavender flowers, essentially a summer colour; it is seen at its best in June.

"*Ramondias* are inseparably associated with shade and damp, so that when grouped with dwarf Ferns they disclose such beauty as ranks them with the finest of hardy exotics. I have had a fine mass of blossoms from seedling *Ramondias* (*Pyrenaica* and *serbica*) sown less than three years ago.

"*Silene alpestris* bears small white starry flowers upon slender stems, and is an excellent dry wall plant."

A RARE CLIMBER (SEMELE ANDROGYNA).

Mr. S. W. Fitzherbert, Kingswear, sends a leaf, or rather cladode, of this fine climber, with the following interesting note: "This is a native of Madeira and the Canary Isles, and in the first-named island is much used for draping the pillars at the entrances to quintas, where it has a charming effect. It was introduced into this country nearly 200 years ago, and was for long known as *Ruscus androgynea*. It is but rarely to be met with in the open in this country, but is grown in a few gardens in Devon and Cornwall. The leaves, or rather cladodes, are from 1 foot to 2 feet in length, and are furnished with

from twelve to twenty pinnate sections of brightly polished green. As these droop the glossy green is well displayed, and a wall completely covered with the handsome foliage is an attractive sight. The cladodes are very tough in texture, and often remain perfectly fresh for six or seven years. Strong, well-established plants push up vigorous *Asparagus*-like shoots from the base, which will sometimes attain a length of 40 feet in a season. In young plants these shoots often appear as early as November, but as they become established the shoots do not appear until the spring. *Semele androgynea* is a noble climber for a large, cool house. In the Temperate House at Kew there is a splendid specimen which has reached the roof, a height of over 30 feet. In the summer the plant presents an attractive appearance, since every pinnate section of the cladode bears, along its edge, clusters of small, yellowish flowers about an eighth of an inch across, some of these clusters containing as many as twelve blooms, and ten or more often being borne on one section. At the present moment every old cladode of the plant, which is growing on a north-west wall, is covered with these tiny blossoms, and the effect is quite pretty, though it is as a foliage rather than a flowering plant that this *Semele* is chiefly valuable. This year's shoots, which have already reached a length of about 20 feet, will not flower until next season. Red berries sometimes follow the flowers in the open in Cornwall, but my plant has not as yet produced fruit."

A NEW MALMAISON CARNATION THE GALA.

Messrs. Hugh Low and Co., The Royal Nurseries, Bush Hill Park, Enfield, send a flower of a very striking new Malmaison Carnation, which it is proposed to send out under the name of The Gala. The flower is of immense size, very full, and a warm shade of pink. It was raised from the variety Lady Grimston fertilised with the variety Princess of Wales, a very difficult cross to make. The flower sent was out from a last year's autumn layer. Another virtue of this variety is its fragrance. A Carnation without this is not much to our liking.

STRAWBERRIES FROM RICHMOND.

Mr. Edward Montague, gardener to Colonel Biddulph, Grey Court, Ham, Richmond, Surrey, sends very fine fruits of Strawberry Royal Sovereign. These were of grand size and excellent flavour. He writes on June 19: "I am sending you a dish of Strawberries for your table. The variety is Royal Sovereign. I gathered the first dish outdoors on June 10, and have been picking every day since. The runners were taken the second week in June last year. They were not layered in pots as usual, but severed from the old plants and pricked out on a piece of ground which had been well prepared for them. They were carefully lifted the first week in August and planted in the bed, three plants in a clump, the clumps being 2 feet 6 inches apart in the rows, and the rows 3 feet apart. A dusting of soot was given occasionally to keep down the slugs; it also improves the colour of the fruit. Each truss of bloom was staked up, and where the fruit was very thick it was carefully gone through with the Vine scissors and the weakest and bad-shaped fruit removed."

A NEW SWEET PEA FROM HISTON.

Mrs. R. H. Biffen, The Gables, Histon, Cambridge, sends flowers of a very pretty Sweet Pea called Zephyr, with the following note: "I am sending for your table a few blooms of a new Sweet Pea, Zephyr. All the sprays should be four-flowered, but at present the plants are too small to produce them at their best. The nearest approach to Zephyr in colour is Flora Norton, but even this is hardly so pure a blue. The colour never burns out, but becomes brighter in intense sunlight."

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Alpines mutilated (*S. L. Lee*).—We do not think the soil grub to which you refer as having been found at the roots is responsible for the mischief you complain of, and it is far more likely to be done by birds at their nesting time, or subsequently when bringing up their young. At this latter period they work very busily in the endeavour to find suitable food for their offspring, and we are inclined to interpret the thing in the following way, viz., that the bird may have seen a grub or some insect upon the plant, and in the endeavour to catch it has peeked away the growth. We have many times seen both the robin and the wren perched upon the tufts of these alpines searching diligently for insect life. At these times a good deal of mischief may be done in a short time.

Sweet Peas eaten off (*Miss C. H. F.*).

So far as we can judge by the crushed specimens sent we think the mischief has been caused by either woodlice or ants. The weevils that you mention eat holes in the leaves and slugs also attack them in a similar manner, but yours, as you say, have been eaten through level with or just below the soil. We advise you to place some pots on their sides along the row, placing in some of these a little boiled Potato and cover it with dry hay or straw. This will attract woodlice. In other pots place small, clean, dry sponges, into the canals of which some Demerara sugar has been shaken. If ants are present they will quickly find the sugar, and they may be shaken out of the sponges into a bucket of some insecticide at frequent intervals, recharging the sponges with sugar each time. It is necessary to keep the sponges dry.

Daffodils in grass (*Staveley*).—You say nothing about the position, whether hot and dry, or moist, or even what varieties have failed to flower. A large number of Daffodils are moisture-loving, and their non-flowering may be due to a variety of causes of which we have no information. Please say what sorts you refer to and whether the growth is quite healthy, that is, the leaves free from brown tips, &c., how long the bulbs have been planted and in what class of soil. With these particulars before us we may give you advice that would prove helpful.

Weeds on lawn (*C. L.*).—The weed sent is a wild *Centaura* and is related to the Cornflower. The most effective way of ridding the lawn of its presence is to trench the ground 2 feet deep early in the autumn, picking out every particle of the roots as the work proceeds and then sowing down with lawn grass seeds. The next best thing to do is to have a well-worn kitchen knife with a strong pointed blade, cutting the roots with it 3 inches below the surface, pulling up the plants and their roots together. By perseverance in this method of eradication for a few years the plant will become so weakened that it will naturally die away. The weed should never be allowed to flower and bear seed.

TREES AND SHRUBS.

Rhododendrons grown tall and straggling (*Dumpling*).—Your *Rhododendrons*, as you say, ought to have had attention many years ago. We are afraid that if you cut them back into the thickest wood now you will not have very satisfactory results. Your best plan will be to cut some of the plants out bodily,



PÆONY DELAVAYI.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

"THE GARDEN" FLOWER SHOW.

IMPORTANT NOTICE.

WE have much pleasure in announcing the list of those who will act as judges at our forthcoming show, to be held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, London, on the 29th inst. They are as follows: Messrs. E. Beckett, gardener to Lord Aldenham, Elstree, Herts; D. B. Crane, a well-known amateur; W. A. Cook, gardener to Sir Edmund Loder, Bart., Leonardslee, Horsham, Surrey; E. Jenkins, nurseryman and florist; H. E. Molyneux, treasurer of the National Rose Society; Owen Thomas, V.M.H., late gardener to Her Majesty Queen Victoria; Walter P. Wright, horticultural superintendent under the Kent County Council; and G. Wythes, late gardener to the Duke of Northumberland. All are horticulturists in whose judgment our readers may place the fullest confidence, and their decisions must in all cases be regarded as final.

We also wish to make it quite clear that we cannot undertake to return any exhibits, and those not called or sent for will be forwarded to a hospital. No prize money will be paid on the day of the show, but will be forwarded to successful competitors as soon after the day of exhibition as possible, therefore we hope that all competitors will write their full names and addresses as clearly as possible on the entry forms and also on cards sent with the exhibits. Visitors will be admitted to the Hall at 1 p.m. until the close of the exhibition on showing a coupon that will be printed in a future issue, and Fellows of the Royal Horticultural Society will be admitted free on producing their passes.

Several readers have asked whether, in the case of such flowers as single blooms of Roses being indicated in the schedule, several of a sort may be forwarded for those who are staging to select from. This will be allowed, as of course those who stage their own exhibits usually take more blooms than are actually set up in case of accident in transit.

Vases will be provided for all cut flowers except in the table decorations. Where exhibitors desire to show their blooms in boxes they must be brought to the Hall and staged in them. Exhibits may be brought or sent so as to reach the Hall the evening previous to the show.

We hope intending exhibitors will fill in and return the entry forms as soon as possible, and not leave them until the last day allowed. These entry forms were published in last week's issue.

PROSPECTS OF THE SWEET PEA SEASON.

ALL lovers of the Sweet Pea are looking forward to the coming season with absorbing interest. It is not the extraordinary development of the flower during recent years alone which accounts for this. An element of uncertainty has been introduced by the singular and widespread sportiveness which showed itself last year. Growers hardly know what to expect. The impurity of the stocks was too general to be attributed entirely to carelessness on the part of growers. Nature was in one of her freakish moods, and few indeed were the growers who did not suffer in consequence. Novelties that were believed to be absolutely fixed threw all sorts of variations.

This impishness on the part of Nature is one of the things that "cut both ways." When it gives a person who has bought a so-called novelty only 20 per cent. of true flowers, the remaining eighty being an old sort, he naturally rises in his wrath and demands the head of the tradesman who has supplied him with the seed. When, however, it gives a grower who has purchased an old sort a series of new breaks, in which he scents awards of merit, things are different, and his complacency is unbounded.

There was an absolute, all-round break up of Sweet Peas in 1907, and one can only say of the prospects of the season, so far as the crop of novelties is concerned, that anything may happen. Prophecy is paralysed. To do justice to the occasion demands the sublime self-confidence of a turf tipster, who asserts his ability to make you a colossal future, while at the same time presenting in his own person every evidence of complete inability to earn a decent living.

I believe that we shall have more novelties exhibited in 1908 than were ever shown before, because large numbers of growers had new breaks last year, and my experience of human nature is that nine out of ten of these will consider that they have only to grow them and show them this year to take the world by storm. It may not be amiss to warn these optimists that the National Sweet Pea Society did not go about with its eyes shut last year; that it read the signs of the times; that it amended the rules governing the operations of its floral committee, where, in one vital spot, they were defective; and that the distribution of awards in 1908 will be safeguarded as it has never been before.

The behaviour of Countess Spencer and the trouble over John Ingman should in themselves suffice to convince raisers that the task of fixing and developing a good commercial stock of a new Sweet Pea is a work of immense difficulty in these days, but it is not an impossible one. There are not wanting firms that prove their ability to produce genuine novelties every year, and, what is more, to distribute stocks which, under independent trial, are practically pure.

Turning to a consideration of the prospects of the season from another point of view—that of the vigour of the plants and the quality of the

flowers—one is bound to strengthen one's own observation and experience with reports from growers in different parts of the country, if one's remarks are to have any general value. By common consent we have had one of the coldest springs on record. March, April and May were thoroughly uncongenial. Strong, biting winds, keen frosts and late hail and snow storms were rife. This weather, following an unusually severe winter, filled growers in what are known as "late" districts with the most gloomy forebodings. Their one erumb of comfort was that the National Sweet Pea Society's London show was much later than it had been in previous years. Had it chanced to be the first week in July, as has been the case in some previous seasons, long and loud would have been the wail of anguish. Even as it is, I do not envy those who trusted to outdoor sowings. There are, I suppose, still a few folk left in the world who have sufficient faith in the British climate to sow Sweet Peas in the open air and expect prize flowers in July; but I think that they must be a steadily dwindling band. Any way, the only plants that I have seen which are strong and forward from outdoor sowings are those in sheltered, enclosed gardens.

There is, naturally, considerable interest in the operations of the Scottish growers, who should be favoured by the later date of the "National" show this year and may make a very strong bid for the chief trophies. That well-known amateur, Mr. Alexander Malcolm of Duns, writes me: "The Sweet Peas in this district are doing splendidly, and a few varieties are showing colour in the bud at this (for us) early date (June 25). The early growths, owing to a partially-ripened condition of the seed, were thin, but when once the plants began to move into full growth they soon reached the standard of former years. I have some fine specimen plants, and in the district the promise is first-rate." The above is very cheerful reading, and points to a strong attack from Scotland this year.

Two well-known firms write me from East Anglia. Mr. John Green of Hobbies, Limited, Dereham, says: "There is every prospect of Sweet Peas being more than up to the average this year. If one gets the average amount of sunshine, the necessary amount of moisture demanded by the crop can easily be given. This is the state of affairs with us: We have enjoyed more than the average amount of sunshine; our crop promises to be timed about right for the meeting of the National Sweet Pea Society. We shall prune back the same crop for the supply of blooms for Shrewsbury. We find this answers well, but, of course, it entails a good deal of labour."

Mr. A. G. Stark of G. Stark and Son, Great Ryburgh, writes: "This has been a remarkable season. All autumn-sown seed went off and had to be sown again. Although the weather has been hot, some of our Peas are not doing well, but one field which has twelve rows of 200 yards long each is doing very well. We have had wireworm in abundance; in fact, some of the rows have been taken off completely. Having about three and a-half acres stiecked, we shall have something to show worth seeing. . . . The seed crop generally will be small, especially field-sown stuff in light soils. We shall have a fair crop, because we keep cutting all flower-stems and feeding."

That famous Winchester grower, Mr. C. W. Breadmore, writes me in a very cheerful strain, in spite of early trials. He says: "We have had a very trying spring, during which the ravages of pests, new and old, have greatly troubled us; nevertheless, at the time of writing (June 24) the prospect is very good indeed. Peas planted out prior to the 2 feet of snow on April 26 have come away in a remarkably vigorous manner, and promise exceptionally well. They have come into bloom early and rapidly on account of the dry, brilliant time during June. The question of water supply hits us hard on our dry and chalky soil; given

a good ground rain during the next few days, I feel sure that some very fine stuff will be on show early in July."

A good deal of interest will, of course, be felt as to the prospects in the Reading district. Messrs. Sutton and Sons write: "Sweet Peas in this district are all very short in the haulm, and the growth is not strong. Owing to the very sunny weather which we have had during June the plants are showing bloom earlier than usual, and we anticipate that they will be in full flower towards the end of June, and probably last through the first and second weeks in July."

Mr. Robert Bolton of Carnforth is optimistic in the extreme. In a letter from him dated June 24 he says: "My Sweet Peas are the best lot I have ever had, very vigorous and strong. I had a look over the plants of the leading Northern exhibitors last week, and all the lot looked exceptionally well. It looks as if all records for big Sweet Pea blooms will be broken this year." Will Southern growers kindly note this and tremble?

Mr. Robert Sydenham of Birmingham thinks that the season will be late. He says: "In my own garden at Edgbaston I am very late. I went for a trip in Spain, Portugal, Tangier, the Canary Islands and other places in May, and when I came back at the end of a month things did not seem to have made the slightest headway. As far as I can see the season will be a late one, and we shall be very much troubled with 'rogues.'"

Messrs. Watkins and Simpson think that the prospects are fairly good provided we have a dry summer. A month ago the haulm was exceptionally short, and it is still dwarf, but it has improved during the past three weeks.

Mr. S. Cole informs me that the cold, wet days and nights in April and May kept the Sweet Peas at Althorp Park back, and he has been terribly harassed with slugs; but the plants are improving, and the early batch are throwing very fine flowers.

Mr. T. Stevenson, Woburn Place Gardens, Addlestone, thinks that in spite of the cold spring the plants will be in bloom early, and that the prospects are very good indeed.

Mr. W. J. Unwin of Histon, Cambridge, reports that he lost several acres of Sweet Peas through slugs; but later hatches, though small plants, are throwing very fine flowers.

Summing up, it may be observed that on the whole the Northern and Western growers are more cheerful than the Southern and Eastern ones. Does this foreshadow a wholesale defeat for the South at the National Show at Vincent Square on July 24? If so 1907 will be avenged, but the battle has still to be fought.

WALTER P. WRIGHT.

NOTES OF THE WEEK

FORTHCOMING EVENTS.

July 24.—National Sweet Pea Society's Exhibition, Royal Horticultural Society's Hall, Vincent Square, Westminster.

July 29.—THE GARDEN Flower Show, Royal Horticultural Society's Hall, Vincent Square, Westminster.

Calla æthiopica in St. Petersburg.—As a flower for cutting *Calla æthiopica* is considered to be of the highest value by the inhabitants of St. Petersburg, and it is becoming year by year a greater favourite. Until recent years the St. Petersburg florists imported the chief part of the Callas sold by them from foreign sources, and a portion of the trade drew its supplies from Hermann Köppe at Wilna, who cultivated the plant on a large scale. But in consequence of the heavy Customs' duties on the weighty blooms and the losses of the tender flowers on the long journey, the St. Petersburg

marketmen perceived the necessity of supplying their needs at home. The plants are grown during the summer months in the open air and dug up and potted at the beginning of September or late in the month of August, according to weather conditions, and are then placed in frames, which are kept close for fourteen days and then afforded air abundantly and the plants syringed daily. Early in October the plants are placed in light glass houses. The flowering period begins in that month and lasts till April. The spathes (flowers so called) are of most value in the months of November, December and January. The Russians cultivate for the cut flower trade *C. æ. devoniensis*, *C. æ. grandiflora* Nicolai, both flowering almost without a break; and *Perle von Stuttgart*, which, because of its compact growth and shortness of flower-stalk, is well adapted for pot culture.—OBSERVER.

Forced bulb show.—In connexion with the special prizes for Hyacinths and Tulips to be competed for on Tuesday, March 9, 1909, at the Royal Horticultural Society's exhibition, the council would be glad if this date could be made a general one for the exhibit of collections of forced spring bulbs, specially with a view to showing which varieties (of Daffodils, for instance) are best suitable for forcing. The council invite the exhibition of small collections from amateurs as well as from the trade.

National Sweet Pea Society's outings and exhibitions.—The two annual outings of the members of the above society will take place this week. On Friday, the 10th inst., the members journey to Reading for the purpose of inspecting the society's trials that have been conducted by Mr. Charles Foster at the University College Gardens, and on Saturday, the 11th inst., the outing is to Kelvedon and Marks Tey. A halt will be first made at Kelvedon to inspect the Sweet Peas grown there by Messrs. Hurst and Son, who raised the gold medal variety of last year, then the party will proceed to Marks Tey and view the extensive stock of Messrs. Dobbie and Co. The eighth annual exhibition in connexion with the society will be held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, on the 24th inst., and the second provincial show at Dublin on August 5. Full particulars of the exhibitions can be obtained from the hon. secretary, Mr. C. H. Curtis, Adelaide Road, Brentford.

PRIZES FOR READERS. JULY.

BOTTLING FRUITS AND VEGETABLES.

A First Prize of FOUR GUINEAS,

A Second Prize of TWO GUINEAS,

A Third Prize of ONE GUINEA,

And a Fourth Prize of HALF-A-GUINEA

are offered for the best essays on the above subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The answers must reach this office not later than Friday, July 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Wellingtonia struck by lightning.—Having noticed in THE GARDEN particulars of a Wellingtonia being struck by lightning, I may mention that, during the terrific thunderstorm of the 4th ult., a Wellingtonia in the grounds here, about 80 feet high, was struck, apparently at the very top, the lightning running down to within a few feet of the ground and then escaping off one of the branches at the bottom, the pieces of bark being thrown some distance from the tree.—A. COSTAR, *The Gardens, Redstone Manor, Redhill.*

Destroying queen wasps.—On page 310 of THE GARDEN for June 27 there is a paragraph on the above subject. I was told about a fortnight since that on a single plant of Cotoneaster Simonsii, in the neighbourhood of Pwllheli, forty-five queen wasps had been destroyed this season, and nearly as many last year. I doubted afterwards whether these really were queens, as I saw a good many on the Cotoneaster at the same time. Usually I see one queen by herself, and generally going to the foot of a plant or shrub. I have since thought that these reputed queens might be the occupants of a nest hanging from a branch. There have been several such nests here recently, generally about thirty or forty insects to a nest.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed.*

Wild Lupines on the banks of the Tay.—The accompanying illustration, from a photograph taken by Lady Marjorie Dalrymple and sent to us by Lady Menzies of Menzies, is of more than usual interest, as it depicts a fine breadth of the Nootka Sound Lupine (*Lupinus nootkatensis*) growing wild on an island in the Tay. Although not a true native of Britain, this plant, according to the latest edition of "The London Catalogue of British Plants," is now established in seven counties, but we doubt whether it is often met with in such quantities as shown in the illustration. The island is situated at the junction of the Lyon and Tay, and the mountain in the distance is Schichallion. Undoubtedly the climatic conditions that prevail in Scotland render it an ideal home for many plants that need a certain amount of coaxing to induce them to grow further South.

Fremontia californica.—This beautiful shrubby climber is flowering most profusely in these gardens. It has a beautiful bright yellow flower about 3 inches across and rather flattish in shape. It has stood the winters with slight protection quite unharmed. I believe this shrub has been in England since 1854, when it was flowered at the Royal Horticultural Society's Gardens; but the plant is said to have died upon an attempt at removal when the Arboretum at Chiswick was given up. It is the only species of the genus. It is supposed to have been first discovered by Colonel Fremont's expedition to the Rocky Mountains in 1846.—W. A. COOK, *Leonardslee Gardens, Horsham.*

Roses from cuttings in summer. I was very interested in reading the article on Rose cuttings, by "F. W. H.," on page 313. The great drawback to growing Roses from cuttings in the usual way is the time it takes before one can transfer them to their permanent quarters, and it is nice to hear of quicker ways of producing them. I wonder if any of your readers have ever tried growing them by the water method, which is quite as quick and far easier than the way described by "F. W. H.?" All one has to do is to take the cutting from the Rose desired, either Tea, Hybrid, or Rambler, and place it in a glass jam-jar with a wide neck, and fill it up with water, being careful that it remains full until the cutting is rooted, which will be in about three weeks. As many as twenty to twenty-five may be grown in one good-sized jar. They must have plenty of light, and

should, if possible, be placed in a cold frame or greenhouse. When well rooted they should be potted into 5-inch pots in good turfy loam, and for the first fortnight kept fairly wet, gradually drying off as autumn approaches. They may be planted into the Rose-bed in January or February next and should flower next summer. Some Dorothy Perkins I treated in this way grew 6 feet or 8 feet in the following summer. The wood used may be young or old, the old wood taking a little longer to root. It is most interesting to watch the roots forming. When I prune my Roses in March and April I always put a few in a jar, with fair results. A little charcoal in the water keeps it pure.—S. L. GREEN, *Chorley Wood.*

NEW PLANTS.

STOKESIA CYANEA PRÆCOX ALBA.

THIS is a very good white-flowered variety of this excellent border perennial, the flower-heads

P. Achievement, which resulted from crossing the Zonal and the Ivy-leaved forms. Shown by Messrs. W. H. Rogers and Son, Limited, Red Lodge, near Southampton. Award of merit.

ANTHURIUM PRESIDENT VIGER.

One of the A. andreaum forms, the spathe being of an intense crimson shade and as though highly varnished. From M. A. Truffaut, Versailles. Award of merit.

CAMPANULA RADDEANA.

A very charming new species from Ural, with roundish, crenate leaves on 3-inch-long foot-stalks, the flowering stems, which are glabrous, bearing eight to ten drooping flowers of a deep violet hue and about an inch across. It is one of the most distinct Bellflowers we have seen, and as shown was barely 12 inches in height. From Mr. G. Reuthe, Keston, Kent. Award of merit.

ERICA CINEREA PYGMÆA.

A really delightful plant not more than 4 inches high and smothered with ruby red bells. An ideal carpeter of the soil if it can be had in



THE NOOTKA SOUND LUPINE GROWING WILD ON AN ISLAND IN THE TAY.

being not unlike a white Sweet Sultan in form and fully thrice as large. From Mr. Amos Perry, Enfield. Award of merit.

ESCHSCHOLTZIA MIKADO.

The most brilliantly-flowered variety we have seen, the colour being that of a glowing crimson Poppy; very intense and showy. Shown by Mr. W. H. Gardiner, Mill Street, St. Osyth. Award of merit.

EREMURUS BUNGEI MAGNIFICUS.

A highly magnified E. Bungei in all its parts, and a noble plant withal. With this fine addition to the group it is now easy to foresee the yellow-flowered Eremuri with all the greatness and stature of the finest E. robustus forms. From Messrs. James Veitch and Sons, Limited, Chelsea. Award of merit.

BEGONIA COL. LAUSSEDAL.

A dwarf-growing, double, yellow-flowered variety that should be of much value for bedding. It is not more than 8 inches high and very freely flowered. From Messrs. James Veitch and Sons, Limited, Chelsea. Award of merit.

PELARGONIUM JAMES T. HAMILTON.

□ This excellent variety is of rich scarlet shade, and would appear to be of a similar parentage to

quantity. From Mr. George Reuthe, Keston, Kent. Award of merit.

SWEET PEA THE KING.

This excellent red-flowered variety is regarded as a Spencer King Edward VII., hence the name.

SWEET PEA MID-BLUE.

A showy variety of a clear deep blue shade. These were shown by Messrs. Dobbie and Co. of Rothesay, and each received an award of merit.

KNIPHOFIA GOLDELSE.

A pretty dwarf-growing hybrid variety, having K. pauciflora and K. ruia as its parents, the former being the seed parent. The long, cylindrical flowers are of a clear lemon yellow tone and very pleasing. From Messrs. R. W. Wallace and Co., Colchester. Award of merit.

DELPHINIUM CAMEYSES.

A showy and good plant with deep violet-coloured blossoms of large size, that are rendered the more conspicuous by a clear white bee-shaped centre. Exhibited by G. Ferguson, Esq., Weybridge. Award of merit.

All the above were exhibited before the floral committee of the Royal Horticultural Society on the 23rd ult., when the awards were made.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

SEDUM CÆRULEUM.

Mr. Clarence Elliott sends from Six Hills Nursery, Stevenage, Herts, flowers of this interesting Sedum, with the following note: "I am sending a small piece of Sedum cæruleum for the Editor's Table. It is one of the loveliest and most suitable annuals one could possibly grow on the rock garden, yet how seldom annuals seem to be grown among alpinists! The enclosed plant was collected this spring in Corsica, and was quite unknown to me until I took it to Kew to be named. There they have a pan of it in the Alpine House. The Kew plants are at present covered with starry sky blue flowers, as are mine; but the egg-shaped, fleshy leaves lack the brilliant red which makes my Corsican specimens so charming. This lack of colour in the Kew plants is probably due to their having been grown under glass. Grown in the open in a starved, sunny position on the rock garden, this blue-flowered Sedum would probably attain the scarlet leaves that it does in Corsica; but in any case it is well worth a trial, or, rather, an annual position on any rock garden. Probably the most suitable treatment would be to raise it from seed as Portulaca is raised, and plant it out as soon as large enough. I see it is described in one catalogue as a half-hardy annual; but my plants have flourished in the open since the end of March, and have survived not only heavy snow but severe frost. From this one would suppose that it might be sown *in situ* on the rock garden. For those who do not know this little-known Stonecrop, it may be described as growing from 3 inches to 6 inches high; leaves fleshy, egg-shaped, scarlet; flower-buds white, opening into starry sky blue flowers a quarter of an inch across. There are a good many true alpine annuals which might be more grown on rock gardens than they are. *Ionopsidium acaule*, for instance, with its countless tiny flowers of palest lavender white, is quite delightful, yet comparatively seldom seen. Once started from seed, however, it sows itself, and a succession of self-sown plants will blossom year in and year out."

INTERESTING SHRUBS FROM CHELSEA.

Messrs. James Veitch and Sons, Limited, send from their Chelsea Nursery a most interesting collection of flowering trees and shrubs, showing the great wealth of bloom that is obtainable at this season of the year. It is to be hoped that such kinds as those named and mentioned in the following list will be more grown in our gardens. The three Mock Oranges (*Philadelphus*) sent are delightful, flowers of snowy whiteness and crowded on the slender stems. All are forms of *P. Lemoini*, and how great is our debt of gratitude to the great French hybridist for enriching our gardens with such treasures. A beautiful trio comprises those sent—*Conquetti*, *Fantaisie* and *Mont Blanc*—and these we commend for their beauty and effect. Then we picked out from the gathering the sweetly-scented *Robinia decaisneana* and the better known *R. hispida*. Among other things were the creamy *Spirea sorbifolia*, *S. corymbosa*, the lovely *Styrax japonica*, the flowers reminding one of the Snow-drop; *Escallonia philippiana* and one of the most

precious of its race flowering now, *E. langleyensis*, the flowers deep crimson and lining the long slender shoots; this is a shrub to make a note of. *Amorpha fruticosa*, the white-flowered *Abelia triflora*, *Andromeda speciosa cassiniifolia*, *Cytisus nigricans*, yellow with bloom, one of the most valuable of all summer-flowering shrubs; *Olearia macrodonta*, *Colutea arborescens purpurea*, the yellow-flowered *Berberis vulgaris integerrima* and the rosy coloured *Kalmia latifolia*—a welcome gathering.

ICELAND POPPIES FROM UPTON-ON-SEVERN.

Miss H. Hemms of Holdfast Hall, Upton-on-Severn, sends us excellent flowers of the popular Iceland Poppies. These comprise new shades of vivid orange scarlet, pale terra-cotta, cream and apricot. The flowers were large and of sturdy habit, evidently the result of good culture.

PERPETUAL-FLOWERING PINKS.

Messrs. B. Ladhams, Limited, The Shirley Nurseries, Shirley, Southampton, send us a series of delightful Pinks, including several unnamed seedlings. Those that attract us most are *Favourite*, *Brightness*, *Charles*, *The King*, *Princess Christian*, *John Ball Improved*, *Nellie*, *Continuity* and *Monarch*. All these are of beautiful colours and very sweetly scented. Such flowers as these are a joy in the garden at this time of the year, and we hope Messrs. Ladhams will continue their good work of raising such varieties.

THE FRUIT GARDEN.

A NEW AUTUMN STRAWBERRY.

(LAXTON'S PERPETUAL.)

THE autumn Strawberries are not grown nearly as much as they deserve to be, and, when their value is considered and the good return secured on a small space of land, it is evident that these fruits should find more favour with amateurs. The new variety named *Laxton's Perpetual* was raised by Messrs. Laxton of Bedford, and was the result of crossing the large summer fruiting *Monarch* with *St. Joseph*, a true perpetual. The result is even better than one could have hoped for, as, though the new variety is a true perpetual, fruiting continuously from June to November, the fruits are much larger than those of *St. Joseph* and also of excellent quality, having a sweet and aromatic flavour and a deep red colour. At the same time the plant is dwarf, and in this respect much like *St. Joseph*. This latter feature is a great gain, as the compact habit of the plant allows it to be grown quite close—18 inches apart will suffice between the rows—so that it will be seen it is excellent for gardens limited in size.

The older *St. Joseph* and *St. Antoine de Padoue* are also well worth attention, these being the best of the perpetual class, the last-named being larger than *St. Joseph*, but not equal to *The Laxton*. Messrs. Laxton inform me that they have several other seedlings on trial, and doubtless *St. Joseph* will be one of the parents. There appears to me to be a desire to secure size in the perpetuals, but I hope if this is done that flavour will not be lost sight of, as this is most important. I am glad to say that the flavour of *Laxton's Perpetual* is much better than that of *St. Joseph*.

Culture is extremely simple. Strong runners planted early in the spring will fruit in the autumn, but to do this it is well to get the plants well rooted and to remove the first flowers that show. Good land that has been well manured and an open border not much shaded with trees, planting in rows 18 inches apart and 9 inches to 12 inches between the plants, will ensure a good crop the following season. To get late fruits the blossoms must be removed until a later date in the summer. I have got successions by

change of quarters, but I find the latest lot must get full exposure in every way. It is also advisable to make a new bed annually, and, this done, the old one can be destroyed, as the fruits, though numerous, get smaller after the second season's crop. During the cropping season in dry weather the plants will repay liberal supplies of food in the shape of liquid manure. G. WYTHES.

THE KITCHEN GARDEN.

THE FRENCH SYSTEM OF GROWING VEGETABLES IN GLASS FRAMES AND UNDER BELL-GLASSES.

(Continued from page 324.)

OTHER crops which may be profitably grown in these warm frames in winter (starting at the same time as the Lettuces) are early Carrots, sowing Radishes among them at the same time. The Radishes will be ready for pulling before the Carrots have made any appreciable growth. Afterwards two crops of Tomatoes may be had from the frame during summer, planting five plants in the bottom of the frame, growing them in a prostrate form on the ground the same as the Melons, taking care that the fruits are placed high enough on inverted pots in order to expose them to light and to prevent their being splashed by the soil in syringing and watering. This also applies to Melons.

Another highly remunerative crop which may be forced in this way is the Asparagus. Roots of three years old and upwards may be dug up from the beds outside and placed thickly together in the frames on a bed of ordinary soil and covered with fine soil to the depth of 3 inches about the middle of November (the same time as the Lettuces and Carrots), and from this planting Asparagus may be cut within a month. As soon as the cutting from these roots is exhausted, the roots may be thrown away and others brought in, so that a succession of four crops at least may be grown in these frames on hot-beds. (I am presuming that the roots are grown at home, when they cost but little beyond the slight labour entailed; it does not pay to buy the roots to force.) Another valuable use these frames may be put to in connexion with this vegetable is to lift them off the hot-beds in spring when winter crops are over and place them over the ordinary Asparagus beds in the garden. This will result in Asparagus being cut at least three weeks earlier than would be the case in the ordinary way, when the price obtained would be more than trebled.

I will only mention one other crop out of a large number which could be included as amenable to profitable growth under this system, and that is the Strawberry. It is a well-known fact that the time the Strawberry is the scarcest and in the greatest demand is towards the end of May, when the pot-forced Strawberries are practically over and before the outside ones are ripe. By the timely use of these frames and cloches (when their services are over as regards winter crops) in covering over Strawberry beds outside as soon as they have set their fruit, the ripening of the fruit is enhanced by at least a fortnight or three weeks, and the difference in price this makes is often as the difference between 3s. per pound and 9d. per pound. I have trespassed too long on valuable space and can only hope that what I have had the privilege of saying may stimulate further enquiry into this subject, pregnant as I believe it to be with enormous possibilities as regards the remunerative employment of labour in the growth of winter and early spring vegetables by our country people, as well as in the greatly enhanced value of land to its owners. In the Vale of Evesham there are upwards of 2,000 acres under Asparagus culture, the best of it commanding a rent of from £10 to £15 per acre per annum. OWEN THOMAS.

THE GREENHOUSE.

IMPATIENS HOLSTII.

SINCE the introduction of this brilliant-coloured *Impatiens* into cultivation from German East Africa in 1903 numerous attempts have been made to cross it with other species in cultivation. Apparently the most successful in this respect are Messrs. Haage and Schmidt of Erfurt. Between *I. Holstii* and *I. Sultanii* they have obtained a number of very beautiful hybrids, one of which is illustrated. The new colours are very distinct and come almost true from seeds. Cuttings also root readily at almost any season of the year. Robust in growth and very free flowering, *I. Holstii* and its hybrids seem likely to supersede *I. Sultanii*, both for cultivation in pots and outside in summer. The individual blooms are 1¼ inches to 1½ inches in diameter.

When once the plants reach the flowering stage they are seldom or never absent from the plants, and for several months, practically throughout the summer and autumn, the plants are covered with flowers, as in the illustration. They thrive best in soil consisting of equal parts loam and leaf-mould, to which plenty of sand should be added. Seeds, which are best sown in March, can be obtained of the following colours in separate packets or mixed: Carmine, dark scarlet, lilac, dark violet, white tinted rose and white with red eye. A. O.

MALMAISON CARNATIONS.

"SOME years ago (possibly twelve or more) you published in THE GARDEN, when it was in a larger form, directions for growing Malmaison Carnations. I wonder if you could let me have them again. They were most successful, and two groups of them I had photographed. Each plant had something like 150 blooms and buds. I have, unfortunately, lost the directions, which were issued in the form of an article, "How to grow Malmaison Carnations." My gardener has neglected them and I am so anxious to get up the stock again."—Mrs. A. H.

Some time ago there was a discussion about the origin and time of introduction of this distinct class of Carnations, but none of the correspondents went quite far enough back. I knew the original blush variety before 1870. I could not be quite certain, but it would be either 1867 or 1868 that we had the first three plants, and I may say that I have been interested in them ever since. These notes being in reply to an enquiry regarding their culture I must keep to that rather than history, except to say that the first came from France. The enquirer asks how to grow them? In the first place, clean healthy stock is necessary, and if the plants already in stock are weak and unhealthy they should be thrown away and fresh healthy plants procured. The Malmaisons require rather different treatment to the other varieties grown under glass. To start with propagation. Layering is the best method for all the true varieties of the original *Souvenir de la Malmaison*, but many of the hybrids may be readily propagated from cuttings.

The best time for layering is when the side shoots have made a good growth, and this is usually about July. My practice has been to sink the smaller pots into larger ones and clear off all the lower leaves, then carefully cut from the under side of the shoots, bringing the knife up through one joint and about half through the stem. The advantage of sinking the plants is that the soil can be brought up to where the stem is cut, and it is dangerous to try to bend the shoots down much for they easily split off from the stem. When done in the open ground the plants may be laid down sideways, and in good ground they do better perhaps than in pots.

As soon as rooted they should be taken up and potted. Soil is of some importance, and although

I have grown them well in various soils, fibrous loam, leaf-mould and some well-decayed stable manure, with firm potting, will be found best; or if the loam is not fibrous, some peat may be added. Sand may also be necessary. In potting be careful that the soil is as firm at the bottom of the pots as on the surface, and do not press the surface down. Leave it loose so that the water can penetrate easily. Pot on into larger pots before the plants become pot-bound or stunted, and always give good drainage. In watering be careful when it is given that it penetrates to the bottom of the pots, but do not overwater. Position is a great point, while under glass they should stand on a moist bottom and have plenty of air above. During the winter the temperature may be kept up to 50° Fahr., and with sun may rise above. Avoid giving too much fire-heat in dull weather, as it only weakens the plants and does not advance the flower-buds.

The same plants may be grown on from year to year, and some of the best I have had have been from three to five years old. The great point is to be careful in cutting the flower-stems out; they should be cut quite close down to the shoot that remains. They flower when grown naturally from early in May until the middle of June, and it may happen that while in flower they suffer from heat. I do not believe in much shading. A little may be given, and plenty of moisture under the stages or between the pots, with air above to prevent damp settling on the flowers. Sulphur and lime may be dusted about freely, and will keep away mildew and rust. It is generally when plants have done flowering that they get neglected, and where plants are to be grown on from year to year it is the most critical time. All old foliage should be cleaned off and the plants repotted before they get weak or stunted. With the older plants some of the soil may be removed, but this will depend on the condition of the roots. With good soil very little manure will be necessary, but when the pots are full of roots some may be given. Liquid made with cow manure and guano or soot may be added, but it should be made some time before required for use and allowed to settle down so that it can be used in a clear state. It is better to use it frequently in weak doses than to give it strong and less frequently. There is no secret in growing the Malmaisons well. Regular attention and potting at the right time are the chief items.

I may add that some growers keep them under glass all the year through, but they are better in the open during July and August if a suitable

position can be given, but should not stand where they may be flooded in case of heavy rains.

VARIETIES.

The old introduction is still to be found, and is as good as when first introduced. It was not long after its introduction that we had a sport of a deeper colour; then we had *Lady Middleton*, a striped variety; and I believe it was a little later that Mr. C. Turner sent out a rosy pink variety. The variety now popularly known as *Princess of Wales* is certainly the best and most appreciated of all the Malmaisons, and in the market makes the highest prices.

Some time ago I visited the nurseries of Messrs. Hugh Low and Co., Bush Hill Park, Enfield, where I found all the varieties, including the hybrids, were being well cared for, upwards of



IMPATIENS HOLSTII AS GROWN AT KEW.

fifty varieties being grown. From these it is difficult to make a selection; but I must say that I believe some should not be included. The true Malmaisons have the peculiar habit of giving a second lot of forets from what should be the ovary. It was owing to this peculiarity that H. J. Jones, the fine crimson, was classed with the Malmaisons. Among those which I noted at Messrs. Low's were *Princess May*, similar to *Princess of Wales*; *Lady Rose*, a fine variety of a different shade of pink; and *Nell Gwynne*, the best or perhaps the only white—it is a little defective in habit, but the flowers are large and have the true scent of the Malmaisons. I might give a good many other names, but it would be better for anyone interested to visit a nursery such as Messrs. Low's or any other large grower and select for themselves.

I find on reference to notes that those I have seen and thought good a few years ago are now rarely seen. When I first grew Churchwarden it was good, but a year or two later I could not get good blooms. It has been the same with other hybrid varieties, yet the old true stock still remains as good as ever. I include the sports and not the seedlings, for my experience is that they are all doubtful. A. HEMSLEY.

A BEAUTIFUL SEA LAVENDER.

(STATICE SUWOROWIL.)

THIS is perhaps the showiest of all the Sea Lavenders when in flower, and one of our very best hardy annuals for autumn or spring sowing. Its greatest value, however, is as a pot plant for greenhouse decoration. Grown under glass the tall flower-spikes thickly clothed with mauve-pink blossoms attain to the greatest perfection. The oblong-lanceolate light green leaves lie almost flat upon the pot, and above them, rising to a height of 2 feet to 3 feet, are the many-branched flower-spikes. It is recorded that exceptionally well-grown plants have produced flower-spikes 5 feet in height. The tallest plants are raised from seeds sown in autumn, the plants being kept in a cool greenhouse or frame during the winter. The plants flowering in the greenhouse at Kew, one of which is illustrated, were grown from seeds sown in January. Their cultural requirements are of the simplest; well-drained pots, ordinary potting soil and cool greenhouse treatment being necessary. The plants do not make an abundance of roots, so that overpotting must be guarded against. A very good method is to grow several plants in a pot.

To flower in the open air the seed may be sown where they are to bloom in autumn or spring, or the young plants can be raised under glass and planted out at the end of April. The latter method is adopted in Hyde Park, where a bed composed largely of this beautiful Sea Lavender attracted considerable attention. Another valuable property of the flowers is that they are "ever-lasting." Cut with long stems when the flowers are fully open and hung in a cool place the stems will dry rigid and the flowers retain their beautiful tint for a year or more. For the decoration of rooms in winter they are very valuable in this state. A. O.

A BEAUTIFUL NEW SALVIA.

(SALVIA SPLENDENS PRIDE OF ZURICH.)

DURING the last generation we have seen the flowering period of many plants greatly extended, and in some instances at least turned quite topsy-turvy, the flowering of *Lilium speciosum* in the spring from retarded bulbs being a case in point. In some cases, however, this change has been brought about by selection, as in the above-mentioned *Salvia*. The typical *Salvia splendens*, introduced from Brazil in 1822, has for the last half century, or perhaps more, been an extremely popular subject for the embellishment of the greenhouse or

conservatory during late summer and in autumn, at which season its bright scarlet-coloured flowers and bracts serve to lighten up the comparatively pale tints of so many of the *Chrysanthemums*, which form the bulk of the greenhouse flowers at that season. This newer form is much earlier flowering than the type.

Apart from its early-flowering qualities, this *Salvia* is also dwarfier in habit than the older type. It is highly spoken of as a subject for bedding out during the summer months. Exception may perhaps be taken to my reference to this *Salvia* as new, but it is really of recent introduction, and so little known as a decided break away from the type that the term new may not appear altogether out of place. It is already a favourite with those who know it, and one may safely predict that this plant has a rosy future in store for it. All the *Salvias* of this class are as readily struck from cuttings as a *Fuchsia*, and they grow away freely in any good potting compost, a little peat and sand mixed with good loam being much enjoyed. H. P.



A PRETTY SEA LAVENDER (STATICE SUWOROWIL) IN THE GREENHOUSE AT KEW.

THE FLOWER GARDEN.

REVIVAL OF THE LACED PINK.

HOW much we owe to Mr. James Douglas, Edenside, Great Bookham, for giving to our gardens much of their flower beauty! At a recent meeting of the Royal Horticultural Society we were charmed with one of the most interesting groups of Laced Pinks we have ever seen, not the varieties we remember years ago, but seedlings raised by this famous florist. The flowers were of many shades, some exquisite in subtle colouring, and others perhaps more conspicuous for beauty of form. One we illustrate, *Bookham Gem*, a worthy name; the flower is of perfect shape, the edge deep rose purple, a warm shade, which seems to agree with the rich fragrance. The time for propagating these old favourites is now with us, and the operation of taking pipings or slips and inserting them in pots, boxes, or beds of sandy soil is a very simple one indeed. We heartily congratulate Mr. Douglas upon his success in raising these beautiful flowers.

ERODIUM CARUIFOLIUM

THERE are some pleasing plants among the *Erodiums* or Heron's Bills, and the foliage in itself is usually very beautiful, the finely-cut leaves of the greater number increasing the attractions of the plants. Some are excellent rock garden plants, while a few are a little too large for any save the larger rock gardens. *Erodium caruifolium* seems to occupy the border line between the border and the rock species, but in districts where such plants grow vigorously it really ought to be a border flower. Its height is given as from 6 inches to 10 inches; but this season it is fully the latter height with me, even on a dry and sunny part of the rock garden.

It is a good plant, however, with its flowers of a red-purple, each about half an inch across and borne in umbels with sometimes as many as ten blooms together. If in the border its stems will need some support where they grow to more than 6 inches or 8 inches, but on the rockery they may be allowed to trail over a stone and show off the bright flowers. A hard and dry soil will help to keep it dwarf and will induce floriferousness, whereas a rich one would produce leaves at the expense of flowers. It is quite hardy, and can be increased by division after flowering or by seeds sown in spring. S. ARNOTT.

A BEAUTIFUL LATE-FLOWERING LILY.

(LILIUM SPECIOSUM.)

THIS is one of the most popular of all Lilies for pots, as in the first place it flowers naturally towards the latter part of August and in September, and is on this account particularly valuable for the greenhouse at a time when many summer-flowering subjects are on the wane and before the *Chrysanthemums* come

THE NATIONAL ROSE SHOW.

THE annual show of the National Rose Society was held on what had been so far the hottest day of the year, and the flowers suffered accordingly. The heat was terrific, and many of even the prize blooms collapsed before the afternoon. It was distressing to see the effect of the tropical weather upon the decorative Roses, many of which were withered in an hour. But the exhibition was in every way a complete success, and, as our report shows, the competition was keen in most classes. The new Roses were interesting and two gold medals were awarded, both the sorts coming from Ireland. We must heartily congratulate Mr. Edward Mawley upon his unselfish and untiring work, and on the hon. treasurer, Mr. H. E. Molyneux. Without these helpers the society would not be in the proud position it is to-day. Her Majesty the Queen visited the exhibition in the morning and remained nearly two hours. Mr. E. B. Lindsell, the president, won the amateur challenge trophy, and Messrs. Prior and Son of Colchester the trophy in the nurserymen's division, both, it is needless to say, with superb exhibits.

NURSERYMEN.

GENERAL SECTION.

In the nurserymen's championship class, which is really the head contest in the United Kingdom, seventy-two blooms, distinct, are asked for, and five competitors entered, hence Messrs. D. Prior and Sons of Colchester may be most warmly congratulated on securing the championship. Certainly their blooms were superb, the whole being a very even and well-developed lot, the colour also leaving nothing to be desired. William Shean, White Maman Cochet, Robert Scott, Bessie Brown, Mme. Delville, Oscar Cordel, Oberhöfgartner Terks and Mrs. Theodore Roosevelt were a few of the very best. Messrs. R. Harkness and Co. of Hitchin came in a good second. Among their flowers were grand blooms of Florence Pemberton, Jean Soupert, Alice Lindsell, J. B. Clark, Yvonne Vacherot, Lady Moyra Beauclerc and Horace Vernet. Third honours went to Messrs. B. R. Cant and Sons, Old Rose Gardens, Colchester. We noticed Bessie Brown, Mme. Jules Gravereaux, Maman Cochet and Mildred Grant in fine condition in this exhibit. The fourth prize was awarded to Messrs. Alex. Dickson and Sons, Limited, Newtownards.

In Class 2, forty distinct varieties, three blooms of each, were stipulated, and competition was very good. Messrs. B. R. Cant and Sons, The Old Rose Gardens, Colchester, are to be congratulated on winning first prize here. Taken on the whole their blooms were very good, especially considering the scorching hot weather. Mildred Grant, Mme. Jules Gravereaux, J. B. Clark, Marie Baumann, Ben Cant, Souvenir de Pierre Notting, Dean Hole and A. K. Williams were a few that particularly appealed to us. The second position was allotted to Messrs. Alex. Dickson and Sons, Newtownards, whose flowers were also of high order. Mildred Grant, Bessie Brown, Princess Marie Mertchersky, Mrs. Bateman and William Shean were superb. Third honours fell to Messrs. D. Prior and Son of Colchester, some particularly good flowers of Dean Hole being staged in their exhibit.

For forty-eight blooms, distinct varieties, the first prize was won by Messrs. J. Burrell and Co., Cambridge, in strong competition. The flowers here were very good, and we specially noticed J. B. Clark, Mrs. Theodore Roosevelt, Mme.

Phillipe Rivore, Lady Ashtown, Mildred Grant and Mme. C. Soupert. Second honours fell to Messrs. G. and W. H. Burch, Peterborough, whose flowers were also excellent. Horace Vernet, J. B. Clark and Mme. Jules Gravereaux were exceptionally well formed and highly coloured. The third position was secured by Mr. George Mount of Canterbury. Mr. Hugh Dickson, Belfast, was considered equal third, and consequently an extra prize was awarded to his exhibit.

In the class for twenty-four distinct varieties there were six entries, the blooms staged by Mr. H. Drew, Longworth, Bucks, being granted first honours. Bessie Brown, Mildred Grant, Robert Scott and Dean Hole were the best. Mr. C. Turner, Royal Nurseries, Slough, was a very close second, his blooms of Her Majesty, White Maman Cochet and Mrs. E. Mawley being superb. Mr. E. Hicks, Twyford, Berks, was third.

For sixteen distinct varieties, three blooms of each, there were six entries, the first prize going to Messrs. G. and W. H. Burch, Peterborough, for a collection of extra large and well-finished blooms. Her Majesty, Mildred Grant, J. B. Clark and Alice Lindsell were particularly large and attractive. The second prize was well won by Messrs. J. Burrell and Co. of Cambridge, whose blooms of Mildred Grant were particularly good. Messrs. John Jefferies and Sons, Limited, Cirencester, were third.

TEA AND NOISETTE SECTION.

For the D'ombain Cup, twenty-four blooms, distinct varieties, had to be staged, and four competitors entered. Mr. G. Prince, Longworth, Berks, appropriated the cup with a beautifully-finished lot of flowers. Souvenir de Pierre Notting, Maman Cochet and Mrs. E. Mawley were the best. The second position was allocated to Messrs. B. R. Cant and Sons, Colchester. Bridesmaid, Mrs. Myles Kennedy and Maman Cochet were extra fine in this exhibit. Third honours went to Messrs. Frank Cant and Co. of Colchester.

For twelve blooms, distinct, there were also four entries, the first prize being well won by Mr. John Mattock, Headington, Oxford. He staged a very good bloom of Mme. Jules Gravereaux. Messrs. Paul and Son, Cheshunt, were placed second, their dozen containing grand flowers of Maman Cochet and Mme. Constant Soupert; third honours went to Messrs. J. Burrell and Co., Cambridge.

For fourteen distinct varieties, three blooms of each, to be shown in fourteen vases, there were seven entries, hence Messrs. B. R. Cant and Sons of Colchester may be congratulated on securing the first prize. Their exhibit contained excellent flowers of White Maman Cochet and Mme. Jules Gravereaux. Mr. H. Drew of Longworth, Berks, was second, and Mr. G. Prince third.

EXHIBITION ROSES IN VASES.

In Class 9, twelve distinct varieties, to include not more than six varieties of Teas and Noisettes, seven blooms of each were demanded. This class was a very keenly fought one, and Messrs. Alex. Dickson and Sons, Limited, of Newtownards, were adjudged the champions. Their blooms were really a delightful lot, the form and colour being superb. Mildred Grant, Bessie Brown, Grace Molyneux and Lady Derby stood out prominent. Messrs. D. Prior and Son, Colchester, were a very good second. Maman Cochet, Mildred Grant and Bessie Brown as shown here being superb. Third honours went to Messrs. Frank Cant and Co. of Colchester.

In a similar class for quantities of Teas and Noisettes, the competition was not quite so good. Mr. Henry Drew, Longworth, Berks, was first with rather small but beautifully-coloured flowers. Maman Cochet, White Maman Cochet and Souvenir d'Un Ami were the best. Mr. John Mattock, Headington, Oxford, was second, and Mr. G. Prince third.

SECTION FOR DECORATIVE ROSES.

For thirty-six distinct varieties, not less than three or more than seven trusses of each, Mr. John Mattock was first with a tastefully-arranged group of well-grown blooms; second honours went to Messrs. Paul and Son of Cheshunt, the flowers staged here being very fine indeed.

In Class 12, for eighteen distinct varieties, not less than three or more than seven trusses of each were asked for, and the competition was very good. Messrs. William Spooner and Son of Woking being first with well-grown stuff. Rubin and Jersey Beauty were particularly good. Second honours went to Mr. Charles Turner of Slough, and third to Mr. John Barrow of Oadby, Leicester.

For eighteen distinct varieties of summer-flowering Roses, Hybrid Perpetuals, Hybrid Teas, Teas and Chinas not admissible, Mr. G. Prince of Longworth, Berks, took the premier award with a tastefully arranged lot of flowers. Rubin, Himalaica and Mrs. Flight were very pretty. Messrs. G. Cooling and Sons of Bath were a good second and Messrs. Paul and Son of Cheshunt were placed third.

Eleven distinct varieties, not less than three sprays of each, was an interesting class, Mr. J. Mattock, Headington, Oxford, taking first prize. Mme. Abel Chatenay and Lady Battersea were very good here. Mr. G. Mount was second and Messrs. J. Jefferies third.

GROUPS OF ROSES.

For a representative group of Roses on the floor, pot plants and cut flowers, Hobbies, Limited, Dereham, Norfolk, staged the first prize group. This was a really superb exhibit and fully deserved the honour. Such Polyanthas as Dorothy Perkins, Hiawatha and Lady Gay were fully represented at the back and in the centre, excellent cut blooms of various sorts being tastefully arranged in front and the whole edged with Maidenhair Ferns and *Isolepis gracilis*. Messrs. Paul and Son, Cheshunt, were second with a group that was little inferior to the first prize lot, all the material used being of high order.

In the class for a representative group of cut Roses, to be placed on staging, to include as far as possible Hybrid Perpetuals, Hybrid Teas, Teas, Noisettes, China and Polyantha varieties, the exhibits were very pretty indeed, and filled one whole side of a long tent. The first prize and gold medal here were won in fine style by Mr. George Mount of Canterbury. This group was a very beautiful combination of artistic arrangement and cultural skill, the flowers being in the pink of condition. Richmond, Killarney, Joseph Lowe, Laurette Messimy and many other beautiful sorts were freely displayed. Mr. F. W. Bradley, Peterborough, secured the second prize and silver-gilt medal also for a beautiful group of well-grown material. Frau Karl Druschki was very good. The third prize and silver medal were awarded to Messrs. W. and J. Brown of Peterborough.

GENERAL SECTION.

OPEN TO ALL NURSERYMEN AND AMATEURS.

For eighteen blooms of any crimson Rose Messrs. R. Harkness and Co., Hitchin, were the

champions with splendid flowers of Ulrich Brunner. Second honours went to Messrs. B. R. Cant and Sons, Colchester, for the same variety, and the third prize was won by Mr. Hugh Dickson with Richmond.

In the class for eighteen blooms of any white or yellow Rose nine competitors tried conclusions, the premier prize being appropriated by Mr. John Mattock, Headington, Oxford, with superb flowers of Bessie Brown. Messrs. R. Harkness and Co., Hitchin, were second with very full flowers of Florence Pemberton, and third honours went to Mr. Hugh Dickson of Belfast. Comtesse de Nadaillac was the only yellow variety shown.

For eighteen blooms of any Rose other than white, yellow or crimson the first prize went to Messrs. Frank Cant and Co. for a delightful lot of Mildred Grant. Messrs. S. Bide and Sons, Farnham, were second with Queen of Spain, and third honours went to Mr. Hugh Dickson of Belfast.

In the class for twelve blooms of White Maman Cochet five competitors entered. Messrs. Frank Cant and Co., Braiswick Rose Gardens, Colchester, took first prize for a very highly-developed dozen. Mr. C. Turner of Slough was a good second and Messrs. B. R. Cant and Sons came third.

Class 21 was for twelve blooms of Frau Karl Druschki and twelve blooms of J. B. Clark, the flowers to be arranged alternately. The effect was very beautiful indeed, as no less than nine competitors staged blooms. Mr. George Mount of Canterbury was the champion with grand flowers. Second honours were splendidly won by Messrs. G. and W. H. Burch of Peterborough and the third prize was secured by Messrs. Frank Cant and Co. of Colchester.

For nine blooms of any new Rose the first prize was secured by Messrs. Alex. Dickson and Sons of Newtownards, Ireland, for a magnificent box of William Shean. The silver medal for the best Hybrid Tea staged by a nurseryman was awarded to a superb flower shown in this lot. Messrs. Frank Cant and Co., Colchester, were second with fine flowers of Mrs. Theodore Roosevelt, and Messrs. B. R. Cant and Sons and Messrs. S. Bide and Sons were equal third with Mrs. T. Roosevelt and Queen of Spain respectively.

The class for twelve blooms, distinct varieties, of new Roses, offered for the first time in the spring of 1905 and subsequently, was a most interesting one and the competition was good. Messrs. Frank Cant and Co., Colchester, were first with excellent flowers. We particularly liked Mme. Constant Soupert, Mrs. T. Roosevelt, J. B. Clark and Mrs. Myles Kennedy. Messrs. B. R. Cant and Sons were placed second, Countess of Derby, William Shean and Colonel K. S. Williams being good here. Messrs. A. Dickson and Sons were third.

NEW SEEDLING ROSES.

For not less than six trusses of any new seedling Rose or distinct sport, Messrs. Alex. Dickson and Sons of Newtownards won a gold medal with Mita Weldon, a beautiful Tea of large size and rather flat shape, the colour being creamy white, tinted apricot. An equal honour was secured by Dr. J. Campbell Hall for a lovely Tea named Mrs. J. Campbell Hall. This has a delicate combination of cream and pink colouring, the petals being rather acute at the apices. Cards of commendation were granted to Shower of Gold, a yellow rambler variety shown by Messrs. Paul and Son of Cheshunt; W. R. Smith, shown by Mr. Hugh Dickson, and an unnamed Tea and a lovely variety named Grace Molyneux, both shown by Messrs. A. Dickson and Sons, Newtownards.

Earl of Gosford, a carmine Hybrid Tea, staged by Messrs. McGreedy and Son, was also granted a card of commendation. In shape it resembles J. B. Clark.

DECORATIVE CLASSES.

In the class for twelve varieties of single-flowered Roses, Messrs. George Cooling and Sons

of Bath were first. Their flowers were staged in excellent condition and contained fine examples of Lady Curzon, Andersonii and Stella. Messrs. Paul and Son of Cheshunt were second, Royal Scarlet and Irish Glory being very fine here.

For twelve vases of Mme. Abel Chatenay, seven trusses in a vase, Mr. G. Mount of Canterbury took first honours with some very large and fresh-looking flowers. Messrs. W. Spooner and Son of Woking were second, and Messrs. D. Prior and Son third. A group here that would have taken first prize was disqualified as being not according to schedule.

THE NICKERSON DIVISION.

For a representative group of the twelve Roses to which the recent ballot had entitled each of the raisers of those varieties to a silver cup, value five guineas, presented by Mr. W. E. Nickerson of Cambridge, Massachusetts, U.S.A., the first prize went to Mr. J. Mattock, Headington, Oxford, for a tastefully-arranged lot of flowers. Mme. Ravary, Dorothy Perkins and Caroline Testout were all good. Mr. G. Mount of Canterbury was second, and Messrs. Paul and Son of Cheshunt third.

In Class 98 a representative group of the twelve Roses occupying the second position on the balloting list was asked for. Mr. G. Prince, Longworth, Berks, was first here with very good flowers. Mme. Abel Chatenay, Una, Grüss an Teplitz and Marie Van Houtte were particularly noticeable. Mr. George Mount was third.

For a representative group of the twelve Roses occupying the third position on the balloting list, Mr. J. Mattock was the champion here with well-grown flowers of such varieties as Mme. Jules Gravereaux, Souv. de Pierre Notting and La France. Second and third prizes went respectively to Mr. G. Mount and Messrs. Paul and Son of Cheshunt.

BEST BLOOMS IN THE SHOW.

Open Section.—Hybrid Perpetual A. K. Williams, shown by Mr. George Mount of Canterbury; Hybrid Tea William Shean, shown by Messrs. Alex. Dickson and Sons, Newtownards; and Tea Mrs. Myles Kennedy, exhibited by Messrs. George Cooling and Sons, Bath.

Amateurs' Section.—Hybrid Perpetual Her Majesty, shown by Mr. E. J. Holland, Sutton, Surrey; Hybrid Tea Dean Hole, staged by Mr. E. B. Lindsell; and Tea White Maman Cochet, shown by Mr. Conway Jones.

AMATEURS' GENERAL SECTION.

In the amateur champion class for thirty-six blooms, distinct, for the Amateur Champion Trophy, value 50 guineas, there were seven entries. Leading honours fell, as usual, to Mr. E. B. Lindsell, Bearton, Hitchin, Herts, for a bright and beautiful exhibit. Oberhöfgartner Terks, Ulrich Brunner, Dean Hole, Nadaillac, Alfred Colomb, White Maman Cochet, Maman Cochet, Mildred Grant, Horace Vernet (grand), Ulster, Queen of Spain, Duchess of Portland, Mrs. John Bateman, A. K. Williams, Countess of Gosford, Marchioness of Londonderry, Marie Baumann and others were all very handsome. Second prize was won by the Rev. J. H. Pemberton, Havering-atte-Bower, Essex. Third prize went to Mr. F. Dennison, Rosecroft, Kenilworth, for bright flowers, and Mr. Conway Jones, Huclecote, Gloucestershire, was fourth.

Mr. A. Tate, Downside, Leatherhead, was a good first in the class for twenty-four blooms, distinct, showing neat and even flowers of Mildred Grant, Dean Hole, Countess of Derby, Frau Karl Druschki and Florence Pemberton. Mr. E. B. Lindsell had to be satisfied with the second place, showing fresh and beautiful blooms of the best sorts. Third prize was secured by Mr. F. Dennison with a fresh lot of beautiful colour.

The class for twelve trebles was well contested, the competition being very keen. Of the eight entrants, the president (Mr. E. B. Lindsell) again

led with a superb exhibit. Mildred Grant, Duchess of Portland, Dean Hole, Florence Pemberton, White Maman Cochet, Mrs. J. Laing, Bessie Brown and Ulrich Brunner were the best varieties staged. Second prize was secured by Mr. E. J. Holland, Sutton, Surrey, also with a superb lot. Mildred Grant, Mrs. W. J. Grant, Maman Cochet, Dean Hole and George Laing Paul were striking examples. A good third was found in Mr. A. Tate's lot.

There were but four entries in the class for nine blooms of any Rose except Tea or Noisette shown in vases. Mr. F. Dennison was a good first with lovely flowers of Mildred Grant. Second prize was secured by Mr. G. A. Hammond, Cambrian House, Burgess Hill, Sussex, who staged lovely blooms of Dean Hole, and third prize was won by Mr. E. M. Eversfield, Deane Park, Horsham, with Florence Pemberton.

OPEN TO GROWERS OF LESS THAN 2,000 PLANTS OF EXHIBITION ROSES.

In the class for twenty-four blooms, distinct, there were but four entries. Leading honours were secured by Mr. W. O. Times, Hitchin, with a capital even lot of blooms; Mildred Grant, Ulrich Brunner, Mrs. J. Bateman, O. Terks, White Maman Cochet, Marie Baumann and Dean Hole were among the best blooms. Second prize was secured by Mr. Thomas B. Gabriel, Hart Hill, Woking, for a nice fresh lot; Killarney, Maman Cochet and Caroline Testout were good. Third prize was won by Mr. C. C. Williamson, Wilstead, Ethelbert Road, Canterbury. The winner of the first prize won the challenge cup, value 10 guineas, presented by Captain Christy.

Only three exhibits were forthcoming in the class for eighteen blooms, distinct. First prize was won by Mr. G. Speight, Market Harborough, with a very interesting series. W. Shean, J. Ruskin, Caroline Testout and a few others were charming. Second prize was secured by the hon. secretary, Mr. E. Mawley, Rosebank, Berkhamsted, with a bright box of blooms; and third prize went to Mr. Richard E. West, Reigate.

In the class for eight trebles, the six exhibits made a fine show. Mr. Speight was a good first, having superb examples of Florence Pemberton, Mrs. J. Laing, Caroline Testout, Mme. Jules Gravereaux, Gladys Harkness, Dean Hole, White Maman Cochet and Bessie Brown. Mr. G. Hammond's second prize lot were good, Dean Hole, Lady Ashtown, Oberhöfgartner Terks and Bessie Brown being very fine. Mr. W. O. Times, Hitchin, was an excellent third.

In Class 38, for seven blooms of any Rose except Tea or Noisette, Mr. Speight took the first prize with good blooms of Florence Pemberton. Mr. Times was second with Frau Karl Druschki, and Mr. A. W. Metcalfe, Luton Hoo, Luton, third.

OPEN ONLY TO GROWERS OF LESS THAN 1,000 EXHIBITION VARIETIES.

The seven entries in the class for twelve blooms, distinct, for the Grahame Memorial Prize, value 5 guineas, were very good. Dr. Charles Lamplough was a splendid first. White Maman Cochet, Dean Hole, Her Majesty, Mildred Grant and Gladys Harkness were all very praiseworthy. Second prize was well deserved by Mr. M. Whittle, and the third prize went to the Rev. J. B. Shackle, Dropmore Vicarage, Maidenhead, with a fresh series.

There were only four entries in the class for five blooms of one variety of any Rose except Tea or Noisettes. Mr. C. F. H. Leslie, Epcombs, Hertingfordbury, Hertford, was a good first with Caroline Testout, the Rev. J. B. Shackle was second, and the Rev. F. R. Burnside, Great Stourbridge Rectory, Essex, third.

The first prize in Class 41 for twelve blooms, distinct varieties, was the Ben Cant Memorial, value 5 guineas. This was won by Mr. William Upton with large fresh blooms of Countess of Caledon, Dean Hole, Caroline Testout, Mme. Jules Gravereaux, Mildred Grant, Bessie Brown

and others. Second prize was won by Mr. H. Robins, Ingatstone, Essex, with a neat series, and Dr. T. E. Pallett, Earl's Colne, Essex, was a good third. There were eighteen entries in this class.

The sixteen exhibits in the class for five blooms of one variety, except Tea or Noisette, made a fine display. First prize was secured by Mr. George Moules, Hitchin, Herts, with a grand lot of Mildred Grant. Mr. Bostock, Springfield, Northampton, was a good second with Florence Pemberton, and Viscountess Enfield, Dancers Hall House, Barnet, was third with fine examples of Caroline Testout.

The three entrants for six trebles in Class 43 were a pleasing feature. Dr. Lamplough again excelled, showing in grand form flowers of Frau Karl Druschki, Mildred Grant, Dean Hole, Florence Pemberton, Caroline Testout and Bessie Brown. A beautiful second was seen in the exhibit of Dr. T. E. Pallett, who had Killarney and J. B. Clark in rare form. Third prize was awarded to Mr. Joseph Wakeley, Rainham, Kent, with a bright series.

OPEN ONLY TO GROWERS OF LESS THAN 500 EXHIBITION VARIETIES.

For nine blooms, distinct, Mrs. E. Horne, Park House, Reigate, was first of the four entrants; Mr. J. Nightingale, Sutton, second; and Mr. V. Rolt third.

The ten exhibits in the class for six blooms distinct made a good display. Messrs. Burrell and Co.'s prize, value 2 guineas, was won by Mr. H. C. Baker with a charming box of blooms. Second prize was won by the Rev. H. S. Arkwright, and equal thirds went to Mr. Courtney Page, Enfield, and Mr. W. Upton.

In the class for five blooms of one variety, except Teas or Noisettes, the eleven exhibits made an excellent display. First prize was won by the Rev. H. S. Arkwright with superb examples of Florence Pemberton. Second prize went to Mr. Courtney Page for Bessie Brown, and third prize to Mr. Vivian Rolt for Mrs. John Laing. The president's prize, value 5 guineas, for twelve blooms, distinct, was well won, in very keen competition, by Mr. C. F. H. Leslie with a beautiful series of blooms. Mildred Grant, Ulrich Brunner, Maman Cochet and Florence Pemberton were superb. The Rev. H. S. Arkwright had beautiful blooms for second prize, J. B. Clark and Dean Hole being grand, and Mr. M. Whittle was third.

OPEN TO GROWERS OF LESS THAN 350 EXHIBITION VARIETIES.

Mr. E. F. Brown, Lynton, Slough, led the eleven competitors in the class for nine blooms, distinct. Killarney, Dean Hole, Earl of Warwick, Mildred Grant and Princess Marie Mertechsky were all noteworthy blooms. Second prize was awarded to Mr. E. L. Dixon, Sutton, Surrey, and third to Mr. George Lewis, Bushey.

The class for five blooms of one variety found ten competitors. Mr. E. F. Brown was placed first with Florence Pemberton, Mr. Alan Searle second with Dean Hole and Mr. W. P. Panckridge, M.P., Petersfield, Hants, third, with Frau Karl Druschki.

The class for four trebles was a pretty one, the seven boxes being very good. First prize was awarded to Mr. H. C. Baker. Dean Hole and Florence Pemberton were grand. Mr. Upton was a good second and Mr. R. H. Gifford, Edensor, Slough, a charming third.

OPEN TO GROWERS OF LESS THAN 200 EXHIBITION VARIETIES.

The fifteen entries in the class for six blooms, distinct, made a brave show, leading honours falling to Mr. C. G. Barron, Charnworth, The Avenue, Hitchin. This exhibit secured the piece of plate offered by Messrs. George Bunyard and Co. Mildred Grant and Dean Hole were good blooms. Second prize was won by Mr. W. G. Pedley,

Hoddesdon, Herts; and third prize by Mrs. E. A. Moulden, Bandra, Stevenage, Herts.

No less than seventeen boxes were staged in the class for six blooms in not less than four varieties. First prize was won by Mr. W. Bentley, 21, Lombard Street, E.C.; second prize by Mr. H. F. Matthews, Berkley House, Stevenage; and third prize by the Rev. J. F. Kershaw, Corsley Rectory, Warminster.

Twenty exhibitors staged in the class for five blooms of any Rose except Tea or Noisette, and made a grand display. First prize was won by Mr. C. G. Baron, Charnwood, The Avenue, Hitchin, with beautiful examples of Bessie Brown; second prize for Florence Pemberton went to Mrs. F. Pridham, Rickmansworth; and third prize was secured by Mr. G. W. Heaton Armstrong, Westcliff-on-Sea.

There were only three exhibits in the class for four varieties, three blooms of each, and the leading position was taken by Mr. Alfred H. Williams, The Moat, Harrow, who had a pretty series; the Rev. J. T. Kershaw was a good second, and Mr. F. A. George, Redhill, Worcester, third.

METROPOLITAN DIVISION.

The class for six blooms, distinct, brought out eleven exhibits. Premier honours rested with Mr. A. E. Clark, Mottingham, Kent, for a beautiful exhibit; second prize was secured by Mr. A. T. Booth, Westbury Road, Woodside Park, N., with a very attractive set; and third prize went to Miss B. H. Langton, Hendon, N.W., for a really handsome lot of flowers. This class was for the challenge cup offered by Mr. E. K. Smith.

There were only three boxes of blooms in the class for six flowers in not less than four varieties; Mr. W. D. Cony, Wandsworth Common, S.W., was first, Mr. A. Wilkinson, Granville Road, North Finchley, N., second, and Miss B. H. Langton third.

The fourteen entrants in the class for twelve blooms, distinct, was a pleasing feature. Mr. J. Hart, Little Heath, Potter's Bar, won first prize—a piece of plate offered by Messrs. D. Prior and Sons—with a really very excellent lot of blooms for a novice. Mr. Harold Peerman, Nantwich, was also a very good exhibitor for second prize. Third prize was secured by Mr. E. L. Dixon, Sutton.

For nine blooms, distinct, the two competitors dividing honours were, first prize to Mr. A. M. Darling, Tonbridge, and fourth prize to Mr. H. W. Sell, Kempton Villa, Luton.

The sixteen exhibitors in the class for six blooms, distinct, made an excellent competition. First prize was awarded to Mr. G. W. Heaton Armstrong; second prize to Mr. R. M. Munro, Mill Fields, Nantwich; and third prize to Mr. J. Smart, jun., Stevenage, all showing well.

OPEN TO AMATEURS WHO HAVE JOINED THE SOCIETY SINCE THE LAST METROPOLITAN SHOW.

The ten exhibitors in the class for six blooms, distinct, made a first-class effort. The piece of plate presented by the Misses Langton was won by Mrs. J. M. Bell, Haileybury, Hertford, with a neat lot. Second prize was won by Mrs. Wainwaring, The Lodge, Bembridge, Isle of Wight; and third prize by Mr. A. Talbot, Southend-on-Sea.

EXTRA CLASSES FOR AMATEURS GENERALLY.

For twenty-four blooms, distinct, Mr. Mahlon Whittle was placed first, winning the piece of plate offered by Mr. James Brown. Second prize was secured by Mr. E. M. Eversfield, Denne Park, Horsham, with a pretty series, and Mr. G. A. Hammond was third. In this class Mr. E. J. Holland was, unfortunately, disqualified.

The fourteen exhibits in the class for twelve blooms, distinct, made a grand display. First prize was well won by Mr. E. J. Holland with superb specimens. Second prize was won by Mr. E. B. Linsell with a handsome series in

fine condition, and third prize went to Mr. W. Leggett, Colchester, with lovely blooms. The Hackness Cup was offered in this class.

For nine Teas and nine Hybrid Teas, the seven exhibits were most noteworthy. First prize was secured by Mr. A. Hill Gray, Newbridge, Bath, for a really lovely lot of flowers. Bessie Brown, Mme. Melanie Soupert, Comtesse de Nadaillac, Florence Pemberton and Alice Linsell were superb. Second prize was won by Mr. Leggett with a beautiful series, and third prize was secured by Mr. E. M. Eversfield.

The class for six blooms of new Roses, distinct, was well filled. First prize was won by Mr. E. J. Holland, Mrs. John Bateman, Mrs. Theodore Roosevelt, Mme. Melanie Soupert, William Shean and Mrs. Myles Kennedy being shown in exquisite form. Second prize was won by Mr. F. Dennison, and the Rev. J. H. Pemberton was third.

For a collection of Roses there were four competitors. First prize was well won by Mr. H. L. Darlington, Potters Bar, with a really pleasing and interesting lot. Mrs. E. M. Wightman, Bengeo, Herts, was second and Mr. D. L. Freedland, Snodland, Kent, third.

TEA AND NOISETTE SECTION.

There were six competitors in the class for eighteen blooms, distinct, Teas and Noisettes. The challenge trophy and replica was well won by Mr. A. Hill, Grays, with a really delightful box of blooms; Mme. C. Soupert, La Boie d'Or and Maman Cochet were lovely. Second prize was awarded to Mr. O. G. Orpen, Colchester, with a dainty lot of blooms, and Mr. Conway was third.

Six boxes of blooms were shown in the class for twelve Teas and Noisettes. Mr. A. Tate won first prize—the Prince Memorial piece of plate—with an excellent lot of Roses. Mr. Eversfield was second and Mr. A. Hill Gray a very good third.

The class for eight trebles was very fine indeed, although there were but four exhibitors. Mr. A. Hill Gray was again first, showing the best sorts in charming form. The Rev. F. R. Burnside was second and Mr. Conway Jones third.

For seven blooms of one variety, Mr. A. Hill Gray was again first with Maman Cochet, Mr. Eversfield second and Mr. Orpen third.

Twelve Teas or Noisettes found eight competitors. Mrs. B. Fortescue led with a pretty lot of blooms of good colour, the Rev. J. B. Shackle second and Dr. T. E. Pallett third.

Seven entries were forthcoming in the class for nine blooms, Teas or Noisettes, Mr. Alfred Evans, Marston, Oxon, being first with a fairly even lot of blooms. Second prize was secured by Mr. Mahlon Whittle, 60, Belgrave Annexe, Leicester, who was close up, and third prize was awarded to Dr. Charles Lamplough, Alverstokey, Hants.

In the class for six blooms, Teas and Noisettes, Dr. F. H. Cooke, Colchester, was first of the ten entrants, showing well Cleopatra and D'Elise Vardon. Second, Mr. W. Upton, 16, Claremont Street, Belgrave, Leicester, also with a beautiful series. Third, Mr. H. C. Baker, Bayfordbury, Hertford.

For five blooms shown in a vase the Rev. H. S. Arkwright, Binfield Rectory, Bracknell, was placed first, with good blooms of Mme. Jules Gravereaux. Second to Dr. Cooke and third to Mr. H. C. Baker.

For six blooms Teas or Noisettes, distinct, there were fourteen boxes, a pretty series gaining first prize for Mr. Alan Searle, Ashton Lodge, Basselt; Empress of Russia and Mme. C. Soupert being very pretty. Second prize was won by Mr. V. Rolt, Storrington, Pulborough, and third prize went to Mr. H. F. Matthews, Berkley House, Stevenage.

In the class for nine distinct varieties, five blooms of each, there were seven very handsome exhibits. First prize was won by Mr. G. A. Hammond, Burgess Hill; second, Mr. E. M.

Eversfield; third, Mr. W. Leggett, Colchester. This is a pleasing break away from the more formal method of exhibiting, the blooms being arranged in vases.

DECORATIVE SECTION.—AMATEUR LADIES.

The table decorations were a most welcome feature, and were set up in a separate tent. There were fourteen exhibits, the leading table being that arranged by Mrs. O. G. Orpen, Colchester, who had a lovely rosy blush single with dainty buds deftly arranged with trailing growths of the Rose as an embellishment. Irish Elegans was the variety used. Second prize also for single Roses was won by Miss J. Langton, Hendon, N.W. Third prize was secured by Miss West, Reigate, for a brilliant crimson Rose embellished with Asparagus foliage and sprays of Rose foliage.

The eleven bowls of Roses were a most attractive feature of the show. Mrs. Orpen again scored with Damask Rose Mrs. O. G. Orpen charmingly disposed; Miss J. Langton was second with an exquisite display; and Mrs. W. Munt, Welwyn, Herts, third.

In another class of a similar character the seven exhibits were very beautiful. Miss J. Langton was first with a superb exhibit; Mrs. H. G. Molyneux, Purley, second; and Lady Wilmot, Bracknell, third.

Vases were very pretty, no less than thirteen being staged. First prize was won by Miss J. Langton with a charming arrangement; Mrs. E. Mawley, Berkhamsted, second with Liberty; and Lady Wilmot third.

SOME OTHER ROSE SHOWS.

NORWICH ROSE SHOW.

ALTHOUGH styled "Rose show," the Queen of Flowers by no means monopolises the majority of exhibits at Norwich summer shows; indeed, this year Roses were rather scarce, this being due, no doubt, to the intense heat of the previous week, and also to the date being that before the great National Rose Society's Exhibition, Crown Point Park, the seat of Russell J. Colman, Esq., although some little distance from the city, was a great place for the show, and with the ideal day the attendance showed an advance over last year of nearly 1,500. A new feature of this year's show was an extra tent devoted entirely to Sweet Peas, which fully warranted its introduction, being filled with exhibits. The perennials were a great feature, as were also the Strawberries and Grapes, and, generally speaking, the exhibits were in advance of last year.

The principal awards were as follows: Forty-eight Roses, Messrs. B. R. Cant and Sons; forty-eight varieties, three blooms of each, Rev. J. A. Fellows; eighteen Teas, Messrs. J. Burrell and Co.; twelve blooms, not less than eight new varieties, Messrs. J. Burrell and Co. Amateur classes: Thirty-six blooms, Mr. R. Steward; twelve Teas, Mr. R. Steward. Growers under 500 plants: Twelve blooms, Mr. F. Valentine; six Teas, Lieutenant-Colonel Danby; twelve blooms, one variety, Mr. R. Steward. Confined to the county: Twenty-four blooms, Mr. R. Steward; twelve bunches of garden Roses, Sir F. Adair; best Tea, a Mrs. Edward Mawley shown by Mr. R. Steward; best Rose any other than Tea, a Mildred Grant shown by Mr. F. Valentine.

Miscellaneous cut flowers.—Twelve bunches, exotic, Mr. Lewis Smith, gardener to Robert Fellowes, Esq., who was also first for forty-eight bunches of herbaceous flowers with a grand collection admirably grouped. Six bunches exotic, B. E. Fletcher, Esq. Thirty-six bunches perennials, Mr. W. Chettleburgh, gardener to Colonel Rous, Westord Hall; twenty-four bunches, Mr. H. Gonde, gardener to E. Reeve, Esq., The Grange, Catton, a new exhibitor in this section, who has made a splendid first impression; twelve bunches, B. E. Fletcher, Esq.; six bunches, Right Rev. Bishop Fisher. Flowering shrubs, Mr. W. Chettleburgh. Iris, Mr. L. Smith. Border Carnations, Mr. Henley, gardener to Sydney Morris, Esq., Wretham Hall. Sweet Peas, twenty-four bunches, the Mayor of Norwich; twelve bunches, Rev. F. Taylor; six bunches, Mr. F. H. Smith; twelve bunches, Messrs. Daniels Brothers', Limited, prize for their varieties, Mr. E. G. White. Messrs. Stark, Ryburgh, and M. R. Holmes, Tuckswood Farm, Norwich, made a big display of new varieties of Sweet Peas.

Pot plants, including Rex Begonias, greenhouse Ferns and Coleus, six plants of each: In all these classes Mr. W. Rush, gardener to F. P. Hinde, Esq., Thorpe, came out at the top. Celosias as shown by Mr. H. Gonde were much admired.

Fruit.—Collection, Mr. W. Shingler, gardener to Lord Hastings, Melton Constable. Three bunches black Grapes, Right Rev. Bishop Fisher; single bunch, black, Sir F. Adair, who was also first for three bunches of white, the

single bunch of white and for six Peaches. Mr. L. Smith was first for a collection of four varieties of Strawberries. Melon, Mr. P. Wright, gardener to W. J. Birkbeck, Esq.

Peas, Beans, Cucumbers, Tomatoes and Onions were much in evidence in the vegetable department, with one or two nice groups of both vegetables and salad from Mrs. Lubbock, Mr. E. G. White and Mr. W. Chettleburgh.

Messrs. Daniels Brothers, Limited, of Norwich made a bold, comprehensive display of choice subjects from their nursery, and Mr. R. Notcutt staged a choice collection of herbaceous flowers.

SUTTON (SURREY) AND DISTRICT ROSE SOCIETY.

The twenty-seventh annual exhibition in connection with the above society was held in the Public Hall, Sutton, on the 1st inst., when a very fine display of blooms was made. We have rarely seen Bessie Brown and Mildred Grant shown in better condition than in some of the collections staged on this occasion. The arrangements were excellent and reflected great credit on the hon. secretaries, Messrs. F. J. Borland and E. L. Dixon, and the chairman and hon. treasurer, Mr. E. J. Holland.

In Division A, open to all nurserymen, the Sutton Challenge Cup, for forty-eight blooms, distinct, was won by Messrs. Frank Cant and Co., Colchester, with a splendid lot of blooms, Frau Lilla Rautenstranch, Lady Ashtown, Bessie Brown, Ulster, Mme. Jules Gravereaux and Mme. Constant Souper being exhibited in very fine form. The bloom of Bessie Brown secured the silver medal offered by Mr. Holland for the best flower in the division. Messrs. R. Harkness and Co. of Hitchin came in a good second. We noticed Mildred Grant, Papa Lambert and Mrs. Myles Kennedy very good in this collection. Third honours fell to Messrs. G. and W. H. Burch, Peterborough.

For twenty-four blooms, distinct, Messrs. G. and W. H. Burch were awarded the premier prize for a splendid two dozen. We noticed a huge flower of Bessie Brown and excellent blooms of J. B. Clark, Mildred Grant, Alice Lindell, Papa Lambert and Helene Guillot. Messrs. Frank Cant and Co. of Colchester were second with well-coloured flowers, and the third prize was allotted to Messrs. R. Harkness and Co.

For twelve distinct varieties, three blooms of each, Messrs. Burch were again awarded first prize, the flowers staged being of large size and substance. J. B. Clark, Her Majesty and Lady Ashtown were particularly noticeable.

In the class for eighteen blooms, Teas or Noisettes, Messrs. Frank Cant and Co. were the only exhibitors, but their blooms were considered worthy of the first prize.

In Division B, open to all amateurs, Mr. E. J. Holland, Sutton, was the winner of the Vice-President's Cup offered for the first time this year for twelve blooms, distinct. The flowers exhibited here were superb, being of good size, shape and colour. William Shean, White Maman Cochet, Bessie Brown, Horace Vernet, Mme. J. Gravereaux, Dean Hole, Mildred Grant and Her Majesty were all very fine indeed. The second honours fell to Mr. A. Tate of Leatherhead. We noticed particularly good blooms of White Maman Cochet, Comtesse de Nadaillac and Mildred Grant in this exhibit. The third prize went to Mr. E. M. Eversfield, Horsham, and an extra fourth prize was awarded to Mr. T. B. Gabriel of Woking.

For twenty-four blooms, distinct, Mr. E. J. Holland once more appropriated the first prize with grand flowers. His flower of Mildred Grant was magnificent, and won the medal offered by the National Rose Society for the best bloom in the division. Bessie Brown and Horace Vernet were also very fine. Mr. A. Tate, Leatherhead, was second, and Mr. E. M. Eversfield third.

For eight distinct varieties, three blooms of each, Mr. E. J. Holland was again a decided first, and rarely have we seen a better trio of Mildred Grant than those shown here. Bessie Brown and Dean Hole were also very fine indeed. Mr. A. Tate was second, and third honours went to Mr. E. M. Eversfield.

For twelve blooms, Teas or Noisettes, distinct, Mr. A. Tate of Leatherhead was the champion. His blooms included good ones of Souvenir de Pierre Notting and Bridesmaid. The second honours went to the Rev. F. R. Burnside, Great Stamburgh, Essex, who staged grand blooms of White Maman Cochet and Souvenir de Elise Vardon. Mr. E. J. Holland was third.

In Division C, open only to amateurs growing less than 1,000 plants, for twelve blooms, distinct, Mr. W. R. Hammond, Burgess Hill, was placed first. His flowers contained excellent examples of Mildred Grant and Dean Hole. Mr. E. E. Grimson of Sutton was second.

In the class for four distinct varieties, three blooms of each, Mr. Hammond was again the champion, the second and third prizes being awarded respectively to Mr. V. Rolt, Pulborough, and Mr. Lewis S. Pawle, Harrow.

For nine blooms, Teas or Noisettes, distinct, the premier honours again fell to Mr. Hammond, his best bloom being a rather small one of White Maman Cochet. Mr. V. Rolt was second and the third prize went to Mr. S. F. Jackson, Epsom.

In Division D, open only to amateurs growing less than 500 plants, the challenge cup offered by E. E. Grimson, Esq., for six blooms, distinct, was appropriated by Mr. V. Rolt of Pulborough with a really good half-dozen. Bessie Brown, Dean Hole and Helene Guillot were the best. The second prize fell to Mr. E. L. Dixon, Sutton; and the third to Mr. F. J. Nightingale, Sutton.

For six blooms of any one variety, Mr. S. E. Jackson was a good first with splendid flowers of Mildred Grant; Mr. L. S. Pawle, second, with Florence Pemberton; and Mr. V. Rolt, third, with Bessie Brown.

Mr. F. J. Nightingale, Sutton, was the winner of the Alexander Clark Challenge Bowl for nine blooms, distinct.

His flowers included good ones of Caroline Testout and Dean Hole. The second prize went to Mr. E. L. Dixon of Sutton, whose exhibit included the best bloom in Classes 15 to 18. This was a full flower of Florence Pemberton, and it secured the National Rose Society's silver-gilt medal. The third prize went to Mr. E. E. Grimson, Sutton.

In the division for local competition, Mr. Nightingale was also the winner of the piece of plate offered as first prize by Messrs. R. Harkness and Co. for twelve blooms, distinct. The second prize in this class went to Mr. E. L. Dixon.

The Ladies' Challenge Cup, offered for six blooms, distinct, was also appropriated by Mr. Nightingale, the second prize going to Mr. H. G. Morrish, Sutton, whose exhibit contained superb flowers of Mildred Grant and Frau Karl Druschki. The latter was awarded the National Rose Society's silver medal for the best bloom in Classes 19 and 20, and also a silver medal offered by A. E. Farnden, Esq., for the best bloom in the whole of the local classes. The third prize went to Mr. C. W. Edwards of Sutton.

For nine distinct varieties of Sweet Peas, shown in bunches, Mr. E. J. Holland was first with a good lot of flowers. Countess Spencer and Helen Pierce were excellent. Mr. H. Churcher was second and Mr. W. R. Hammond third.

For six distinct varieties, in bunches, Mr. E. T. Baker was first with fair flowers, Mr. H. E. Whistler being second and Mrs. C. G. Johnson third.

REIGATE ROSE SHOW.

A HIGHLY-CREDITABLE exhibition was held on the 27th ult. Competition on the whole was very keen, the exhibits evoking considerable interest. In the first division (open to nurserymen) the Reigate Challenge Cup for forty-eight distinct varieties fell to Messrs. R. Harkness and Co., Hitchin, who staged a very fine lot of blooms, including Queen of Spain, Mildred Grant, J. B. Clark, Hugh Watson, Kaiserin Augusta Victoria, Hugh Dickson, Earl of Dufferin and Mrs. Myles Kennedy. Messrs. Frank Cant and Co., Colchester, came second with a good collection, some of the finest being Dean Hole, White Maman Cochet, Bessie Brown, Mildred Grant, Mme. Jules Gravereaux, Duchess of Portland, M. Joseph Hill and Duke of Edinburgh. Messrs. B. R. Cant and Sons, Colchester, were third.

For twenty-four distinct varieties, Messrs. G. and W. H. Burch, Peterborough, were first, with fine blooms of Helen Keller, Mrs. John Laing, Kaiserin Augusta Victoria, Countess of Caledon, J. B. Clark and Queen of Spain. Messrs. B. R. Cant and Sons were second; and Mr. E. J. Hicks, Twyford, Berks, third.

For twelve bunches of garden Roses, Messrs. Spooner and Sons, Woking, came first with a lovely display, Eda Myer, Mme. Abel Chatenay, Richmond and Mme. Chédane Guinousseau being very fine, followed by Messrs. F. Cant and Co. and Mr. G. Prince, Longworth, Berks.

In the amateurs' classes the Challenge Cup for twenty-four distinct varieties went to Mr. E. J. Holland, Sutton, who had particularly fine blooms of Mildred Grant, Horace Vernet, Bessie Brown, Gustave Piganeau, Fisher Holmes, Hugh Dickson, William Shean and Laurent Carle. Mr. A. Tate, Leatherhead, came second with good blooms of Antoine Rivoire, Mildred Grant, Victor Hugo, Mrs. Edward Mawley and White Maman Cochet, the last named receiving a medal as being the finest specimen bloom in the division. Mr. E. M. Eversfield, Horsham, was third.

For twelve distinct varieties, Mr. E. J. Holland was again first; Mr. G. A. Hammond, Burgess Hill, second; and Mr. E. M. Eversfield third.

For eight distinct varieties, three trusses of each, Mr. E. J. Holland was the champion, showing good flowers of Bessie Brown, J. B. Clark, Florence Pemberton and Mrs. W. J. Grant. He was followed by Mr. E. M. Eversfield, with good blooms of Dean Hole, Hugh Dickson and Lady Ashtown. Mr. G. A. Hammond was third.

For twelve Teas or Noisettes, Mr. E. M. Eversfield came first; Mr. A. Tate, second; and the Rev. J. A. Fellows, Attleborough, third.

For eighteen distinct varieties (amateurs growing less than 2,000): First, Mr. F. Slaughter, Steyning; second, Mr. R. E. West.

For nine distinct Teas (amateurs growing less than 2,000), Mr. F. Slaughter again took premier award with excellent flowers of Maman Cochet, White Maman Cochet (medal bloom of the division), Boadicea, Mme. de Watteville and Caroline Küster. Mr. J. B. Gabriel, Woking, was second.

For twelve distinct varieties (amateurs growing less than 1,000), challenge cup: First, Mr. W. R. Hammond, Burgess Hill; second, Mr. D. L. Freeland, Snodland.

For twelve distinct varieties (local competition) challenge cup: First, Mr. F. C. Morrison; second, Mrs. C. Horne; third, Mr. A. C. Brown.

For nine distinct varieties (local competition), challenge cup: First, Mr. F. C. Harrison; second, Mrs. R. Adams.

For six distinct varieties (local competition), challenge cup: First, Mrs. R. Adams; second, Mr. C. B. Haywood; third, Mr. F. C. Harrison.

For six blooms, not less than four varieties (local competition), challenge cup: First, Mr. A. F. Blades; second, Mr. W. H. Gattier; third, Mr. J. S. Motion.

Table decoration, challenge silver Rose bowl: First, Mrs. Codd, Reigate, with a splendidly-arranged exhibit, consisting solely of one variety, Mme. Abel Chatenay, with its own foliage. The award was richly deserved. Miss West was second, with Miss J. P. Pearson and Miss Spreckley third and fourth respectively, several others receiving commendation.

in; next, no Lily is less liable to be attacked by insect pests; and, thirdly, the blossoms have not the heavy fragrance of some Lilies, which in a confined place is often overpowering.

The bulbs of *L. speciosum* as sent from Japan are, as a rule, from about 8 inches to 12 inches in circumference. If the bulbs are potted singly, pots from 6 inches to 8 inches in diameter are suitable, while effective masses may be formed by putting several bulbs in large pots or tubs. Australian butter tubs, square in shape, a foot in diameter and the same in depth, are very suitable for the culture of these Lilies, and indeed many other plants. They are stout and strongly made, and the wood of which they are composed does not decay quickly.

Four years ago I obtained two of these tubs, bored five half-inch holes in the bottom of each, and gave them three coats of good oil paint. When thoroughly dry a layer of broken crocks with the concave side downwards was placed over the bottom, then some soil, and in each tub five bulbs were placed at an equal distance from each other.

The potting soil, which is of more importance than some imagine, was made up of one-half rather heavy fibrous loam, the remainder consisting of leaf-mould, dry cow manure and rough sand in about equal proportions. Such a soil is an ideal one for most Lilies. The bulbs were placed in the soil at such a depth that the upper part was 2 inches below the surface, and at the same time a space of 3 inches was left to the rim of the tub. This was not, as might be supposed, to allow for watering, as 1 inch or a little more would suffice for that, but as the stems of *Lilium speciosum* develop they push out a number of roots from their base, and then a top-dressing is useful, as it supplies an additional rooting medium just as it is required.

These tubs of Lilies, which are in summer used to decorate a small terrace, have flowered beautifully for the last four years. They are simply protected during the winter by two or three old sacks thrown over each. Then, before growth recommences, a little of the old and exhausted soil is taken from the top and some fresh put in its place. The drainage is still perfect, and everything points to a good display for another year, the buds being now visible. At first each bulb threw up one vigorous shoot, but now the stems are much more numerous. They are, however, less vigorous than the original ones.

Though these tubs just referred to are always out of doors, such treatment is not advisable when the plants are needed for the greenhouse. For this purpose the bulbs when potted had better be placed in a cold frame, that is to say, without any artificial heat, but they must be protected from sharp frosts by a few mats or other covering material. Sufficient water should be given to keep the soil slightly moist, but care must be taken not to overwater till the roots are active. As the stems, leaves and flowers develop more water will, of course, be required. By March or soon after the succulent shoots will push through the soil, and from that time it is necessary to see that they are not allowed to become drawn and weak. To obviate this the growing plants will need plenty of light and air.

When all danger from frost is over the plants may be stood or plunged out of doors, taking care that they are not allowed to suffer from want of water. When the pots are full of roots a little weak liquid manure occasionally will be helpful. Taken into the greenhouse just before the earliest flowers expand a few plants of this Lily will form an attraction for a considerable time.

After flowering they should be stood out of doors, watering them as before till the stems die down. When sharp frosts threaten the pots had better be removed to the frame, and when repotting is needed it should at the latest be done soon after Christmas. As a rule bulbs kept for the second season flower ten days or so earlier than freshly imported ones. A common error is that of drying off the bulbs during the winter, as it



PINK BOOKHAM GEM. (Natural size.)

is most injurious to those bulbs with loose scales, such as Lilies.

The varieties of *Lilium speciosum* are: Kratzeri, a yellowish coloured bulb with rather pale green leaves and white flowers; coloured kinds—*rubrum*, with rosy red-tinted blossoms; and *Melpomene*, in which they are of a deeper hue. This last is from its richness of colouring most attractive.

The flowers of *Lilium speciosum* which are so attractive in the florists' shops throughout the winter and spring months are obtained by retarding the bulbs beyond their normal season of growth by keeping them in refrigerators. As soon as these bulbs are taken into a more genial temperature and potted they grow away rapidly and then flower.

H. P.

THE ROSE GARDEN.

HYBRID BRIAR ROSES.

IS there no one among the multitude of British rosarians who will take up the work so ably begun by that indefatigable hybridist Lord Penzance towards the improvement of our native Briar? It is true he worked mainly upon the European species, *R. rubiginosa* or Sweet Briar, but, I believe, his aim was also to improve the bloom of *R. canina*. We all know the splendid results of Lord Penzance's labours with *R. rubiginosa* and the charming colours to be found in the sixteen varieties he named. Where is there a more delightful gem than Lady Penzance, with its tints of apricot and orange, or the glowing scarlet of Anne of Geierstein? To read this hybridist's account of his successes and failures in the "Rosarian's Year Book" for 1892 compels us to wish such an enthusiast were with us to-day. In 1896 we find him writing in the "Rosarian's Year Book" that he had established one great fact, which was that different races or families, however opposed, were capable of uniting in a common progeny. Have we not seen this verified? Look at the marvellous mixture of *Rosa wichuraiana* and an Hybrid Perpetual, which gave us Dorothy Perkins, or, still more marvellous, that of Persian Yellow crossed with Antoinette Ducher (H.P.), which produced Soleil d'Or.

M. Pernet Ducher has not been slow to utilise his creation of Soleil d'Or in still further successes by crossing some of his splendid Hybrid Teas with seedlings from Soleil d'Or, for we have announced for this year the Lyon Rose, which should prove quite the novelty of the year if the report of those who have seen it is correct. M. Jules Gravereaux has also been working upon Persian Yellow, and his *Lea Rosuti*, a cross between the latter and a seedling, should be good.

One of the most beautiful results, in my opinion, of the crossing of *Rosa canina* with a Tea Rose is manifest in the variety *Una*. Here we have all the lusty vigour of *R. canina* with a delightful Tea-like bud of delicate cream opening to a large single bloom of wondrous beauty.

In Gottfried Keller, Dr. Muller has given us a marvellous combination. First we have Mme. Berard crossed with Persian Yellow, then this seedling crossed with another seedling from Pierre Netting and Mme. Berard, and this again crossed with Persian Yellow. The result is a delightful single Rose of perpetual Tea-like characteristics, but a flower nearly single, reminiscent of a large blossom of Lady Penzance. I am very anxious to see Herr Lambert's novelty *Parkfour*, which is said to be more dazzling than Grüss an Teplitz.

It is evident to me that there is a vast unexplored field for the hybridist among Roses alone, and it is a most fascinating work for one with leisure, only my advice would be, do not attempt too much. Set to work on some given object, say, the improvement of the Scotch Rose, perpetuating the *wichuraiana* or multiflora groups, or the beautifying of our hedgerows by producing rich coloured Dog Roses.

All who grow the Penzance Sweet Briars should take the hint given by Lord Penzance and have spent blossoms removed and all seed-pods; they would then obtain a good number of flowers in autumn.

P.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

GREENHOUSE AND CONSERVATORY.—Seeds of the herbaceous Calceolarias may be sown now to provide plants for flowering in May and June next year. I make a sowing of these seeds in light sandy soil that is finely sifted, thinly distributing the seeds on the surface, which should previously be made fairly firm. Lightly cover the seed with fine sand, and place a piece of glass over the pan until germination takes place. These plants may be raised in a cool greenhouse or cold frame, shading the pans from bright sunshine. Plants in the greenhouse and conservatory need to be overlooked pretty often just now. Fuchsias, Heliotropes, Petunias, Geraniums, Lilliums and quite a host of other subjects that are now well rooted require water more often than formerly. An occasional application of liquid manure will greatly assist the plants. Cuttings of the showy regal, fancy and show Pelargoniums may be



1.—A CLUMP OF DOUBLE DAISIES LIFTED READY FOR DIVISION.

The Flower Garden.—Mulching the stronger-growing subjects in the border should be done without delay. As far as possible let the watering be done in the late afternoon or evening, as the plants are able to take more advantage of liquid plant food applied at this time. Do not just sprinkle the surface with a rosed watering can, but apply the water or liquid manure quite freely to the roots of each plant. The free use of the hoe between the plants is highly beneficial atill, aerating the soil, keeping weeds under and also assisting the soil to absorb the moisture applied and the plants to benefit thereby. Several well-known and reliable annuals may still be sown for providing flowers in the early autumn. Shirley and other Poppies, Candytuft, Mignonette, Nemophila insignis, Virginian Stock and Gypsophila elegans are excellent for this purpose. Should the soil be very dry give the quarters a good watering over night, sowing the seeds on the anceeding morning. Sow thinly.

The Vegetable Garden.—Continue to plant winter greens and finish this work as soon as possible; plant firmly, giving the plants plenty of room, as advised in earlier issues. I am now making a sowing of Parsley for winter use, selecting a sheltered border where the soil is nice and friable. Sow in drills 1 inch deep and 1 foot to 15 inches aaunder. In a few weeks the seeds should germinate, after which progress will be comparatively rapid. Shallots in many gardens will be quite ready for lifting. Should the weather be wet or showery, place them out on the greenhouse bench or in a shed to dry. If the weather is fine they may be spread out thinly in the open and afterwards stored away in some cool and airy place until required for use. Ridge Cucumbers in the open will now need plenty of water to keep them in health. Take the chill off the water first if it has not been exposed to the sun's influence for long. D. B. C.

DIVIDING SPRING-FLOWERING PLANTS.

Now that most of these have finished flowering, our thoughts naturally turn to their future treatment. If the plants are doing well and we do not want a larger atock all that is necessary is to cut off the old flower-stems and clean the plants. Next fork over the soil between and

top-dress with a little fresh soil in which a small quantity of well-decayed manure has been placed. This is all the attention they will require, except keeping them free from weeds and watering occasionally when the weather is dry. In addition to the desire to obtain more plants, it may be advisable to lift them because they are crowded or because the plants are degenerating through growing in the same position for some years and the plant-food becoming exhausted.

How to Divide the Clumps.—Fig. 1 shows a root of the double white Daisy lifted after flowering. Having shaken most of the soil from the roots, it will be found to consist of a number of growths similar to those illustrated in Fig. 2. These readily divide up into pieces as shown, and each, if planted separately, will grow into a nice plant to flower next spring. The position to plant them depends on the ground available. They may be either planted where it is desired for them to bloom or on a spare piece of ground, preferably sheltered from the sun for an hour or two during the middle of the day. Previous to planting the ground should be dug and well manured. When planted on a spare border temporarily they may be moved to their flowering quarters in autumn or early spring. Subsequent treatment will consist in watering the plants during dry weather, syringing them after hot days till growing freely and stirring the surface soil between the plants. The variety illustrated in Fig. 3 is named Monstreuse and has pure white flowers 2 inches to 2½ inches across. Rob Roy (red), Longfellow (rose) and Alice (pink) are all good sorts for the garden in spring.

The following subjects may also be divided at the present time. All are easily grown in ordinary garden soil, and will be found very useful for growing in small beds as illustrated in Fig. 3 and Fig. 5, as a groundwork for spring-flowering bulbs, groups, or edgings for the mixed border or for filling pockets in the less favourable positions in the rock garden.

Rockfoils.—Several of the Saxifragas or Rockfoils are delightful plants for the garden in spring. One of the best is Wallace's Saxifrage. A small round bed illustrated depicts this plant forming a perfect carpet of small white flowers in May. London Pride (*Saxifraga umbrosa*) is about 9 inches to 1 foot high when clothed with pinkish blossoms. The Mossy Saxifrage



2.—TWO DAISY SHOOTS WITH ROOTS ATTACHED READY FOR REPLANTING.

propagated forthwith for next summer's display. Any light sandy soil may be used, inserting the cuttings around the edge of small pots, and these stood outdoors in a sunny position to root. Apply water sparingly.

Roses.—These are now making a beautiful display, although there are instances where insect pests are causing anxiety. I syringe my plants with clear water heated to about 120°, this effectually ridding the shoots of green-fly. I am now proceeding with the budding of my Rose Briara. I believe in getting this work done in good time. Roses intended for greenhouse culture in the winter and spring should be repotted without delay. These plants revel in a compost made up of two parts good fibroua loam, two parts well-rotted manure and one part charred earth and clean road-grit, all thoroughly mixed together.

Orchids.—The hot weather at this period makes it imperative that the grower should shade more heavily than usual all cool house Orchids. Air, too, must be admitted to the glass atructure quite freely at this season. The value of maintaining the greenhouse patha and benches in a cool, moist condition is invaluable just now, and this can only be achieved by constantly using the rosed watering can and syringe.



3.—A SMALL ROUND BED FILLED WITH THE DOUBLE WHITE DAISY MONSTREUSE.

(S. Rhei) forms a dense mass of bright green growths, which are refreshing throughout the year. It is especially suitable for an edging to a border. In May the plants are studded with small pink and red flowers.

Double Primroses.—The beautiful old double Primroses have lost much of their popularity. This is to be regretted, for they are delightful subjects for a moist shady border. In the North of England, Scotland and Ireland they are met with more frequently than in the South. By lifting the plants now and dividing them they will, with proper attention, make nice clumps for flowering next spring. The names by which they are known in gardens are mostly descriptive of the colour of the flowers. These include *alba plena*, white; *lilacina plena*, deep lilac; *purpurea plena*, purple; *rosea plena*, rose-coloured; *sulphurea plena*, sulphur yellow; and *rubra plena*, red.

Siebold's Primroses.—The varying tints of the flowers of these plants are among the most delicate and chaste in the garden in spring. They are easy to grow, the colours are numerous, and the plants are very free-blooming. The plants prefer a light rich soil in which plenty of leaf-mould and a little well-decayed manure



4.—A CLUMP OF WALLACE'S SAXIFRAGE LIFTED READY FOR DIVISION.

enthusiast to produce these roots in abundance from the middle of October onwards until the plants begin to run for seed, providing large roots are not needed.

Those who have had any experience in growing Carrots for seed purposes will know that it is the usual practice to sow the seeds for stock plants at the end of July or early in August, the plants being allowed to remain in the seed beds until the following February, when they are lifted and planted in the seeding quarters. A slight modification of this system will give us the roots we require for use in the winter and early spring, compared with which the old, large roots are much inferior.

It is necessary to select a well-drained site on rather light soil and a position where Peas or early Potatoes have been removed from will answer admirably. This must be thoroughly dug and all large lumps broken, but manure will not be necessary, as sufficient will have been left by the previous crop to supply the one we now have under consideration. Tread the ground firm and rake it level, so that a fine tilth is secured, then draw shallow drills 1 foot apart for the reception of the seeds.

If the soil is very dry, as it probably will be, it is a good plan to well water each drill before sowing the seeds. Scatter the latter rather thinly and then cover and tread down in the usual way. Sowing for this crop is best done about the middle of July. Germination will be greatly facilitated if some slight shading can be afforded, and where the bed is not a large one this should certainly be done, using brown paper, old fish netting, leafy boughs, or any other material for the purpose. When the seedlings are well up all weeds must be removed and the young plants thinned so that each stands well by itself. If left very thick, water is apt to stand round the crowns during the winter, and the plants suffer accordingly. During a spell of very frosty weather a slight protection will be needed, old Bracken, straw, Spruce boughs or similar material answering admirably for the purpose.

ROSES FOR THE AUTUMN.

WHETHER we obtain a good autumn crop of flowers from our Rose bushes or not will depend to a great extent on the treatment meted out to them now, and those beginners who are anxious to have late flowers will do well to pay attention to one or two very simple details.

The tyro in gardening is so very apt to spare the knife and spoil the plant that it is little wonder that this frequently happens with the Rose. When cutting summer blooms do not be

afraid of securing a good length of stem with them. By doing this the flower is rendered more valuable for many purposes and a crop of autumn flowers is practically assured. This hard cutting induces dormant buds to break at the base of the stem, and it is the shoots which spring from these that will bear those flowers so welcome in September.

In addition to a bold use of the knife, the plants must have ample supplies of food, as it is clearly evident that a double crop of blooms means an extra strain on the plants; therefore, frequent waterings with clear water and liquid manure must be resorted to, supplementing these with some approved artificial or natural manure.

SOWING SEEDS FOR EARLY SPRING FLOWERS.

THERE are no flowers more appreciated than those that greet us in the spring, and, fortunately, many of them are so easily raised and grown that nobody with a garden plot need be without them. Prepare an open sunny patch of ground by levelling with a rake, draw shallow drills, taking care that they do not exceed 1 inch in depth, and sow the following seeds at the end of July: Sweet Allysum, white; Virginian Stock, various colours; Candytuft, white and crimson; Larkspur, blue and white; *Nemophila insignis*, a beautiful blue edging plant; *Limnanthes Douglasii*, a 6-inch high yellow and white flower, grand in a mass; *Saponaria calabrica*; the Calabrian Soapwort, pretty white and pink starry flowers; *Viscaria cardinalis*, glowing crimson scarlet flower resembling a Flax in shape, 15 inches high; *Collinsia bicolor*, pretty flowers of mingled blue and white; and *Silene pendula compacta*, a splendid rose-coloured flower that blooms in masses in warm and sheltered gardens. All the plants mentioned should be thinned out in the seed-bed if they come up quickly, and may be planted where they are to bloom in October.—E. J.



5.—A BED OF WALLACE'S SAXIFRAGE AT THE END OF MAY.

has been mixed. The leaves die off in autumn, the young foliage pushing up in early spring. Among the numerous varieties the following half dozen are distinct and recommended: *Alba magnifica*, white; *clarkaeiflora*, magenta; *lilacina superba*, lilac; *grandiflora*, creamy white, flushed rose; *Maiden's Blush*, pink; and *Sirius*, red, white centre.

Leopard's Bane (Doronicum).—This is a showy early-flowering plant with large yellow Daisy-like blooms. As they will thrive in almost any soil or position, the *Doronicums* are generally planted in the less favourable spots in the garden. They range in height from 1 foot 6 inches to 2 feet 6 inches. The commonest species is *D. plantagineum*, of which the variety *excelsum* or *Harpur Crewe* is the best; this flowers in May. *D. austriacum* flowers in April, and as early as March in favourable localities; it grows about 18 inches in height.

YOUNG CARROTS IN WINTER AND SPRING.

A CROP of fresh, sweet young Carrots during the winter and early spring months is one that does not need any recommendation, as it would be very welcome indeed in every household where these roots are esteemed. How to secure such a crop is a question that may be puzzling to many, yet it is comparatively easy for any gardening



6.—A DIVIDED PORTION OF WALLACE'S SAXIFRAGE. THE ARROW DENOTES THE DEPTH TO PLANT, AND THE ROOTS SHOULD BE CAREFULLY LAID ROUND IN A SHALLOW HOLE MADE WITH A TROWEL.

THE TOWN GARDEN.

BUDDING ROSES.—Although it cannot be asserted that Roses rank with the most satisfactory of flowers for the town garden, there are large numbers of amateurs who, despite many failures, still essay their culture, and it must be acknowledged that some of them achieve great success when allowance is made for the circumstances under which they labour. And those who grow Roses invariably desire to raise some of their own plants by budding. This is the time of year to put the operation in hand. I would urge everyone to try it, for the process is simple and full of interest. At the outset two things must be considered. First the condition of the stock, and, second, the state of the bud. As far as the former is concerned it is imperative that it shall be in such condition that the bark will rise easily to admit the bud. In reference to the bud it is essential to study the small slice of heart wood which is found inside the bud sheath when this is cut from the plant. It is necessary to remove this, and upon the manner in which it comes out one decides upon the prospects of success. If it hangs very tightly in position, the bud is unripe, while if it flies out instantly, the bud is over ripe, and neither condition is favourable. If, however, it hangs up a little and yet can be withdrawn it is safe to assume that the bud is just right and that it will grow satisfactorily. Directly a man has mastered the art of knowing when the bud is right he will have complete success. The cuts on the stock are first an upward one some $1\frac{1}{2}$ inches to 2 inches in length and next a cross cut at the top about half an inch or less in width; as soon as these have been made the bark on each side should be carefully raised with the handle of the knife and the bud slipped into its place. With the necessary tying in the operation is finished.

LAYERING CARNATIONS.—These delightful flowers have their season of beauty at the same time as the Rose, and they thrive so excellently in town gardens that they should always be represented. It is true that the sparrows will demand a heavy toll unless they are circumvented, but by black threading the plants efficiently in the spring they can be kept at bay, and growth will be unchecked. It is common and good practice to try one or two new varieties each season, and when these bloom one decides upon those that are to be kept and marks others to be discarded. The favoured ones must be increased, and the best method for adoption is by layering, which should be commenced as early as possible so as to ensure splendidly-rooted plants to pass through the winter. A compost of three parts of loam and one part of leaf-mould, with an addition of sharp, clean sand, should be prepared and mounded up round the plants to be increased, and into this the shoots should be pegged after cutting. The latter work requires a sharp knife and a steady hand. The shoots selected must have a few of the lower leaves removed, and the knife should be inserted underneath and drawn upwards through one joint; the tongue thus formed must be pegged down into the special mould in such a manner that it is well opened. If the soil is kept pleasantly moist, roots will be emitted quickly, and perfectly-rooted young plants will be secured for potting to winter in frames or planting out in beds or borders.

THE LAWN.—To keep the grass in good condition it is imperative that it shall be attended to regularly, as well in respect of watering as of mowing and rolling. As far as watering is concerned it is of the utmost advantage to have a sprinkler, this being allowed to run for several hours, moving it occasionally to cover the entire surface. Mowing should be done about once a week, and in the hot weather the cutters should be set rather high so as not to expose the base of the plants.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

PRIMULAS of the stellata section and others grown for winter decoration should now be potted up and kept close for a few days. Keep the frame nice and moist. Cinerarias may also be placed in pots; these should be kept cool and heavily shaded till they recover from the shift. A frame under a north wall will suit them for the next three months. Give Begonias of the Lorraine type another shift and stake as soon as necessary; one stick in the centre will suffice at this period.

Liliums coming into flower should be removed to a cool house, and one that is shaded, then the blooms will last in good condition much longer. Later batches should have a sheltered place outside, or a very cool house with a north aspect.

Azaleas and *Camellias* that have made their buds will be better if placed outside on a bed of ashes. They should, however, be shaded from hot sun, and syringed every afternoon after a hot day. *Ericas*, *Libonias* and *Rhododendrons* should all be treated similarly, and the watering be carefully done twice daily; if by any chance a plant becomes very dry it must be plunged in a tub for a few minutes.

Coleus thyrsoides and *Moschosma riparium* should be got into the next size pots. Small plants of these in 6-inch pots I have found to carry the best flowers, and for smaller plants in 3-inch pots there is yet time to propagate.

Calanthes that are now making good growth need extra care in watering till the plants have made a pot full of roots. *Dendrobiums* making good growths should be watered carefully, especially newly-potted plants. Give them a syringing twice daily and damp the spaces between the pots several times a day.

KITCHEN GARDEN.

Tomatoes should have the growths neatly tied to sticks and all the side laterals pinched out as soon as they appear. Carters' Sunrise is a fine Tomato for outside work and is setting a fine lot of fruit.

Turnips may be sown often to maintain a regular supply, and French Beans on a warm border for a late crop. Lettuces and Radishes should be sown frequently and afforded water regularly so that the plants will be crisp and tender. Sow Endive in quantity. Keep the hoe well going among all growing crops, and if the weather is hot and dry afford water in quantity. Continue to plant out Celery and Cauliflowers and prick out Broccoli so that the plants will have nice little balls of earth when lifted to be planted in the final positions.

HARDY FRUIT.

All fruits that are ripening must of necessity be protected from the birds. Nets should be placed high enough above the trees so that they clear the growth. Continue to layer Strawberries in small pots for forcing and planting out; those layered a week or two since will soon be ready for severing if they have been kept well supplied with water as advised. When severed they should be kept in a shady place for a few days to keep them from flagging. It is a good plan to change the stock now and again and, if expenses are a point to be considered, buy in a dozen of the varieties wished and plant out on a good border expressly for getting a new stock. Waterloo and President Loubet are good late varieties. Royal Sovereign, Leader and President are sorts that still hold their own.

W. A. COOK.

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FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CAMPANULA MEDIUM CALYCANTHEMA.—For the decoration of the greenhouse or conservatory but few plants can surpass in beauty and usefulness these highly ornamental Canterbury Bells. They are invaluable either as pot plants or if grown for cuttings and the flowers range through a wonderful variety of colours. The culture of these plants is not at all difficult. Seed may be sown in July to produce flowering plants the following summer. When the seedlings are growing well, instead of potting them on an excellent plan is to plant them out in the garden as one would Wallflowers, and then pot them up in autumn.

Abutilons, grown for their flowers alone, do not appear to be so popular as they once were, yet they are very pretty subjects for the greenhouse or conservatory. Those remarkable for richly-marked leafage appear to be replacing the flowering section to some extent, and this is chiefly owing to the variety of uses to which they may be put. Small plants are very useful for the decoration of dinner-tables, and under artificial light they bear comparison with many flowering plants. Cuttings root freely, and if inserted towards the end of July will make good plants in small pots for use in the house during late autumn and winter.

HARDY FRUIT.

Summer Pruning.—Shortening the growths of all trees which are trained in the various forms of wall trees, pyramids, espaliers and the like, is a necessary part of the season's work, and the time has now come for extensive operations in this way, for there will now be no fear of the shortened shoots breaking into growth from the back buds and throwing the trees out of gear. No hard and fast lines can be laid down as to the proper number of leaves which shall be left on each shoot at the summer pruning, as this will vary with the individuality of the trees, but as a general rule it may be said that not less than five leaves should be left on a shoot, and if the tree is naturally a strong grower more still should be left.

KITCHEN GARDEN.

Transplanting Celery.—It matters very little how stocky and healthy the young plants of Celery may be, satisfactory results cannot be expected unless due care is taken at the time of removal into the trenches. A very common mistake is lifting the plants while the roots are in a semi-dry state. Many of the roots then snap off and are left in the bed. Moreover, the plants soon flag if exposed only for a short time to sun and wind, also losing their lower leaves. Then, again, the trench is often insufficiently moist and watering after planting is performed in a half-hearted manner.

Lifting Shallots.—These are often lifted much too early, and the old adage to plant on the shortest and lift on the longest day, though good advice in some seasons and in early localities, will certainly not do this year in the North and North Midlands. When they are harvested they should lie in the sun until thoroughly dry, and the cottager's plan of hanging them on a sunny wall is a very good one.

FLOWER GARDEN.

Brompton Stocks.—July is a good time for sowing the seed of this useful Stock, and a moist, shady border is the best position for them. The seedlings must be well thinned out when fit to handle, this being important to avoid weak, leggy plants. If possible, the border or bed intended for their final quarters should be made ready a good while beforehand, as a loose root-run is apt to produce a sappy growth.

T. B. FIELD.

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ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN

Pæonies and Lilies of the Valley diseased (Thos. R.).—The Pæony appears to be affected by the fungus named Botrytis Pæonia. The stems attacked are best removed at once and burnt. Fresh manure or large quantities of organic matter of any kind should not be applied to plants, especially when there is only a small amount of lime in the soil, for the addition of the organic matter makes the conditions suitable for the development of the disease, and the young stems as they push through the earth become attacked by the fungus, which finally leads to their death. The addition of lime to the soil is a useful means of checking the progress of the disease where it is possible to apply it. The remarks made above apply equally in the case of the Lily of the Valley, where the principal cause of the trouble is the fungus named Botrytis parasitica.

Hardy plants for late bloom on wall (Miss D.).—The number of plants of the kind you desire suitable for late bloom is limited, but some of the earlier flowers, if planted on the shady side, will flower much later than in the sun. You do not mention whether the wall has soil in the centre or is of the usual stone or brick and mortar construction, so that it is more difficult to select good plants. Good blue flowers are *Ceratostigma plumbaginioides* (*Plumbago Larentea*), to be grown in sun, and *Veronica corymbosa*, in either sun or shade. *Silene Schafta*, red, sun or shade, is excellent, and for the top of the wall *Sedum spectabile*, red, and the dark variety *atropurpureum* are good. The following, for sun or shade, except where indicated, should flower late: *Campanula garganica*, blue; *Coronilla varia*, pink; *Lotus corniculatus*, fl.-pl., yellow; *Silene maritima*, fl.-pl., white; *Sedum Ewersii*, pink; *Mecanopsis cambrica* and the double variety, yellow, for top; *Linaria cymbalaria*, lilac; *Arenaria balearica*, white, shade; *Anthemis Aizoon*, white, sun; and *Achillea Clavennæ*, white, sun. The double *Helianthemum* called *venustum plenum* or Mrs. C. W. Earle, red, and *Jubilee*, yellow, will give blooms much later than the other Sun Roses, and should have sun. We regret that there are so few good blue flowers, but you might sow seeds of the little blue *Stonecrop* (*Sedum cæruleum*) another season, and also of the bluish *Lonopodium acule* at the same time, May, for autumn bloom. Some of your flowers which bloom early in the sun will probably grow and flower later in the shade.

Climbing plants dying (Reader).—As you say the soil is good we cannot understand why your *Ampelopsis* should have died. Sometimes when building operations are going on and there are certain holes and pits to fill up rubbish is used to fill up with that may contain poisonous materials, and when the roots of the plants reach such materials they, of course, succumb to its effects. Or it may be there are chemical works near you that would account for the mortality you speak of. We advise you to dig up a plant with its roots and send it to the Scientific Committee of the Royal Horticultural Society, Vincent Square, S.W., and give them as many details as possible. If, as you say, many creepers in the

locality have failed, this points to some serious local conditions which can only be explained by an examination of the roots of the plants.

Romneya stem diseased (Mrs. E. W.).—The *Romneya* has been attacked just where the shoot leaves the soil by a fungus which has caused the rotting of the shoots. The fungus which is at work cannot yet be identified, but it is probable that it is present in the soil and that the surrounding conditions are such as to enable it to develop well. It would probably be wise to remove the top 2 inches or 3 inches of soil and replace it with fresh which has some lime and a little flowers of sulphur mixed with it.

TREES AND SHRUBS.

Bunches of purple Broom growing on Laburnum Adami (Rev. A. R.). The purple Broom you send is *Cytisus purpureus* and it is quite natural to find branches growing on *Laburnum Adami*; in fact, it is the great feature of the *Laburnum*, the production of yellow and purple *Laburnum* flowers and typical shoots of *Cytisus purpureus*. *Laburnum Adami* originated as a graft hybrid. *Cytisus purpureus* was grafted on to a *Laburnum* and a hybrid resulted, which produced all three kinds of flowers, and this has been perpetuated. Graft hybrids such as this are very rare and this particular instance has furnished an engrossing subject for scientists.

Lavender plants dying (L. S. Owen).—Your Lavender plants appear to have been fed too liberally after being enfeebled by the winter. On account of the cold and damp summer and autumn of 1907 a great number of shrubby plants were not properly ripened and suffered badly during winter, plants which pass through far more severe winters without injury if the wood has previously been well ripened. Yours would probably have started away again had the lime and superphosphate not been given while the plants were in a weak state. It is quite improbable that they will grow again: the one you sent was quite dead on arrival. Your best plan is to commence with fresh plants; cuttings will root readily in August.

Copper Beech leaves infested (Mrs J. E.). The leaves of your Copper Beech are attacked by one of the aphides (*Phyllaphis* sp.). Spray as you suggest with Abol, paraffin emulsion, or a new insecticide known as "V 2" at once, and again in the autumn, when many of the leaves have fallen, with a winter wash sold as "V 1" or a caustic wash. This should be repeated twice when the leaves have all fallen.—G. S. S.

Clematis for inspection (Mrs A. C. D.).—The *Clematis* you send is *C. montana rubens*. If you have purchased it for a scarlet-flowered variety you have been under a misapprehension, for it is not a scarlet colour at all. The flowers you send are slightly paler than is usually the case, which may be due to soil or some other local condition. There is a scarlet-flowered *Clematis*, but it is of herbaceous habit and produces urn-shaped flowers. It is called *C. coccinea*. *C. montana rubens* was introduced from China a few years ago by Messrs. Veitch.

ROSE GARDEN.

Roses with rolled-up foliage (R. G. B.).—Of late years Rose growers have been completely mystified by the appearance of a number of their Rose plants with the foliage rolled in a cylindrical manner as described by you, and, although it is illustrated and commented upon in the new book, "The Enemies of the Rose," published by the National Rose Society, it still remains to many minds a mystery. The authors of the book mentioned say it is caused by the leaf-rolling sawfly, and "if one of the folds is opened we find inside one or more green larvae." We must say we have unrolled many leaves and have never found the said green larvae. It is said the leaf rolling is accomplished by the larvae, but sometimes it is aided by the incisions made by the females when they lay the eggs. It is hinted that the trouble may arise when suckers have been allowed to grow, and some think it is imported to our gardens on the roots of Briars. Can it be that foreign Rose plants have brought the "disease," which it appears to us to be, into the country? for we never remember seeing this leaf-rolling until comparatively recently. The

authors of "The Enemies of the Rose" say that the sawfly appears in May and June, the colour is black and shiny, the legs black with whitish knees, tibiae and tarsi, wings dusky and iridescent, length one-sixth of an inch. The following treatment is recommended: Hand-pick the folded leaves when first seen and destroy, and afterwards spray the Roses with arsenate of lead. What we cannot understand is, that if the trouble arose from the roots, how is it there are usually a number of healthy leaves on the shoot with a few of the rolled leaves above them? It may be caused by late frost and brilliant sunshine following next day. We should be glad of the opinion of Rose experts on this subject, for it is one of considerable importance.

Budding seedling Briars (A. Novice).—You were ill-advised in cutting away the weak growths. It is always best to allow as much growth as possible to remain on the Briars, excepting the extreme ends. These are shortened just a few inches. By allowing the growth to remain the plants are enabled to grow stronger, as the more foliage there is to enable the plant to develop the better and the stronger will be the Rose plants next year. Do not think of removing any basal eyes, but just allow the Briars to grow as they like this summer. The buds are inserted in the root-stem just beneath the branches, or where you have marked B on your diagram. It is not necessary to insert more than one bud; but you may insert two, one on front and one on back of this root-stem, if you prefer to do so. You may cover the buds in November with a little fine soil, or, better still, with burnt garden refuse or burnt earth, and this can remain until April. It often saves the buds from being killed by hard frosts.

Cutting Rose blooms off young bushes (E. H. A.).—There are no definite rules as to what length of stem may be cut with a Rose bloom, but it must always be remembered that to remove foliage during the growing season is a serious tax upon the plant's vitality. Many old-established plants are quite ruined by the reckless cutting of the blooms with long stems. Whenever these are required for decorative purposes we always advise that a special plantation be made for cutting, and as Rose plants are now so very cheap, it pays to renew such plants whenever necessary. By so doing we allow our permanent beds to develop as they should do in order to be really decorative. From young bushes we should not cut more than 2 inches to 3 inches of growth with each bloom or bud, but it will be best to refrain from cutting at all as far as possible the first year.

Rose shoots damping off (Guernsey).—Possibly the cause of the shoots damping off is an excess of strong stimulants, which has checked root action. The bloom sent was certainly a very hard opener, one too full of petals, and the wet weather we have had would be a likely cause of the bloom damping; but this could hardly be the cause of the shoots behaving like this. We can only recommend you to keep the soil well hoed, not scratched over, but hoed 2 inches or 3 inches deep. Do this once a week. Thin out the growths if very numerous, removing the weakest from the centre of the plants. Where two or three buds are produced on one stalk reduce to the one which is the best formed. We believe you have in Guernsey very heavy dews at night. Possibly this is a contributive cause to the damping of very double varieties. Plant more of the less double sorts, such as *Caroline Testout*, *Mme. Ravary* and *Pharisæer*.

Treatment of Rambler Roses after flowering (M. F. W.).—As your plants are now in 9-inch pots they will not require to be repotted this year. As soon as the blossoming is over cut back the laterals to one or two eyes and remove entirely one or two of the oldest growths, then put tall Bamboo canes into the pots and tie up the remaining growths into an upright position. The canes should be about 8 feet high. To have really nice well-flowered specimens next year, three or four growths would be ample, but we should not remove too much growth now. Encourage, as much as possible, three or four of the most prominent of the young growths, and keep them tied up and well exposed to the sun. They will make a much longer growth than the Bamboo cane, but do not curtail such growth until pruning time. When they reach the top of the cane allow them to droop over and tie them up to the roof of the house. Early in August remove the plants to a sunny position outdoors. In front of a greenhouse is best, as the object of putting them outdoors is to thoroughly harden the growths. They must be well syringed and freely watered while in the greenhouse, but when outdoors water should be sparingly given, although they must not be deprived of what is necessary. The plants should be placed in a cool house by the end of October, and then pruned about the end of the year. If three or four growths some 8 feet in height are retained this will be better than a greater height, and you should

obtain some very fine graceful trails from such growths. You must see that the plants do not lack water. In these 3-inch pots the plants, when in full growth, would require watering two or three times a day. You did quite right in not pinching the laterals. The great beauty of these wickiana Roses is the length of the trails of blossom, and they can be so arranged that you may have a pillar of blossom such as were seen in many instances at the recent Temple Show.

KITCHEN GARDEN.

How to treat Tomato plants under glass (W. H. R.).—No, do not shade your Tomato plants no matter how hot the weather may be. We never have too much sunshine in this country for these subjects. Train the plants at least 1 foot from the roof glass, remove all side shoots which grow from the main stem, admit air freely, especially through the front ventilators, on hot days, and when the fruit commences to ripen maintain a dry atmosphere. Commence feeding when two or three trusses of fruit are set. Probably the discolouration of the fruits was caused by scalding through maintaining a too close atmosphere.

Peas failing to grow (J. Arthur).—The cause of the failure of your Peas is, we think, attributable to wireworm in the soil eating the roots. To find out if this is so or not, bury out pieces of Carrots, Turnips or Potatoes about 2 inches deep in the soil and examine them daily for a few days, when you will probably find the wireworms feeding on the roots.

Peas turning yellow (H. Bostock).—The soil in which the Peas are growing is teeming with a small white worm, one of the Enchytridae, which very frequently attack the roots of plants and kill them. The soil contains very little lime indeed, and this is probably at the root of the mischief. The worms are never so abundant where lime is plentiful and no doubt better results will be obtained if attention is directed to this matter before sowing Peas again.

Pale-coloured Pea plants (J. L. B.).—Most certainly the Pea plants sent, both of William the First and of Ne Plus Ultra, present unusual features; indeed, cursorily, it might be assumed that the plants were developing variegation, as they were partly becoming in their stems and leaves almost yellow. The obvious conclusion is that there is in your soil, as well as in that of your neighbours', a lack of nitrogen, as the plants are failing to create chlorophyll or the essential colouring matter of leafage, which is also a product of robust health. Your district is one having generally a deep chalk base, and our conclusion is that the soil is too full of lime, such as chalk is in its natural condition, to suit Peas, and needs, to do Peas well, to be deeply excavated and replaced with loam from an alluvial soil. We have washed out and carefully examined the roots, and fail to find any evidence of insect or fungoid injury while, as should be found on the roots of all Pea plants, there are the customary little swellings or nodules, through the agency of the bacteria existing in which the free nitrogen of the air is converted into soil nitrogen, and hence root food. But what good is thus done seems to be more than neutralised by the too-abundant presence of lime in the form of natural chalk. It is not too late now to have a trench 20 inches wide and 2 feet deep taken out and refilled with good loamy soil and some well-decayed manure, then sowing on the trench thinly a single row of Peas. No other solution of the trouble presents itself.

MISCELLANEOUS.

Clematis montana as a pot plant (M. P. W.).—Now that the plant has ceased flowering repot it into an 8-inch pot and keep it growing in your greenhouse for a time, then plunge it outdoors in full sun. By plunging we mean sink the pot up to the rim in soil or ashes; but it will be necessary to look it over now and then so that any water needed may be afforded. No pruning will be required.

Keeping Lily ponds clean (A. E. B.).—For keeping Lily ponds clear of Algae, &c., a solution of copper sulphate has been recommended. It should, however, be carefully used, as injurious effects have resulted to Nymphaeas and other aquatic plants after it has been applied. The strength required to be effective is in the proportion of 1 lb. to 1,000,000 gallons of water. Another method, and a safe one, is to use a kind of shrimping-net made of canvas to skim the surface of the water frequently.

Destroying Thistles (A. H. R.).—By the constant use of a garden roe or of a spud having at its base a sharp chisel-like end, either tool being kept freely in use to cut off all Thistle-like growths close to the ground, Thistles can in time be eradicated. If all leaf-growth be thus stopped the roots must eventually die. As yours is a grass field, you could, as rapidly as each Thistle head was cut off as low down as possible by one person, have a second one to follow with a can containing weed-killer, sulphuric acid or paraffin, and with a brush allow a few drops of the liquid to fall on the top of each of these severed root-stems. The process may seem a slow one, but it would ultimately prove effectual. We know of no instrument by which roots can be extracted; indeed, these run horizontally as well as vertically. Follow up

what we have advised for a season, and you should find excellent results.

Names of plants—H. J. King.—1, Duke of Edinburgh; 2, Mme. Plantier; 3, Gloire des Polyantha.—Mrs. E. A. B.—Iris sibirica orientalis.—H. Moore.—Ceanothus azureus.—H. J.—Rose Mme. D'Arday; Asystasia bella.—J. Mills.—1, Carex remota; 2, Lysimachia nemorum; 3, Sanicula europaea.—G. W. E.—1, Lathyrus sativus; 2, L. s. unbellatus.—W. H. Cox.—Ligustrum japonicum.—S. Smith.—Kalmia latifolia.—Mrs. Gill.—Spiraea discolor.—F. Jones.—Iris versicolor.—J. Moffatt.—Dictamnus albus.—C. Morgan.—Sisyrinchium angustifolium.—Miss O. P.—Spiraea cantoniensis flore-pleno.—R. H., Salop.—1, Pteris serrulata; 2, P. s. var. cristata, 3, Selaginella kraussiana; 4, Oxalis corniculata; 5, Fuchsia procumbens; 6, Galvia species, cannot name without flowers; 7, Abelia species, cannot name without flowers.—S. H. B.—Philadelphus microphyllus.—W. H. J., Scorer.—1, Eupatorium riparium; 2, Ceanothus integriflorus; 3, Salvia species, cannot name without flowers; 4, Cannot name without flowers.—J. England.—Calycanthus glaucus.—A. S. Whittaker.—Semele (Ruscus) androgyna.—C. Jones.—Iris sibirica.—Newcastle.—Loniceria involucrata; L. tatarica variety without flowers.—Hoburn.—Odontoglossum triumphans. May be worth from 3s. 6d. upwards, according to size and condition.

SOCIETIES.

RICHMOND HORTICULTURAL SOCIETY.

The thirty-fourth annual exhibition of flowers, fruits and vegetables was held in the Old Deer Park, Richmond, Surrey, on the 24th ult., when a very good display was made. The weather was ideal and the arrangements reflected much credit on the hon. secretary, Mr. W. J. Cook, and his committee. Roses were superb and pot plants generally were very good. Vegetables and fruits were rather weak.

COMPETITIVE CLASSES.—ROSES.

For forty-eight Roses, distinct, three blooms of each, the first prize went to Messrs. D. Prior and Son, Colchester, for a magnificent collection of highly-developed blooms. The colour and substance were superb and the form of the majority of flowers left nothing to be desired. Alice Lindsell, Ulrich Brunner, Mildred Grant, Helen Keller, A. K. Williams, Bessie Brown, Mme. Cousin, Innocente Rivola, Lady Ashdown and Duke of Wellington were the best among a very fine lot. The second prize went to Messrs. R. Harkness and Co., Hitchin, the blooms shown in this exhibit being also of very high order. We specially noticed Mrs. E. Mawley, William Shean, Dean Hole, Mildred Grant and Mrs. W. J. Grant. The third prize was awarded to Messrs. Frank Cant and Co., Colchester, whose flowers were of good form and colour, but rather small.

For twenty-four Roses, distinct, three blooms of each, competition was very good, and Messrs. B. R. Cant and Sons, Colchester, appropriated the first prize with a splendid lot of blooms. We specially noticed William Shean, Bessie Brown, Comte de Raimboud and Mildred Grant as being extra good. Second honours fell to Messrs. G. and W. H. Burch, Peterborough, in whose exhibit we noticed William Shean, Mildred Grant and Suzanne Marie Rodocanachi in excellent form. The third prize was awarded to Messrs. D. Prior and Son, Colchester.

Twelve Roses, distinct, three blooms of each, was a popular contest, and the premier prize was secured by Messrs. B. R. Cant and Sons of Colchester with blooms of grand size and colour. Bessie Brown, Mildred Grant, Aimee Cochet and Dean Hole were superb. The second prize was awarded to Messrs. W. and J. Brown, Peterborough, and the third to Mr. E. J. Hicks, Twyford.

For twelve Hybrid Perpetual Roses of one variety, Messrs. D. Prior and Son, Colchester, appropriated the first prize with a splendid dozen of Mrs. John Laing, the form, colour and substance of which was grand. Second honours went to Messrs. Paul and Son, Cheshunt, for superb flowers of Frau Karl Druschki, and the third prize went to Messrs. R. Harkness and Co., Hitchin, for Hugh Dickson.

In a similar class for Teas the first prize was awarded to Mr. E. J. Hicks, Twyford, Berks, for a very fine dozen of Mme. J. Graveaux. These flowers were very full and beautifully coloured. The second prize went to Messrs. D. Prior and Son, Colchester, for highly coloured flowers of Maman Cochet, and the third award was given to Mr. J. Brown, Peterborough, for Mme. Jules Graveaux.

For twenty-four Roses, distinct, open to amateurs only, competition was very good. The first prize was secured by Mr. E. J. Holland, Silverdale, Sutton, who staged a very even lot; Gustave Piganeau, Bessie Brown and Comte de Raimboud were extra good. Second honours went to the Rev. J. H. Pemberton, Havering-atte-Bower, for flowers of large size; Gustave Piganeau, Bessie Brown and Florence Pemberton were excellent. The third prize was secured by Mr. W. Leggett, Colchester.

In a similar class for twelve Roses, distinct, the first prize collection was staged by Mr. E. J. Holland, Silverdale, Sutton, the blooms being of good size and colour but rather lacking in form. We noticed excellent flowers of J. B. Clark, Dean Hole and Bessie Brown. The Rev. J. H. Pemberton, Havering-atte-Bower, was a very close second, his flowers of Frau Karl Druschki, Dean Hole and Mme. Jules Graveaux being very good. The third prize was granted to Mr. W. C. Romaine, The Priory, Old Windsor.

SWEET PEAS.

The principal class was for nine distinct varieties in bunches. The first prize was secured by the Earl of

Dysart, Petersham (gardener, Mr. T. F. Conway), for a well-grown collection, in which Paradise, Henry Eckford, Black Knight and Helen Lewis were very good. The second prize went to E. Moccatta, Esq., Addlestone (gardener, Mr. Thomas Stevenson), for well-developed flowers; and third honours fell to Mr. H. Compton, Kingston Hill. Generally speaking, the Sweet Peas in the other classes were poor.

PLANT GROUPS.

These were well arranged, but some rather inferior material was used in their composition. In Class 1 the Hon. Sir C. Swinlen Eady, Oaklands Lodge, Weybridge (gardener, Mr. James Lock), was the champion here with a very tastefully-arranged group of well-grown material. Crotons, Liliums, Orchids, Roses, Clerodendrons, Palms, Ferns, Carnations and Crassulas all played a part in the colour scheme of this group. Second honours went to Mr. William Vause, Leamington, well-grown Crotons being the chief feature, these being judiciously intermixed with Orchids, Hydrangeas, Ferns and similar plants.

In Class 3 Lady Waechter, The Terrace House, Richmond, won first honours with a very tastefully arranged group, in which Liliums, Hippeastrums and Orchids predominated. The second prize went to Mr. C. M. Bartlett, East Sheen (gardener, Mr. C. Hicks), and the third was awarded to Mr. William Vause, Leamington.

VEGETABLES.

For a collection of twelve dishes of vegetables, distinct, the first prize went to the Earl of Dysart, Ham House, Petersham (gardener, Mr. F. F. Conway). This was a very fine group indeed, the Tomatoes, Beetroots, Onions, Peas, Carrots and Potatoes being extra good. The second prize went to Sir C. Swinlen Eady, Oaklands Lodge, Weybridge (gardener, Mr. James Lock). Tomato Best of All and Potato May Queen were very fine here. The third prize group was very inferior.

For the best collection of vegetables, nine distinct varieties, grown from Carter's seeds, the first prize was also won by the Earl of Dysart. Peas, Tomatoes, Carrots and Beetroots were very good in this exhibit. Second honours went to Mr. R. Keene, Richmond, for a loosely-arranged exhibit, and the third prize to Mr. J. Munro, Richmond.

For a similar collection of eight distinct kinds, grown from Webb's seeds, the Earl of Dysart was the only exhibitor, but the group was considered worthy of first prize. The Carrots, Beetroots and Tomatoes were very good indeed.

FRUITS.

The Grapes were the best feature in this section. For the best three bunches of black Grapes, H. J. King, Esq., Eastwell Park, Ashford, Kent (gardener, Mr. J. G. Weston), was first with grand bunches of Black Hamburg, these being of large size and the berries well finished. Second honours went to Sir W. Greenwell, Marden Park, Caterham (gardener, Mr. W. Lintott), for the same variety, and the third prize went to Mr. W. E. Wells, Hounslow.

In a similar class for white Grapes the first prize was appropriated by Sir W. Greenwell (gardener, Mr. W. Lintott), for three very good bunches of Foster's Seedling. The second prize went to Sir C. Swinlen Eady, Weybridge (gardener, Mr. James Lock), and the third prize to H. J. King, Esq., Ashford, Kent.

NON-COMPETITIVE GROUPS.

Messrs. T. S. Ware, Limited, Feltham, staged a good bank of herbaceous cut flowers, which included excellent Peonies, Liliums, Delphiniums, with tall pillar Roses in the centre. A fine batch of Spiraea Queen Alexandra occupied the end facing the entrance. All the material used in this group was really first class. Gold medal.

Messrs. J. Feed and Sons' group consisted of well-grown Carnations of the perpetual-flowering section, with Roses, Delphiniums, Irises, Peonies and similar subjects. Silver-gilt medal.

Messrs. William Cutbush and Son, Highgate, N., staged their Carnations in fine condition, the blooms being large and well coloured. The perpetual-flowering varieties were very freely represented. Messrs. Cutbush and Son also arranged a very pretty little group of pot plants on the floor, this comprising such things as Begonias, Geraniums, dwarf Roses, Spiraea Queen Alexandra and Carnations, all in good condition. Silver-gilt medal.

The bank of Roses staged by Messrs. W. and J. Brown, Peterborough, was a very fine one, many excellent blooms being shown in bunches in vases. Silver-gilt medal.

Mr. William Thompson, Sheen Nurseries, Richmond, arranged a very fine group of flowering and foliage plants on the floor. Palms, Hydrangeas, Dracaenas, Spiraes, Crotons, Geraniums, Japanese Maples and similar subjects were artistically combined to form an attractive exhibit. Gold medal.

The beautiful group of Roses put up by Messrs. James Veitch and Sons, Limited, Chelsea, was a centre of attraction the whole day. Splendidly-grown pot Roses of all sections were most tastefully arranged, with a few good specimens of Liliun aratum intermixed. Gold medal.

Messrs. Eggitt and Son, Thames Ditton, exhibited a choice and comprehensive little group of Ferns.

The magnificent group staged by Mr. Amos Perry, and consisting of Delphiniums, Liliums, Irises and similar plants, with a dainty water garden containing hybrid Water Lilies in the foreground, was much admired, as it fully deserved to be. Gold medal.

Mr. E. J. Hicks, Twyford, exhibited a very pretty group of well-grown Roses. Long-stemmed blooms were tastefully arranged with foliage in virgin cork at the back, other good blooms being shown in boxes in the front. Silver medal.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

"THE GARDEN" FLOWER SHOW.

SEVERAL questions have been addressed to us in reference to our forthcoming show, which is now close at hand. Vases and dishes will be provided, but not boxes for showing such things as exhibition Roses. These, of course, must be brought by the exhibitors, as in the case of the National Rose Society's and similar exhibitions. These flowers may be exhibited in vases, and in the case of flowers being sent vases only will be used.

No exhibits can be received after nine o'clock on the Wednesday morning, the day of the show, but those bringing exhibits can stage them up to ten o'clock, judging beginning at eleven o'clock. The Hall will be open at eight o'clock in the morning on the day of the show, and up to seven o'clock or eight o'clock on the previous evening. All exhibits not being brought personally must be sent addressed to the Manager, THE GARDEN, Royal Horticultural Society's Hall, Vincent Square, London, S.W., the nearest stations being Victoria, Charing Cross and Waterloo.

As mentioned in previous notices, one coupon will secure admittance, and that coupon is published in our issues of July 18 and 25. This will admit readers and their friends. There will not be the slightest difficulty in obtaining admission, but, of course, as we have pointed out, all exhibitors must have the series of coupons already issued, which must be sent or brought with the exhibits and not sent with the entry form.

OUTDOOR-GROWN GRASSES AND FLOWERS.

THE BEST EIGHTEEN FOR CUTTING FOR ROOM DECORATION.

(First Prize Essay.)

ALMOST every lover of flowers has his or her special favourite, valued above all others for cutting; to many the Rose, on account of its fragrance and its diversity in form and colour, will appeal most strongly, while others will prefer the Carnation or, perhaps, the Narcissus or Lily. There are so many flowers suitable for cutting for indoor decoration that it is a matter of some difficulty to make a selection of the best eighteen, but in doing so two things should be borne in mind: First, that the flowers chosen should be of lasting quality, that is, they should remain in good condition for four or five days at least, if not more; and, secondly, that the stems should be stiff and firm in texture, so that the blooms will remain in the position in which they

are first placed and not droop under the influence of heat or artificial light. The stems should also be of sufficient length to allow of a graceful arrangement of the flowers. Fragrance is, of course, another point to be considered, adding greatly to the attractiveness of bowls and vases of cut flowers, and many of the best kinds for cutting are sweet scented; on the other hand, there are others which should not be omitted for want of this quality. The manner of arrangement is a question of individual taste and hardly comes within the scope of this article, except to mention that while many flowers, including Roses, Narcissus and Sweet Peas, are most effective when arranged with their own foliage, others, such as Carnations and Aquilegias, show to the best advantage when associated with one of the many slender tall-growing Grasses, either wild or cultivated.

SELECTION OF FLOWERS FOR CUTTING.

Roses.—In addition to the Hybrid Perpetuals, Teas and Hybrid Teas one may have long-stemmed sprays of the single varieties which have now become so popular. If cut when the buds are half open, these will keep fresh for some days. Then there are the wichuraiana and multiflora varieties and the China Roses, which furnish many delicate and beautiful tints. The cultivation of Roses is too well understood to need much description. Planted in November in good loamy soil which has been deeply dug and well manured they will produce quantities of flowers. Tender varieties, such as the Teas and Hybrid Chinas, should be protected from frost by earthing up the stems to a height of 9 inches or 10 inches with dry soil. The spring and summer cultivation consists in keeping the surface soil loose by frequent hoeing and in removing all suckers which may appear. A mulch of half-decayed manure should be given in spring, and, when the plants are well established, the colour and quality of the blooms will be improved by applications of weak liquid manure after growth commences. Severe pruning is not necessary unless very large flowers are required.

Narcissi.—There are no plants to equal these for cutting in spring, and by growing a number of varieties a long succession of bloom is ensured. Narcissi will grow well in most soils, but prefer a deep, moist loam without the addition of manure. Planting should be carried out in September, covering the bulbs with from 4 inches to 6 inches of soil, according to size. The bulbs may be allowed to remain for two or three years, or may be taken up annually when the foliage has died down, dried, and replanted in August or September.

Sweet Peas.—For furnishing cut flowers in July and August, a sowing should be made about the middle of March in deeply dug soil well enriched with manure. A second sowing may be made at the end of April for autumn blooming. The seeds should be sown 3 inches apart, and the plants afterwards thinned out to 6 inches apart. Stakes must be provided when

the plants are 3 inches high; water should be given freely in dry weather, and a mulch of decayed manure will prolong the blooming period. Spent flowers should be removed daily.

Carnations.—Many beautiful varieties may be raised from a packet of good seed sown in pots or boxes in May and placed in a cold frame; the young plants should be planted out in early autumn in good rather rich soil and will bloom the following summer. Named varieties and choice seedlings may be propagated by layers in August; these will be well rooted early in October and may then be detached from the parent plant and planted out.

Aquilegias.—Many of the best varieties come true from seed, which should be sown thinly in pots or boxes in May; the seedlings may be pricked out into a bed of prepared soil when sufficiently large and transferred to their permanent positions in autumn. The soil should be of a fairly rich nature, and a situation selected which is not reached by the early morning sun, or the flowers may be destroyed by spring frosts injuring the buds.

Lilies.—Nearly all the Lilies are suitable for cutting, but the best for this purpose is, undoubtedly, the Madonna Lily (*L. candidum*). Bulbs of this species should be planted in August and succeed best in good and rather moist soil. *L. croceum*, *L. umbellatum*, *L. tigrinum* and *L. testaceum* are among the easiest to grow. The varieties of *L. speciosum* should be grown in a mixture of loam and peat, and are best planted among Rhododendrons, Azaleas or Pæonies, so that the lower part of the plant is protected from the summer sun. Where possible, all Lilies should be planted in autumn, and, with the exception of *L. candidum*, which ought to be planted about 3 inches deep, they should be covered with from 6 inches to 9 inches of soil.

Lily of the Valley.—For this plant a prepared bed of loam, leaf-mould and well-rotted manure is preferable, and single crowns should be planted in autumn 5 inches or 6 inches apart. The position must be open but shaded from the south. The vigour of the plants will be maintained by annual dressings of well-rotted manure applied in autumn.

Tulips.—The early Dutch varieties are practically useless for cutting, but the tall-growing May-flowering varieties are invaluable, and many of them also possess the advantage of fragrance. These Tulips should be planted in October and November 5 inches or 6 inches deep, and are all the better if taken up when the leaves have died down and dried in the sun for a week or two. They may then be stored in a dry place and replanted in autumn.

Pæonies.—Both the single and double varieties are beautiful when arranged in large bowls with their own foliage. The best time for planting is September, and the deeper and richer the soil the better will the plants grow. Liquid manure may also be given with advantage in spring and summer.

Pyrethrums.—The single varieties are the best for cutting, but the double are also useful. Pyrethrums should be planted in autumn or early spring in rich, deep soil.

Irises.—Most of the bulbous species are excellent for cutting. *I. reticulata* and its varieties should be grown in light, rich soil and a warm, sheltered position. Then there are the Spanish and English Irises flowering in June and *I. juncea*, with golden flowers, which should be grown in a dry, sunny situation in light, sandy soil.

Michaelmas Daisies.—All the numerous species and varieties of Michaelmas Daisies can be used as cut flowers for indoor decoration. The plants grow best in rich, deep soil and should be taken up every second year and divided, replanting, if possible, in fresh positions.

Chrysanthemums.—The many border varieties, including some of the early-flowering single kinds, may be largely grown for cut flowers. Propagation can be effected either by cuttings or by division of the old plants in spring. Good

loamy soil, not too heavily manured, is the most suitable. The surface soil should be frequently stirred and the plants securely staked early in the season.

Solomon's Seal.—This is a most graceful and effective plant; the long, arching stems may be associated with tall Tulips or other flowers. A shady position must be selected, and the plants grow best in soil composed of loam, leaf-mould and well-rotted manure. The stems should not be cut too freely till the plants are well established.

THE FOLLOWING GRASSES ARE AMONG THE BEST FOR CUTTING:

Pampas Grass (*Cortaderia argentea*).—The large handsome plumes of this plant are highly valued for indoor decoration in winter. It should be planted in very rich, deep soil, and, if possible, a sheltered and rather damp situation should be selected; till well established it must be freely watered in dry weather and a mulching of manure should be given in early summer. The flowering stems are best cut when just open and hung head downwards in a dry place for a week or two before being arranged in vases.

Miscanthus japonica.—This is a handsome Grass with green leaves striped with white and grows about 4 feet high. It should be planted in rather rich, deep soil.

Blue Lyme Grass (*Elymus arenarius*) is valuable for its bluish grey foliage. It reaches a height of about 3 feet and should be planted in deep soil in a rather moist situation, such as the margin of a pond.

Feather Grass (*Stipa pennata*).—This Grass is useful for mixing with Carnations or other flowers. It grows 2 feet high and succeeds best in deep sandy loam. C. W. CAULFIELD, Bridgen House, Park Crescent, Erith.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

July 22.—National Carnation and Picotee Society's Annual Exhibition, Royal Horticultural Society's Hall, Westminster.

July 29.—THE GARDEN Flower Show, Royal Horticultural Society's Hall, Vincent Square, Westminster.

Exhibition of home-bottled and preserved fruits and vegetables.

On November 26 and 27 next the Royal Horticultural Society will hold their annual exhibition of home-bottled and preserved fruits and vegetables at the hall of the society in Vincent Square, Westminster, and now that the fruit-preserving season has again arrived it may give added zeal to the lovers of this skilled domestic art to prepare fruits for award at this exhibition.

Dried or bottled fruits of any kind may be shown, subject to the conditions of (a) there being no chemical preservative or (b) artificial colouring matter used, (c) of their being tasted by the judges, and (d) provided they have been grown in the British Islands. The schedule contains classes for bottled fruits, home-dried or evaporated fruits, preserved vegetables, jams, fruit jellies and cheeses, foreign jams and miscellaneous appliances, preserving bottles, &c. The exhibits will be judged by the most competent authorities, and the medals of the society and prizes of money awarded accordingly. One class is specially attractive, and, it is believed, quite original. It invites for exhibition three bottles of British-grown fruit (of which one must be Raspberries) bottled and shown by amateurs. These will be examined by the judges and left in the care of the society until November, 1909, and a silver cup and other awards given. A complete schedule and further information may be obtained from the Secretary, Royal Horticultural Society, Vincent Square, Westminster, S. W.

Turin Exhibition.—Preparations are being made to celebrate the fiftieth anniversary of the proclamation of the Kingdom of States by

holding in 1911 an International Industrial Exhibition in Turin. Three flower shows will be held in connexion with the exhibition, one in May, one in September and one towards the end of October.

PRIZES FOR READERS.

JUNE COMPETITION.—AWARDS.

In this competition readers were asked to name the best eighteen outdoor-grown flowers and grasses for cutting for room decoration, with directions for their successful cultivation. The prizes are awarded as follows:

The first prize of four guineas to C. W. Caulfield, Bridgen House, Park Crescent, Erith.

The second prize of two guineas to F. J. Landsdell, Desford, Leicester.

The third prize of one guinea to Miss Ruth B. Cannon, St. George's Hostel, Reading, Berks.

The fourth prize of half-a-guinea to G. H. Webster, Oak Cottage, Woolton, Liverpool.

This competition proved a popular one and a large number of essays were sent in. The quality of these, however, was not very high. Those from the following were above the ordinary and deserve commendation: E. Cummins, Miss Hopkinson, Miss S. Keep, Mrs. E. Anderson, W. H. Shaw and C. H. Walkden.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The fruiting of Pear trees.—

Staying at Lee Abbey, Lynton, a few weeks ago I came across the following record of the crops of some of the Pear trees growing in the garden there, and as such a long and careful record is probably unusual, I send you a copy, thinking it may be of interest.—A. L. FORD, Gwynnall, Lymouth, Devon.

Date.	Bishop's Thorns.	Marie Louise.	Glor. Morveau.	Passé Colmar.	Chacourtié.	St. Germain's St. Germain.	Doucé d'Ét.	Williams' Bou Chretien.	Jargonelle.	Bouré d'Anjou.	Bours d'Ardenay.
1886	300	108	84	234	288	462	—	—	—	—	—
1887	74	24	240	406	373	216	—	—	—	—	—
1888	—	61	342	535	166	252	50	—	22	—	—
1889	290	32	60	271	337	584	—	15	—	—	—
1890	—	—	75	284	85	89	50	—	28	—	—
1891	463	100	174	592	507	465	80	38	36	—	—
1892	—	34	113	211	70	145	110	14	50	—	—
1893	324	212	108	116	—	361	118	80	96	18	56
1894	112	40	387	504	382	160	128	19	54	37	60
1895	166	20	17	421	—	384	220	14	125	10	7
1896	115	—	89	25	84	120	78	19	145	—	—
1897	120	—	22	603	190	234	10	—	138	—	20
1898	22	47	12	56	145	91	32	64	196	27	—
1899	294	—	62	379	127	120	125	—	115	—	20
1900	24	17	50	143	70	238	156	—	168	11	44
1901	395	51	—	387	103	140	265	86	193	14	21
1902	105	20	21	85	83	172	7	49	256	9	34
1903	—	—	—	32	46	—	119	—	205	6	—
1904	—	6	152	395	202	62	59	34	265	19	120
1905	—	3	40	496	102	72	360	24	248	4	20
1906	—	19	40	75	6	—	224	52	245	53	6
1907	—	—	25	195	92	4	34	10	47	35	—

* Standard broken by snow and destroyed in 1903.
† Espalier. ‡ Wall. § Wall, over fifty years old.
The blanks imply that no fruit ripened sufficiently to be gathered.

A useful garden tool.—It might be interesting to some of your readers to know that I have found that a small hand-fork put into a long handle far more useful than any hoe, as it breaks up the surface to any depth—from half an inch to 3 inches—does not injure the roots, and can be used on any beds or borders, no matter how full of plants, with perfect safety. For hoeing round Rose trees there is nothing better.—F. HESSEL.

French Carnations.—Many of the English visitors to the recent flower show held at the Franco-British Exhibition on the 24th ult. must have been disappointed with the French exhibit of Carnations. The grand blooms shown

by Messrs. Hugh Low and Co. and Mr. W. H. Page, to say nothing of those by some of the other English exhibitors, were perfect in finish and in colour. The French blooms were certainly wanting in brightness, many of them had hard, deformed centres, the calyces of others were burst, and altogether there was a lack of taste and artistic refinement in the display. This seems rather strange, considering that long before the middle of the seventeenth century the Carnation was a popular flower in France and has been grown there for centuries. Probably the very first independent monograph on any florist's flower was one on the Carnation by a French author in 1647, since which time numerous treatises in separate form and in various works on floriculture have been published by French authors. There is no doubt that Carnations can be well grown in France, for we have often admired the large and beautiful groups staged by Messrs. Lévêque et fils of Paris at the French shows, and there are others who make a speciality of the flower.—CELLESTISTE.

Judging table decorations.—I think the system of judging table and cut flower decorations at shows is wrong. I should like to see a committee formed for judging these composed of six or eight persons and the prizes awarded by vote. When left to one individual the prize is awarded to some arrangement which appeals to his or her personal taste. A committee such as suggested would prevent such unfairness.—T.

Wistaria multijuga.—I am sending you a photograph of a *Wistaria multijuga* that is growing in the gardens of G. W. W. Blathwayt, Esq., Melksham House, Melksham, Wilts. It flowered most profusely, having 184 long racemes of bloom of fine colour in the latter part of May and early June. The height of the plant is 3 feet 9 inches from the ground. It was planted in its present open position, fully exposed to north and north-east winds, three and a-half years ago. The first year it had eighty heads of bloom, the second year not so many, but this year there was a very fine show.—R. H. LEGG, *Melksham House Gardens*.

Plagianthus Lyalli.—Three years ago I received a small plant of *Plagianthus Lyalli* from New Zealand, and finding it just alive put it out in the open garden. Here it made good growth, and is now over 6 feet in height. Last year it bore a few flowers, and this year it is blooming freely. The pure white, cupped flowers are very pretty, having a central cluster of pale yellow anthers tipped with pink. They also have a pleasant perfume. The largest of the leaves is 5 inches in length and 3 inches in breadth. They are heart-shaped, with a smooth upper surface, but hairy on the reverse. The blooms are about 1½ inches in diameter, and are borne on foot-stalks of the same length. Here the shrub is deciduous, but in the lower elevations in New Zealand it is said to be evergreen. In its native country it flowers in January, but here it blooms in June and July. I saw a fine specimen growing against a wall at Canon Fillacombe's at Bitton Rectory which was a sheet of white bloom. My plant is growing as a shrub in the open with no wall near it. It is said to form a small branching tree from 20 feet to 30 feet high in the mountain district of the middle island of New Zealand.—S. W. FITZHERBERT.

Wellingtonia struck by lightning.—Your correspondent J. Williams (page 310 of your issue of the 27th ult.) will be interested to know that a *Wellingtonia* (*Sequoia*) was struck by lightning here in 1905. The storm occurred in the afternoon of Saturday, August 5, the tree being struck at a quarter to two o'clock. The tree, which was about 56 feet in height, stood on the lawn, there being an Oak tree about 20 yards away and two Spanish Chestnuts nearer to the *Wellingtonia*. The lightning appeared to enter the tree close to the top, running round the trunk in its descent and completely splitting the stem into several pieces

right the way down. Some portions were picked up at a distance of 40 feet from the tree.—WILMOT H. YATES, *Rotherfield Park Gardens, Hants.*

THE KITCHEN GARDEN.

NOTES ON TOMATOES.

THERE are constant additions being made to the already long lists of this popular esculent, but it is doubtful whether very much improvement has really taken place of late years. I make a point of trying one or two new varieties each year, or rather I should say varieties that are new to me, for the numbers of varieties are now legion, and it is next to impossible to fairly keep pace with them. Messrs. A. Dickson and Sons, of Rose fame, this spring sent me a packet of their new Tomato Liberty, and I am very favourably impressed with its merits. It sets very freely and the fruits are of medium size, while the plants are healthy and robust. The flavour is quite distinct from anything I have previously tasted, being more acid than in any other variety. This characteristic will recommend it to many palates, and it certainly is most



THE RARE WISTARIA MULTIJUGA.

refreshing and thirst-quenching. Carter's Sunrise is a wonderful cropper, as practically every flower sets, but grown in pots, as I am compelled to grow it, the fruits are small. The flavour is good, and the fruits are a fine colour and very solid. Freedom, an American variety, is one of the handsomest fruits I know, and for growing in pots has few superiors. It is a free setter, the fruits are large and well shaped, while colour and flavour are excellent. Magnus, another American sort, is a little like Sutton's Peachblow, especially in colour. Here it is considered to be the finest flavoured of all Tomatoes. The foliage is quite distinct from any other I know, but the fruits, although of fine size and shape, are never very numerous.

Sparks's Earliana is yet another American that I have grown for some years. It ripens as soon as Sutton's Earliest and is quite as prolific as that excellent sort. It is rather peculiar in shape, and the foot-stalks are very long. In colour it is a dull scarlet, while in flavour it is the sweetest of all Tomatoes, as far as my experience goes. I got a few seeds of a variety named Keelings this season, but I fail to find the name in any catalogue. Are any readers of THE GARDEN acquainted with it? It seems a little coarse, and is certainly late, as no fruits had ripened on June 27. Stirling Castle, although not a large fruit, is a wonderful bearer and always reliable.

Laird's Supreme for all-round qualities I have never seen equalled, and I grow it in larger quantities than any other sort. It is a grand setter, carries good-sized, fine-shaped fruits, and the flavour is excellent. C. BLAIR.

Preston House, Linlithgow, N.B.

NEW PLANTS.

ODONTOGLOSSUM ELEANOR WESTONBIRT VARIETY. This is the result of a cross between *O. cirrhosum* and *O. Uro-Skinneri*, the result being medium-sized flowers with beautiful markings. The sepals are lanceolate with very acute apices, the petals being somewhat broader and frilled at the margins. The labellum is comparatively large, the white ground being beautifully striated with rich crimson. The sepals and petals have a yellow ground colour freely marked with dull brownish crimson blotches and dots. Award of merit.

Laelio-Cattleya Clivemagnifica.—A cross between *Laelio præstans* and *Cattleya aurea*. We have in this bigeneric hybrid a flower of rare beauty and refinement, but of good size also. The shape of the sepals and petals is quite normal, and the colour is of the richest rosy mauve or pale purple. The labellum is very conspicuous; it is large and very broad at the top, with delicately fringed margins. The colour is the richest velvety crimson imaginable, with very rich golden yellow inside the throat. First-class certificate. Both were shown by Lieutenant-Colonel Holford, Westonbirt, Tetbury, Gloucester, before the Orchid Committee of the Royal Horticultural Society at Holland Park on the 7th inst., when the awards were made.

Viola Ernest Needham.—A fancy variety, white, rayed, with a heavy margin of violet and mauve. From Messrs. W. Artindale and Son, Sheffield. Award of merit.

Begonia Frilled Queen.—A lovely variety of the crimped class, the flowers large and of a pleasing shade of pink. From Messrs. Blackmore and Langdon, Bath. Award of merit.

Begonia Duchess of Cornwall.—A double-flowered variety of an intense glowing crimson hue; certainly the richest of its colour we have seen. From Messrs. Blackmore and Langdon. Award of merit.

Delphinium Statuaire Rude.—A delightfully toned flower of the softest mauve in a noble columnar spike of great beauty and excellence. It is one of the finest Larkspurs we have seen. From Messrs. Blackmore and Langdon. Award of merit.

Thunica Saxifraga fl.-pl.—Those who know the typical species of the above can form an estimate of the merits of this semi-double variety with its blossoms of a deeper pink hue. For rockwork, walls, ruins and the like this plant will be as welcome as it is delightful. From Mr. G. Reuthe, Keston, Kent. Award of merit.

Rose Molly Sharman Crawford.—A very fine white-flowered Tea Rose of great purity and excellent form.

Rose Mrs. David Jardine (Hybrid Tea).—A charming flower, rosy peach in colour, the form being excellent.

Rose Florence Edith Couthwaite (Hybrid Tea).—A delightful Rose of salmon and cream colouring, the flowers flushed with pink.

Rose George C. Waul (Hybrid Tea).—A very handsome Rose of a cherry scarlet hue and of beautiful form. The above Roses were exhibited by Messrs. Alex. Dickson and Sons, Newtownards, County Down, and each received an award of merit.

Delphinium Progression.—A white-flowered variety of considerable purity and merit, representing an advance upon existing white-flowered varieties. Shown by Messrs. R. W. Wallace and Co., Colechester. Award of merit. All the above were exhibited before the Royal Horticultural Society at Holland Park, on the 7th and 8th inst., when the awards were made.

TREES AND SHRUBS.

SHRUBS FOR THE SEASIDE.

THE TAMARISKS.

THE Tamarisks, or species of *Tamarix*, possess some considerable importance from a decorative standpoint, particularly in gardens situated in the vicinity of the coast, for they thrive quite close to the high-water mark, and are rarely, if ever, discoloured by salt-laden winds. In some towns various sorts of *Tamarix* are cultivated as hedges, and as such they have much to commend them. At Southport many such hedges may be seen in the public gardens situated between the esplanade and marine lake, and they have a particularly bright appearance. It is not, however, as a dwarf shrub or hedge plant that the Tamarisks are always met with, for some grow into large specimens of tree-like proportions, the trunks sometimes being from 1 foot to 1½ feet in diameter, and the examples 15 feet or 20 feet high. Such specimens are to be met with in various parts of England, many fine ones existing at Abbotsbury Castle, Dorset, while in the vicinity of the sea they are frequently found. Some parts of the Kentish coast are thickly dotted with Tamarisks, while numerous large examples are to be found wild in the Isle of Wight. It is not, however, in the neighbourhood of the sea only that the Tamarisks are to be found, for fine specimens exist in many inland gardens, and when well grown the beauty of their bright green foliage, graceful habit and pink flowers is always appreciated.

One of the best of the stronger-growing members of the family is *Tamarix gallica*, the French Tamarisk. Under favourable conditions this grows at least 20 feet high, with a trunk of considerable proportions.

A closely allied plant is *T. anglica*, another European species, which is widely distributed through the western portion of the Continent and is also found in England; it assumes large proportions, and is somewhat like the former plant. *T. chinensis* is a Chinese species peculiar by reason of its elegant plumose habit; growth is more luxuriant in the case of young plants than is so with many other sorts. The flowers are pink and borne freely. It is an excellent plant for use in shrubberies or for groups in prominent places on lawns. In height it is very similar to *T. gallica*.

T. pentandra is found in Eastern Europe and parts of Asia, and of late years much attention has been directed to it, or rather to a plant whose name is really a synonym of this. The plant referred to is *T. Pallasii rosea*, or *T. hispida æstivalis* as it is sometimes called. This is without doubt one of the most beautiful flowering shrubs we possess, and it has the advantage of producing its flowers during late summer. Although when mature it forms a large bush, it can be kept small by pruning back each spring. This results in shoots 3 feet or more in length being formed, which bloom from end to end, the flowers being of a very delicate shade of pink. The flowering period extends over a space of six weeks. It is seen at its best when planted in rich soil in moderate-sized masses.

T. tetrandra is a free-growing, free-flowering plant suitable for massing in prominent positions. It is of loose, elegant appearance, and the combination of light green leaves and pinkish flowers is very pleasing. It blossoms during late spring. The German Tamarisk (*T. germanica*) really belongs to another genus, the correct name being *Myricaria germanica*. It is less suitable than any of those previously mentioned for ornamental gardening.

For general purposes intending planters cannot do better than select *T. gallica* and *T. chinensis* of the larger-growing sorts, and *T. pentandra* and *T. tetrandra* for other purposes. Although the Tamarisks will grow and do well in poor

sandy soil, they grow more vigorously and attain larger proportions in good loam. Propagation may be effected during winter by making cuttings 9 inches to 12 inches long from the previous year's wood and inserting them in a shady border out of doors in a similar manner to Currant and Gooseberry cuttings.

THE TULIP TREE.

(*LIRIODENDRON TULIPIFERA*.)

THIS is a native of North America, and is one of the most ornamental of the larger hardy deciduous trees we have. In its native habitat it is found in moist bottoms and alongside rivers, where it attains a height of 120 feet to 150 feet, with trunks having a diameter of 3 feet or more. The wood is described as being white, hard and heavy, and easy to work. The heart-wood is of a lemon yellow colour, and is strong and durable enough for almost any purpose. It would probably hardly pay to grow it for timber in this country, its chief value here being as an ornamental subject for the lawn or park, where it requires a fairly moist spot and plenty of room to develop, some of the older specimens in this country being nearly 100 feet in height, with a proportionate spread of branches.

The leaves are about 5 inches long by 6 inches wide, four lobed, the lobes being arranged in two pairs on the sides of the leaf, while at first sight it looks as if there was another lobe missing at the apex of the leaf, where the two lobes nearest the tip project further than the centre of the leaf. The autumn colour of the foliage is intense golden yellow and is rarely absent on established trees, whatever the season may be. The creamy yellow flowers open in June and July, but are usually too high up to be much noticed. They are, roughly, the size and shape of a Tulip, from which the tree has been given its common name. The bark, especially that on the larger roots, has a distinct odour and a very bitter taste, and has certain medicinal properties; it is also used in the manufacture of beer for giving taste and smell.

Propagation is effected by seeds, which germinate readily outdoors if sown in a moist spot in spring. The young plants require transplanting every year for the first three years, when they can be allowed to stand for two years without removal, unless, of course, they are planted in their permanent quarters. Transplanting is best done in early April or just as the young buds show signs of moving, as, like its near ally the Magnolia, the Tulip Tree makes rather fleshy roots, which are apt to rot if they are disturbed in cold, wet weather. There are some five or six varieties, of which *L. t. aureo-marginata*, with leaves margined with silver in spring, changing to yellow later on, and *L. t. fastigiata*, a strong-growing, upright tree, are the best.

Bagshot, Surrey.

J. CLARK.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

SWEET PEAS AND PINKS FROM BERKSHIRE.

Mrs. de Lacey-Lacey sends from The Garden House, Stamford, Dingley, splendid flowers of Sweet Pea Eckford's Giant, cut from plants which have been inoculated with nitro-bacterine.

We have seldom seen finer specimens, and this refers not only to the individual bloom but the spike itself. With these also came a collection of seedling Pinks of Messrs. Ladham's (Southampton) strain; the laced forms were very charming and the self of much beauty.

COLOURED PLATE.

PLATE 1852.

THREE NEW DAFFODILS.

(BEDOUIN, FIREFLAME AND SUNRISE.)

I AM afraid to say how many hundreds of named varieties of Daffodils are known to-day to experts. We have Long Trumpets and Short Trumpets, Big Cups and Little Cups, Large Eyes and Small Eyes in every gradation of size and shape, with the result that show committees and judges are harassed and worried to know where one class ends and the other begins. Disputes arise, as at Truro and Birmingham in this present year of grace. Catalogues differ. The charming Sunrise of the plate is listed by Miss Currey as an *Engleheartii* and by Messrs. Barr and Sons as a *Barri*! Could there be a more timely illustration of the necessity for some definite classification to which all of us would yield a willing acquiescence, as "Bridgers" do to the rules of the Portland Club and cricket players to the laws of the M.C.C.? Daffodil people naturally look to the Narcissus committee of the Royal Horticultural Society in their dilemma, and I am very happy to say they will not look in vain. It is pretty well known that a sub-committee has been sitting his summer under the able guidance of one of the grand old—and yet up-to-date—men of the Daffodil world, the Rev. William Wilks, on purpose to classify all existing named flowers. The result of their deliberations will see daylight very soon, and I feel sure will be helpful to many, but it must not be regarded as a final effort. On the contrary, it is but a first attempt, and no one, I know, more than the committee themselves will realise its imperfections and its tentativeness.

But I must pass on to the more immediate subject of these notes, viz., the coloured plate of the three new red-cupped varieties—Bedouin, Fireflame and Sunrise. Bright colour is always noticeable in Daffodils. The white or yellow of the perianth is such a good foil no one can help being attracted. I can remember when good red cups were rare. Now, however, they are much less uncommon, thanks to an ever-increasing army of hybridisers. The three blooms figured in the plate are excellent examples of their latest efforts. Bedouin is altogether an exceptional flower, and was one of the very best in Mr. Dawson's gold medal collection at Vincent Square on April 14. It is a large, striking incomparabilis, something after the style of *Flora Wilson*, which I believe is one of its parents. The large and rich orange scarlet cup is surrounded with a broad overlapping ivory-white perianth of quite 4 inches in diameter and of much substance. It is one of the most beautiful red cups that we have; price only £30. Sunrise is a seedling of Mrs. Backhouse. It has a flattish orange cup, with a red edge, and is distinguished by well-defined yellow flames on the white petals. This marking is, I believe, unique. It is a tall grower, and when I saw it in London thought highly of it as a decorative variety. Fireflame is also a 1908 introduction. From its general appearance it suggests *M. J. Berkeley* × *Poetorum* parentage. Blackwell is a fairly well-known flower of a similar type. Their distinguishing features are earliness and brightness, and because of these qualities they are very useful either in the border or as cut flowers. Everyone should have a few of these early bright varieties in their collection to prolong the season of red cups.

J. JACOB.

THE FLOWER GARDEN.

RAMONDIAS (ROSETTE MULLEINS) AND THEIR CULTURE.

AT the present time, when the Ramondias are in flower, it is difficult to imagine anything more daintily pretty than a group of these little alpinas happily situated in the crevices of rocks. In the Kew Rockery an ideal place is found for them on the shady side of a Bay, and there these Pyrenean plants enjoy a cool, moist position, shade without the drip of overhanging trees and, as they are planted with their rosettes of leaves in a vertical position, one can see them to the best advantage.

At Glasnevin Botanic Gardens they grow with great freedom and probably are a little more vigorous, and in the moister climate here obtaining do not seem to require quite so much shade. In a sunken path, with masses of Ferns rising on either side, irregular blocks of stone are placed to form steps leading to a higher part of the rockery. The crevices of these steps are numerous and ample, and are planted with the Ramondia, so that the steps are studded with their crinkled rosettes of leaves, from which rise a quantity of dainty purple and white flowers with orange eyes, borne upon slender stems. Here, if planted in a place where the water does not collect, they thrive equally well planted in the ordinary position as in a vertical one. Writing of planting in crevices, one has to see that these are not merely blind holes, for alpinas love good drainage and a deep root-run. Many of them, though so dwarf in stature, have tremendous roots in proportion to the amount of foliage.

Ramondia pyrenaica alba is a beautiful pure white variety and worthy of special care. Mr. Perry claims to have distributed this really good plant, having found it growing wild with the commoner form in the Pyrenees, where, in the same neighbourhood, he found several other albino forms of alpinas. *R. pyrenaica rosea* is also a delightful plant, but there seems to be intermediate shades between the pure white one and this rose-coloured variety.

R. serbica is a more uncommon species from Servia, having flowers of a pleasing shade of mauve. The rosettes of leaves have a more grassy green appearance, while the individual leaves are more attenuated at the base than in *R. pyrenaica*. *R. serbica* var. *Nathaliae* is a fine variety of the former, with deeper-coloured flowers, and found on the Carpathian Mountains. Both this Servian species and its variety will grow in similar positions to the Pyrenean one, while all of them seem to enjoy a peaty soil.

Ramondia (*Syn. Jankva*) *Heldreichii* from Thessaly is rather a difficult plant to grow. The silky white hairs of the leaves give it an interesting appearance, and possibly denote a dislike of dampness. So far, though the plant lives, it has not been a success here. The *Ramondia* belongs to the natural order Gesneraceae, and several of the genera are remarkable for the ease with which they strike from leaf-cuttings. The *Gloxinia* and *Saintpaulia* may be cited as familiar examples, while the *Ramondia* also shares this characteristic. Sound, firm leaves should be selected in the autumn and taken off close to the base of the old plant. Pots or pans should be prepared as for cuttings, using a compost of sandy peat and the leaves inserted by the petioles, the pots then being placed in a cold frame or a greenhouse with a slight bottom-heat. The leaf-cuttings usually just form roots through the winter, then in the following spring form new little rosettes of leaves, when they may be potted up separately. The seed of the common *Ramondia* ripens and germinates here very freely, so that leaf propagation is only useful for the good forms.

Glasnevin.

C. F. BALL.

BROMPTON STOCKS.

THE art of raising the beautiful Brompton Stocks, which were the pride and delight of our forefathers, seems to be almost lost in the garden of to-day. Ten Week or German Stocks there are in abundance in most gardens, and the brave and sweet display they make is very acceptable; but still we miss the dear old Bromptons with their towering spikes of bright and richly-scented blossoms borne in early spring. Probably the difficulty of keeping the young plants through the winter is the chief cause of the decline of the Brompton Stock in popularity, and on a heavy

soil in a low-lying situation the difficulty is a real one. There are, however, hundreds of gardens that are neither very exposed nor very wet. In these the famous old flower could be grown with perfect ease. A packet of seed will give sufficient plants for most gardens, and it should be sown before July is out. Make a shallow drill by treading a rake handle horizontally into a plot of fine soil, scatter in the seeds very finely, return the soil with the rake, tread lightly, rake and again make level and water in. If thin sowing is practised, the plants may remain in the seed row until planted in permanent quarters at the end of October, or they may remain and be planted out permanently in early spring. E. J.

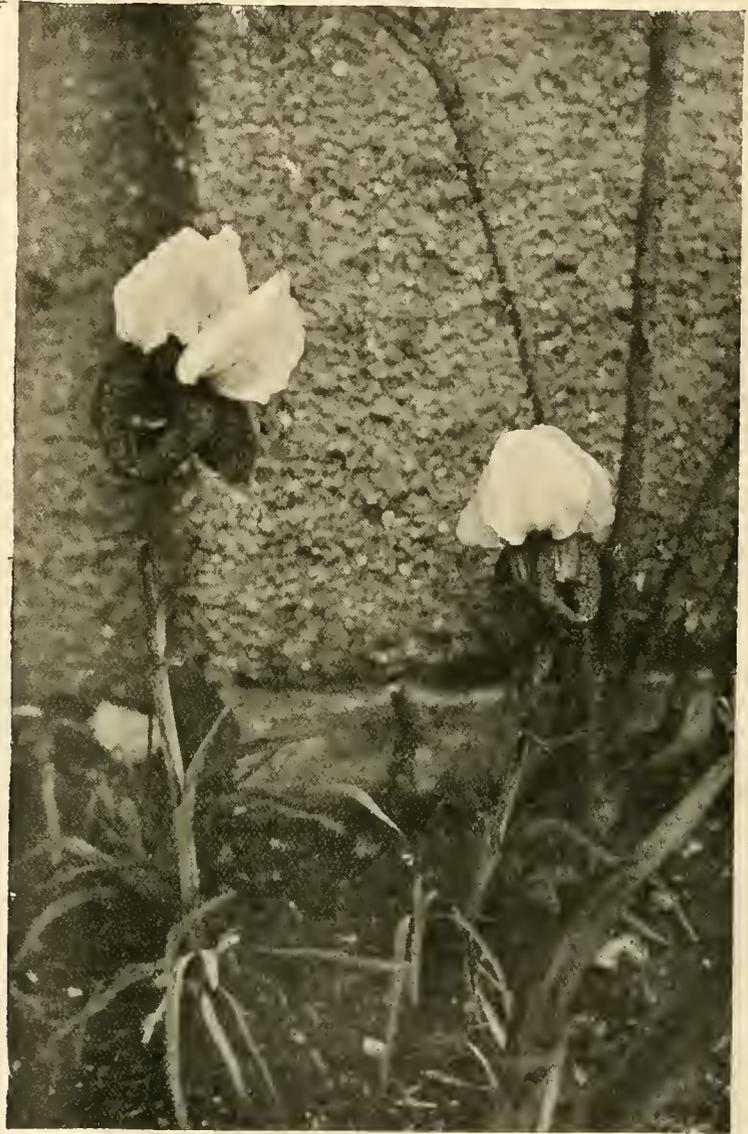
THE CUSHION IRISES.

THERE are Irises for every garden and for every position in a garden, and growers with wide experience may be disposed to share Mr. Reginald Farrar's invective, frankly believing that the Cushion Irises are beyond the ambition of any but experts and favoured gardens. That this section embraces some species difficult to regard as permanent occupants of our borders cannot be gainsaid, but, at the same time, there are a few which amateurs may attempt with confidence, and few plants surpass in beauty those gorgeous and majestic coloured flowers which, once deigning to reward the ardent cultivator, seem to act as incentives to future efforts.

Originating within the western limits of Asia, these *Oncocyclus* and *Regelia* Irises are peculiar to the localities in which they are indigenous. They flower with us, for the most part, in May and June, and in a few weeks more the growths are matured for the following year's display,

and it is generally accepted that after flowering a baking treatment until October or November ensures the fullest measure of success. In practice this may be secured by covering the plants with sashes so elevated as to admit air and yet prevent water reaching the plants. Planted in November or December, growth becomes active at once. None of them can endure sodden surroundings, and anything which promotes dryness at the root in winter will add correspondingly to the future well-being of the plants.

The Cushion Irises are pre-eminently subjects for natural well-drained soils, and a sun-baked spot at the foot of any low wall will almost



ONE OF THE CUSHION IRISES: I. IBERICA.

guarantee success, for such a position is sure to dry out naturally as soon as flowering is completed, and then only in an occasional year will the border feel the influence of returning moisture too soon in autumn, when the lights may be employed to ward off excess. Soil for these Irises should be rich, and that which is most conducive to success is a natural fertile loam. Soil artificially compounded may at times be unavoidable: then preference should be given to old meadow turf that has been stacked for some time, employing this as the staple, to which is added a quantity of shingle, crushed limestone

or chalk. The plants should be set deep and firm, with the rootstock about 1 inch below the surface, and they are best left undisturbed afterwards.

The illustration shows *Iris iberica*, a beautiful species from the Caucasus and one which amateurs unacquainted with this section might well obtain on trial. The standards are pale lilac and white, with deeper veins; the falls are chocolate brown, mottled with an amber colour; and the throat is marked by a deep velvety maroon blotch. The flowers are borne upon stems 12 inches to 15 inches in height, though the plant itself is only 6 inches high.

THOMAS SMITH.

Walmgate Gardens, Louth, Lincs.

TREE PÆONY IN A LINCOLNSHIRE GARDEN.

The illustration is reproduced from a photograph kindly sent to us by the Rev. F. D. Hall, Manby Rectory, Louth, Lincolnshire. It represents a Tree Pæony in the rectory garden there, which carried at one time over 234 blooms.

VERONICA ALLIONI.

AMONG the Veronicas are many beautiful little alpines, and of these one of the prettiest is *V. Allioni*, not now much seen, although a spurious plant of much inferior value is substituted. It is a low-growing subject with greyish green leaves and small closely-arranged spikes of dark blue flowers not more than 6 inches high. The arrangement of the flowers on these spikes is so close that a somewhat matter-of-fact catalogue compiler has said they are "like lead pencils." In any case, the whole plant is one to be coveted by the alpine grower, and as it is not difficult to cultivate, even in an exposed part of the rockery, it might be added to many collections with profit. I find that *V. Allioni* does well with me at Dumfries on an elevated place in the rock garden, and in loam and grit with plenty of small stones about it and in full sun. It is increased by division in spring or autumn. S. ARNOTT.

THE GREENHOUSE.

HERBACEOUS CALCEOLARIAS.

MR. A. DAY, gardener to A. J. Brandon, Esq., Redfields Gardens, Church-Crookham, Hants, sends us a photograph of five herbaceous Calceolarias, three of which together measured 5 feet in diameter. Unfortunately, the photograph was not quite suitable for reproduction, but we give below the accompanying note: "I am sending you a photograph of five herbaceous Calceolarias which were grown here this season; you will see the size of the plants by the tape measure. I sowed the seed on July 1 (last year) in a shallow pan partly filled with loam, peat and leaf-soil in equal proportions, covering the pan with a piece of glass and standing it in a cool frame in the shade. I turned the glass each morning till the seedlings appeared. As soon as large enough to handle they were pricked off into 2½-inch pots, using loam and leaf-soil with the addition of a little peat. When they had filled these pots with roots they were shifted into 3-inch pots, using two parts loam and one part leaf-soil and decayed manure from an old hot-bed. The next shift was into 5-inch pots, using soil as before, and from these they were moved into 8-inch pots (in which they flowered), still using similar soil, with the addition of a little *Le Fruitier*, about a 5-inch potful to a bushel and a-half of soil.

When the flowering pots were well filled with roots I commenced using weak liquid manure, only just colouring the water, or for a change putting a tablespoonful of *Le Fruitier* to 1 gallon of water, letting it stand a few hours before using. I always used clear water at alternate waterings. The plants were grown in a frame till October, when they were placed near the glass in a cool greenhouse. I fumigated occasionally to keep down green fly, and took care never to shift the plants before the pots

were well filled with roots, or give them too large a shift, as these, with overwatering, I regard as the chief causes of failure."

A PRETTY GREENHOUSE HEATH.

(*ERICA PROPENDENS.*)

AS far as my knowledge of greenhouse Heaths extends there is not one which can when in flower be in any way confounded with this, while in addition to its distinctive characters it ranks among the most beautiful members of the genus. Introduced from South Africa in 1800, this Heath was twenty years ago comparatively unknown; but since that time it has made considerable headway in popular favour, and in 1899 it was given an award of merit by the Royal Horticultural Society. It belongs to that section of greenhouse Heaths known as soft wooded, that is to say, the class to which the popular *Erica hyemalis* belongs. In build it is somewhat after the manner of that well-known plant, but the growth is more slender and the habit dwarfer. The flowers in their shape, colour and arrangement are, however, totally different, for they are of a decided bell shape, and are suspended singly on slender stalks each about 1 inch long.

The colour of the flowers is difficult to define, being of a pinkish hue with a suspicion of mauve and lilac. At a little distance, or viewed in a subdued light, a mass of flowers such as that presented by a plant in good condition has a curious misty appearance, but at the same time decidedly pleasing. This Heath has of late joined the limited number of those taken in hand by the cultivators that supply Covent Garden Market with flowering plants. H. P.

ARUM LILIES AND THEIR TREATMENT.

THESE exceedingly useful and attractive subjects should be given good treatment if large, elegant flower spathes are required, together with healthy foliage. Our plan of growing them probably does not differ from that of many others who are successful with their culture. Some gardeners I know grow them in pots during the summer, but I prefer planting them out in the open on a piece of well-manured land at this season. As soon as they have finished flowering they are divided and planted out at 16 inches apart, and but little attention is necessary through the summer, except to keep the soil among the plants free from weeds and giving the roots a thorough soaking at intervals in dry weather with manure water. The old leaves will soon die down, to be succeeded by a fresh healthy lot.

About the middle to the end of September the plants may be lifted and potted up, using pots of various sizes to suit the size of the plants. Before lifting them, however, it is well to give the soil a thorough soaking with water if needed, and after the potting is finished the plants are stood in a rather shaded spot and kept well syringed at intervals should the weather prove dry and warm.

When potting them be careful not to damage the roots more than can possibly be helped, and when the roots have well filled the pots, feed freely with liquid manure; but if smaller blooms are wanted less feeding is desirable. H. MARKHAM.



A LARGE TREE PÆONY IN THE GARDEN OF THE REV. F. D. HALL, LOUTH, Lincs.

THE ROSE GARDEN.

NOVELTIES IN BEDDING ROSES.

It is not every novelty that appears of which one can say "it is a good garden Rose," but of late years decorative varieties have predominated among the large output from the numerous raisers now engaged in the work of cross-fertilising this flower. In these few notes I propose to name some really good sorts that will supply that variety which is so dear to the lover of the garden, and anyone may safely plant in quantity the sorts named herewith, for they are the *crème à la crème* of the recent introductions. It would be a large garden that could accommodate beds of one variety of the many excellent sorts, but I would suggest that they be planted in small groups, say, threes or fives, a plan that would show at a glance which would be most acceptable for making larger plantations. I do not pretend to name the Roses in order of merit, because I consider they are all good of their respective classes.

One of the first to notice is Mme. Melanie Soupert, a variety of great beauty, with huge flowers, not very double. The conical form of the half-open blooms is very attractive, and the colouring of salmon yellow and carmine is most exquisite. It is quite one of the best of recent novelties which that prince of raisers, M. Pernet Ducher, has given us. His other novelty, Marquis de Sinety, is, perhaps, up to the present moment the most remarkable colour yet obtained. It seems like a glorified Ma Capucine, with the fiery orange colour even more conspicuous than that. Charlotte Klemm must be grown by the hundred. Its colour is most gorgeous, the effect of a mass being almost as brilliant as a bed of Henry Jacoby Geranium. It is a China Rose with a very large semi-double flower of quaint formation.

Friedrichsrut is a deep blood-red colour and a grand full flower, sweetly fragrant. Every shoot seems to blossom, and this should prove a real good thing, for we are in need of brilliant bedding Roses that have individual flowers of good quality and yet freely produced. I think this character may be claimed for M. Pernet Ducher's latest novelty, Château de Clos Vougeot, a Hybrid Tea with brilliant velvety scarlet flowers shaded with fiery red. It is said to keep its colour well under a hot sun. A tendency to lose their wonderful colouring under hot sun is characteristic of many recent Roses. If this one maintains its colour it will become immensely popular.

Mrs. Aaron Ward yields the most delightful buds imaginable, and somewhat like a Lady Roberts. This variety is peculiar in having two or three different colours on the one plant, but in older bushes this may be overcome. Mrs. Peter Blair is a grand addition to the yellows, although not very rich in tint. Its beautiful trusses of buds show up well on the upright stems. Hugo Roller is a wonderful Rose that has quite caught the public fancy. The lovely blending of yellow and crimson is so very pronounced that one is drawn to it at once. As the variety yields its blossoms on good erect stems it cannot fail to be a good bedding sort, with a flower nearly large enough for exhibition. William Shean is,

the two in colour; but it is in the erect habit of Mrs. E. G. Hill which makes it superior to the older Rose. Hon. Ina Bingham has such wondrous petals that we can forgive the want of fulness in the flower; in fact, one rather admires the Rose as it is, for we have quite enough double flowers, and these semi-doubles have a special beauty on the plant. The colour is a warm shell pink. Gustave Grunerwald has so firmly established itself as a garden Rose that it must be placed in the front rank for this purpose. The colour might be a little more taking, but the yellowish shade on the rich rose-pink ground has a great attraction, and not less so is its vigorous growth and free-flowering qualities.

Queen of Spain can either be utilised as a garden Rose or for exhibition by freely dis-budding it. The blooms have great substance, and although it is not all that we expected of it, yet there is a future for this Rose. In Elizabeth Barnes we have a marvellous Rose of very rich colouring. It is like a Mme. Abel Chantenay. Farbenkönigin and Beauté Inconstante all blended in one flower, and, being of robust habit, it must prove a general favourite. Dora is a flower almost as large as a Paul Neyron, of beautiful form, and of a colour midway between Captain Christy and Lady Mary Fitzwilliam. Souvenir de Stella Gray is an exquisite mixture of apricot and orange tints, with red splashes and shadings, long-pointed buds and vigorous growth. P.



THE NEW HYBRID SWEET BRIAR ROSE REFULGENCE SHOWN BEFORE THE ROYAL HORTICULTURAL SOCIETY BY MESSRS. WILLIAM PAUL AND SON, WALTHAM CROSS. (Natural size.)

perhaps, the largest flower yet obtained among the Hybrid Teas if we except Mildred Grant. It is a huge flower of deep pink colour and massive petals. It will be one of the best for show purposes, and I believe it cannot fail to prove satisfactory as a bedding Rose.

Warrior is a much deeper Papa Gontier, with a superior growth to this latter. It will grow as vigorously as a Marie van Houtte. This year its deep blood-red buds are coming a marvellous rich colour. Mrs. E. G. Hill will become a formidable rival to that lovely Rose Grand Duc de Luxembourg. One can scarcely distinguish

attributes we have mentioned above are but strengthened by remarkable freedom of flowering and the pronounced Sweet Briar fragrance emitted by the plants. We regard this Rose with much favour, not merely as a good garden plant for the few, but good alike for beds or groups, and capable of affording beauty of a rare kind when planted as a hedge or dividing line in the best positions in the garden. This excellent variety was raised by Messrs. William Paul and Son, Waltham Cross, and exhibited before the Royal Horticultural Society on the 23rd ult., when it received an award of merit.

ROSE REFULGENCE.

THIS is a new hybrid Sweet Briar of much vigour and promise. The blooms are inclined to be semi-double, 3 inches or more across and of an intense glowing crimson shade, the colour appearing the more pronounced by reason of the rich velvety sheen seen on the petals. Strong and vigorous in growth, with the firm leafage that would almost suggest *R. rugosa* influence, we have here one of the best additions to the Sweet Briar that has yet appeared. The good

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

GREENHOUSE AND CONSERVATORY.—The present is an excellent time to sow seeds of the beautiful *Primula Sieboldii*. Sow the seeds as soon as they are ripe in a compost made up of light loam, leaf-mould and silver sand in equal parts, this being passed through a sieve with a rather fine mesh. Mix the soil thoroughly, and after



1.—MANURE SHAKEN OUT FOR A MUSHROOM BED. THE HEAP ON THE LEFT REPRESENTS THE SHORT MATERIAL WITH WHICH THE BEDS ARE MADE, AND THAT ON THE RIGHT THE LONGER STUFF FOR COVERING THE BEDS.

carefully crocking the pans or boxes in which the seedlings are to be reared fill in the compost and sow the seeds thinly. Thoroughly moisten the soil by holding the pan or box in a vessel of water, with the surface soil just above water level. For flowering early next spring the present is an excellent time to repot *Arum Lilies* that are grown in pots. The compost for these plants has frequently been given in these pages. Plants of the *Indian Azaleas* that have recently shed their blossoms, and are standing in a cool house to harden, should now be placed outdoors for the summer months. Choose a warm but protected situation, and if they are kept moist at the roots their progress will be quite satisfactory. The greenhouse and conservatory must be freely ventilated during the next few weeks. *Hydrangeas* may now be propagated by cuttings. I find it a good plan to insert cuttings singly in small pots in light loamy soil and then place them in a handy little propagating frame or under a bell-glass in a shady quarter of the greenhouse.

The Flower Garden.—The layering of *Carnations* should proceed apace for next year's supply. I always do this work in good time so that the layers may be severed and nicely established plants be raised by the autumn. The same remarks apply to the beautiful garden *Pinks*. Their fragrant blossoms are always welcome, and there are many choice sorts comparatively unknown. If pieces of these plants be pulled off with a slight heel on them and dibbled in in some shaded quarter they root readily enough. At this season I make it a rule to rigorously remove spent blossoms and seed pods from all plants that are not required for seed purposes. By these means the period of blossoming of the different subjects is prolonged.

Window Gardening.—To maintain a neat and pleasing appearance dead foliage and flowers should be promptly removed from all window plants. This not only applies to plants in the window, but also to the occupants of the window-boxes. Take pains to water the plants as they need it, and if any plant has got dry at the roots

immerse the whole ball of soil in a vessel of water so that it may become saturated.

Vegetable Garden.—I am just making my sowing of spring Cabbage in a border outdoors that has been well prepared and thoroughly moistened beforehand. Seed germinates very quickly at this season, so that good plants should be ready for planting in a comparatively short time. I have just lifted both *Shallots* and *Garlic*, the foliage having turned yellow, which is always an indication that they are ready for this treatment. Before placing them indoors in a cool place we spread them out to dry in the sun; in this way they keep much better. *Cos Lettuce* should not be allowed to grow too long before being tied rather loosely. *Leeks*, if not already planted, should be put outdoors in their permanent quarters at once. Our earliest plants are already doing well, and we are feeding them as growth proceeds. We prefer that they should be planted 6 inches apart in the rows, and the latter should be about 1 foot asunder. If planted in trenches similar to those prepared for *Celery*, *Leeks* invariably do well. The quarters recently assigned to *Turnips* are receiving attention. I am now dusting the surface soil in the early morning with soot, this warding off attacks of the *Turnip fly* and to a large extent ensuring the success of the crop.

Fruit Garden.—*Peaches*, the fruits of which are now swelling, should be given a thorough soaking with liquid manure. This must not be left too late, otherwise its application may be harmful. It is before they approach the ripening stage that they can appreciate liquid manure. Summer pruning of the fruit trees should be done as soon as possible, otherwise the different subjects will not derive the full benefit from it. D. B. C."

CULTURE OF MUSHROOMS IN THE OPEN.

This is a subject in which many beginners are no doubt interested, but have in the past been deterred from taking up the cultivation of *Mushrooms* because they have felt it is a matter quite beyond them, and one with which they could not very well succeed. We wish to dispense this fallacy at once, and endeavour to lay down simple rules by which *Mushrooms* may be grown quite successfully. *Mushrooms* may be grown very successfully in the open air, although with greater certainty under cover. They may be grown in almost any position, provided they are protected with plenty of litter against cold and uncharitable weather and other deterrent influences. Horse manure is the all-important essential, and unless this can be obtained in sufficient quantity it were better to leave the subject alone. However, where a supply of horse manure is available or can be procured, *Mushrooms* may be grown with comparative ease, especially if the manure be good and such as is obtained from horses that are well fed, in which case the manure is rich in food for *Mushroom* culture. The manure must be fresh and new, and be dealt with immediately on its receipt from the stables. We would absolutely eschew manure having sawdust, shavings and peat moss litter in it, as these are deterrent influences and can only be used successfully by growers with considerable experience.

How to Prepare the Manure.—As this is received it should be placed in a heap arranged as near to the quarters where the beds are to be made as possible. See that the quarters are quite clean and free from weeds. Shake the

heap over well, placing the longer littery matter—pieces 1 foot or more in length—in a heap by itself, and all the shorter material in another heap. The longer littery matter is kept apart for the purposes of covering the ridges once the *Mushroom* beds are formed. The shorter manure must be turned over repeatedly, and, should it be somewhat dry on its receipt, it is well to give it a good watering. Frequent waterings will not be needed if the manure be given one good watering in the first instance. Naturally, the more frequently it is turned over the drier it becomes, and it would then be too late to apply water without running considerable risk, largely rendering previous efforts null and void. From October to February it may be safely said that no water whatsoever will be needed. The case is different, however, in the month of September or later than February. In dry weather water must be applied at these periods, but only in sufficient quantity to moisten all the dry parts. It is not necessary to saturate the manure, but just sufficiently well to moisten it throughout. The heap may be turned again on the following day, assuming the manure is fairly new and fresh, but if not in this condition two days may elapse before it is necessary to turn the heap again. In subsequent turnings work the heap over in such a way that that which was formerly on the outside of the heap is placed in the centre, and *vice versa*. Generally speaking, three turnings will suffice. What the grower has to bear in mind is to so deal with the manure that the heap may be thoroughly sweetened throughout. Fig. 1 shows how this material should be prepared.

When the Manure is Ready for Use.—The manure that is properly prepared for *Mushroom* beds should give off no offensive odour, but should smell quite sweet and not unlike that of the *Mushroom* itself. It must not be wet, but sufficiently moist for one particle to adhere to another without exuding moisture. Of course, it must be hot, and if the manure was in good condition at the commencement the heat should be right when the beds are made up. Manure that is wanting in heat after preparation will be less likely to give good results, as the temperature always goes down after the beds are made up.

Making Up Ridge Beds Outdoors.—The beds must be made up according to the space available



2.—A BED MADE UP PREPARATORY TO SPAWNING.

and the quantity of manure prepared. Beds of this character may be made up any length from 3 yards and upwards. Ridge beds should be about 2½ feet in width and of the same height, tapering to their apex, at which point they should be about 6 inches in diameter. Beds of larger dimensions are too warm, and smaller beds very soon lose their heat. In cold weather, however, we should be disposed to make the

beds larger. With a garden line it is easy to determine the limits of the beds, and the ground plan having been fixed upon, proceed forthwith to shake out the manure in layers of 6 inches, treading it firmly, finishing each successive layer of 6 inches before proceeding with the next one. When the bed is about 2 feet high rake down the sides with a fork, in this way removing all loose matter and placing this ultimately on the top of the ridge, finally beating this down, at the same time treating the sides of the beds in similar fashion to consolidate them, which in the end should have the appearance of the bed represented in Fig. 2.

What to Do Preparatory to Spawning.—We must now await the spawning period. A thermometer inserted here and there in the bed to a depth of 2 inches to 3 inches will assist the grower in determining when it is ready for this work. At first the heat will be somewhat high, and ultimately it will reach a figure at about 130° Fahr. Should the temperature be beyond this it is too high, and must be reduced by more beating and treading. After a while the temperature



4.—BEDS COVERED WITH THE LITTERY MATERIAL.

which has been at 130° will gradually fall, and when this ultimately reaches 85° spawning may begin at once.

Spawn is made up of a mixture of manure and soil, permeated throughout with very fine white threads. The white threads are the live parts of the spawn, and really constitute the Mushroom plant in a dormant state. Sixteen cakes of spawn go to a bushel. It is essential that the spawn be of the very best, and this can only be ensured by purchasing this product from a reliable source.

How to Spawn the Beds.—Break up the spawn into pieces, so that eight to ten pieces are procured from each brick of the spawn. These pieces may be inserted here and there, 9 inches apart, on the top of the bed and in the sides. A cavity should be made for the insertion of each piece, so that its flat side is level with the surface soil. Adjust it in position and press the manure firmly to it, so that no cavity exists in which the moisture may settle, as this may cause the spawn to rot.

Covering the Beds with Soil.—The ridge beds should be covered with soil to a depth of 1½ inches about three days subsequent to the spawning, except in very wet weather, when the covering should take place immediately after the spawning. The soil for covering the beds should be of a friable character and absolutely free from decaying vegetable matter.



3.—A BED AFTER SPAWNING COVERED WITH SOIL AND MADE FIRM PREVIOUS TO COVERING WITH LITTERY MATERIAL.

Soil that has been recently manured is quite unsuitable for the purpose. We prefer, if possible, to use good loam from an old pasture, but when this is not available any other soil that is not rich will answer the purpose almost as well. Make this firm by using the back of a spade. Fig. 3 represents how a ridge bed in the open should be covered with soil.

Subsequent Treatment.—The only thing that now needs to be done is to cover the beds with the littersy matter previously conserved with the prepared manure in the first instance, and the beds should be covered with this so as to conserve the warmth and to protect the ridges from rain. Should the surface soil be dry previous to the covering with the littersy matter it must receive a slight watering; but if it be moist on no account apply the water. Within six weeks the beds ought to come into bearing, and from this time forth we may look forward to a continuation of the supply. In the case of beds in exposed and cold situations an extra covering of littersy matter must be applied, and, if it be possible, the beds should be screened from strong winds by covering them with mats and other available covering. July, August, October, December and January are the best periods in the year to form beds outdoors. We like beds running from north to south, as in this way they get all the sun possible. Fig. 4 represents a series of beds covered with littersy matter after spawning.

WORK IN THE VEGETABLE GARDEN.

The most important work in the vegetable garden is the planting out of the various winter greens, such as Broccoli, Cabbage, Brussels Sprouts and Kale. The ground needs no special preparation for this crop, but a plot that has carried Peas or early Potatoes may be levelled with the fork and planted; digging is not necessary, as these plants like a firm root-run. It is customary to pull young Cabbage and similar plants from the seed-bed, but many roots are torn off in this manner and a check is given to the plant. The better way is to loosen the plants with a fork, when they will come up with roots intact. Where a limited number of plants is dealt with, the trowel may well take the place of the popular dibber as a means of inserting the tender-rooted seedlings.

A small packet of Radish seed scattered broadcast on any vacant plot will give useful salad in a few weeks. If the seedlings come up very thickly pull out a portion and eat the young green tops before bulbs form. Turnips may be sown in a moist semi-shaded portion of the garden, either in a drill or scattered broadcast. Often a place beneath the shelter of a row of Peas or Runner Beans can be given, and this will suit the crop admirably at this season. Thin sowing and dusting with soot or lime to keep slugs at bay are essential to successful Turnip raising. Parsley sown now will yield a picking all through the winter and until late in spring. A well-drained position should be chosen, such as alongside a walk or under a wall which keeps off heavy rains, and the plants

should be thinned out 6 inches apart. The old country superstition as to bad luck attending the transplanting of Parsley may well be ignored, and any gaps in the row made good from places where the plants are too thick. E. J.

SUITABLE SOIL FOR ROOM AND WINDOW PLANTS.

Too often the idea obtains that any ordinary garden soil will grow window plants; this fallacy generally finds a home with the person who has had no experience of greenhouse plants. Once the attempt to grow greenhouse plants is made the necessity of using good soil is realised and the ordinary medium of the garden is never allowed to grace or disgrace a flower-pot. If good soil is necessary for greenhouse plants, then it must be even more so for window and room plants, and I should like at the outset to impress this fact very strongly on readers' minds. The strongest plant will dwindle and die in unsuitable compost; the weaker ones will never have a chance of living.

The realisation of the necessity of good soil brings us to the consideration of what good soil is. Here let me say that when soil is employed in a gardening sense it rarely means soil pure and simple; it is invariably a mixture of various ingredients, such as loam, peat, leaf-mould, sand, charcoal and occasionally other substances. The whole is collectively termed compost, and this is really a better term than the generally used one—soil. With a view to assisting the tyro, a brief explanation of what is meant by loam, peat and the other ingredients forming a compost may well be given.

Loam is, as I know from a wide experience, the biggest puzzle that one can set a gardening novice to unravel, and yet, fundamentally, loam is the simplest of the simple. Take a spade out into a field or common, thrust it down some 9 inches with the foot and bring away the soil displaced, and there you have loam in its purity and its most desirable form. To make this loam fit for potting purposes it is wise to stack it, layer upon layer, grass side downwards, in a heap outdoors. This serves a double purpose, *i.e.*, it causes the grass to decay and forms what is called humus—the most valuable ingredient of all soils—and also starves out such animal and insect pests as wireworms, millepedes, cockchafer grubs and leather jackets, all deadly enemies of the gardener, practices he indoors or out. About twelve months should be allowed to accomplish these desirable objects, but loam stacked for six months may often be safely employed. The above is loam in the generally-accepted sense of the word, and such is always intended when the word is used by writers in the horticultural Press, but occasionally one may hear a jobbing gardener speak of the top spit of a cultivated garden as “loom.” E. J.

(To be continued.)



5.—A GOOD CROP GROWN IN THE MANNER DESCRIBED.

THE TOWN GARDEN.

THE QUEEN OF FLOWERS.—This is essentially the time of the Rose, and those town dwellers who are so fortunate as to be able to persuade the plants to thrive will now have to be giving them some attention so as to ensure the full enjoyment and pleasure from the blooms. Green fly will assuredly have put in an appearance, and it must be promptly exterminated or serious injury is certain to accrue. A pinch of snuff is excellent in those gardens where the plants are not numerous, or the pest can be cleared out by the aid of one of the many washes or powders which are advertised in THE GARDEN. The surface soil must be kept loose and fine, or a dressing of short, sweet manure applied so as to conserve all moisture in the soil. When water is necessary the soaking should be so thorough that it will pass down below the roots, and, rising again, bring with it the food for the plants. Climbing Roses on walls will be especially benefited by heavy waterings and also by judicious applications of weak liquid manure, although I have never noticed any substantial advantage follow upon the use of this in the case of plants in beds and borders. As town dwellers who grow Roses seldom do so for any other purpose than the adornment of the garden, it is unnecessary to have recourse to anything beyond the most perfunctory disbudging. Hybrid Perpetuals should be cut over after flowering and encouraged to throw up new shoots, as these will give welcome flowers later in the season.

INSECTS IN THE GREENHOUSE.—At this period of the year, when work in the flower garden presses so severely, the greenhouse and its occupants are apt to be neglected, with the common result that many of the plants become infested with green fly, red spider and other pests. This should never be allowed, for it is imperative that the plants shall be kept clean and in perfect health if they are to afford satisfaction in due course. In some cases it is probable that sponging will have to be done before matters can be again properly adjusted, but as a rule fumigation on two or three successive evenings will do all that is necessary. The house should be closed so as to confine the fumes long enough for them to effect their purpose. Tobacco is, of course, excellent; but the special preparations now on the market are so efficacious and so much pleasanter to use that the former has practically fallen into desuetude. When all is clear the ventilators should be wide open in the daytime and almost wholly so during the night, while the floors and other surfaces may be advantageously damped at frequent intervals, watering receiving regular attention.

ROOM PLANTS.—Showers are not as frequent as we should like them, especially for the occupants of the garden; but when they do come they should be taken full advantage of on behalf of the room plants. Whenever a warm rain is falling stand these out of doors to enjoy it, and they will not only be cleansed, but also reinvigorated by their sojourn in the open. Failing showers, it is good practice to stand them out and sprinkle them through the rose of the water-pot or hose. It is imperative that they shall not be neglected in the matter of watering, and that the leaves shall be kept scrupulously clean by frequent gentle spongings with pure or soft soapy water.

TOMATOES ON WALLS.—Up to the time of writing these have done splendidly this season, but they must not be overlooked, especially in the matter of removing all the young shoots that appear in the axils of the leaves, in watering and in feeding as may be necessary. When the plants are well set with fruit weak liquid manure will help them immensely, but if it is given strong the plants will rush quickly to leaf and succeeding clusters will suffer as a consequence. Clear water must be given frequently.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FRUITS UNDER GLASS.

VINES.—Keep the temperature as low as possible where ripe Grapes are hanging, and keep sufficient moisture about the floors to prevent attacks by red spider. Where Grapes are cut the Vines may with advantage be syringed copiously twice daily, and the use of an approved insecticide will be an advantage. Later houses must be looked after very closely during hot weather. See that all places are damped thoroughly several times daily, but do not syringe the bunches, as if the water is not perfectly clean it will spot the berries. Keep the border in a good moist condition.

Peaches.—Where there are moveable lights over the early house these may at once be taken off. Keep the trees, however, well supplied with moisture, and on no account allow them to suffer from drought. Keep late houses well supplied with moisture, and to trees carrying heavy crops give some stimulant at every other watering. Prop the fruits up near the light to enhance the colouring. The latest house should have all the ventilators open during warm weather both day and night.

Melons will set very easily now, and those in cutting should be good owing to so much sunshine. Plant for the last crop in a house that can be kept warm during September should the weather prove cold.

HARDY FRUIT.

Take up and burn all old Strawberries that have become worn out; the ground can be utilised for Broccoli or other greens. Pot up Strawberries that were layered in small pots for forcing, using good loam, with some manure added, and ram the soil well, so that the growth will be solid. Look over all crops and thin where there is a superabundance. Many amateurs do not thin the fruit enough and in consequence it is small and the trees or bushes suffer for the succeeding year. Net all fruits before they get to a ripening stage; it is much easier to keep birds away when they have not tasted the fruit. Keep a sharp look-out for any insect pest and apply remedies at once.

KITCHEN GARDEN.

Tomatoes should be secured to the stakes as they grow. Take out the lateral growths as fast as they appear. These plants are doing well outside this season, and Carter's Sunrise has already got a fine set of fruits, which are swelling away rapidly. Continue to plant out Leeks and Celery if possible on dull days or during the afternoons of bright ones, watering thoroughly before and after. Mulch Peas and Beans after a thorough watering. Sow Carrots for autumn use. Thin all crops, so that those left may develop thoroughly.

FLOWER GARDEN.

Carnations are earlier than last season, so that layering with some varieties may be got on with at once. Place a quantity of good sharp fresh soil around the plants to be layered. Use a very sharp knife and wire pegs and make the latter quite firm.

Lavender flowers must be collected as soon as the spikes are fully open. Keep all beds and borders smart by constant picking off dead and decaying inflorescences. Maintain the ground free from weeds and Roses well watered and mulched where this is practicable. Give an occasional watering of guano and syringe well on the eve of a hot day, and if any rust or mildew puts in appearance syringe with potassium sulphide.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardlee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

ROOF CLIMBERS.—Many of these will now be making robust growth, and a dull day should be selected to overhaul them. All gross and superfluous growths should be removed, and those selected loosely and gracefully suspended, exposing to view as much flower as possible. There is a tendency with these plants to grow upwards and a desire to flower where they cannot be seen.

Hydrangea Thomas Hogg.—This is a noble plant when grown as a large specimen, and will produce a flowering truss from almost every bud when well ripened. In the formation of large plants the annual growth must be encouraged to form in the full sun. Neat little plants are secured by inserting cuttings now or later on in the autumn, after the embryo truss has formed. As soon as rooted the plants must be grown in full sun in the open air, after being repotted and finally established in 5-inch pots.

FRUIT UNDER GLASS.

Melons.—The season so far has been most favourable for these fruits, but there is still a necessity for continued warmth in the hot-water pipes, as there are times when the temperature is much lowered owing to rain and other causes. Should canker make its appearance, keep the plants drier, and dress the affected parts with fresh quicklime, sulphur and finely-powdered charcoal. Closely watch ripening fruits, and remove them just as the stalk is cracking.

KITCHEN GARDEN.

Cucumbers.—Plants growing in frames or hot-beds that have been bearing since April will now be showing signs of giving out, especially if they have been heavily cropped, and it will be necessary to thin out a lot of the old foliage so as to allow room for new growth to form. The surface soil should be slightly disturbed, and 1 inch or so of light, rich, porous compost given, to which should be added a slight sprinkling of soot. If the soil is heavily charged with moisture through constantly sprinkling the foliage, withhold water for a time. Plants which have been rather severely pruned should be kept close and shaded for a few days and the foliage dewed over morning and evening. If the roots are healthy new growth will soon form. This must be kept pinched at about the third leaf and regulated over the surface of the bed.

FLOWER GARDEN.

Roses.—These have had a very trying time in many places through the drought. Where there is a good water supply it will be helpful to the plants to give them a good soaking. All old flowers should be picked off directly they have passed their best. Strong, flowerless shoots, which often appear, should be shortened back level with the flowering shoots.

Antirrhinums.—Where flowers of gorgeous hue are in request at this season of the year, one of the best things available is the tall-branching Antirrhinum. From seed sown last July we have plants now 3 feet high with the first spikes just at their best, the shades in selfs varying from white and yellow to deep crimson and maroon, besides very striking mixtures, as dark scarlet with golden lip, and crimson and carmine striped on a yellow ground. To obtain plants for next season it is advisable to start soon. Prepare boxes by filling with a rather light compost, and give a good soaking before sowing, cover the seed lightly, place in a cold frame and shade from hot sun. Transplant into nursery beds as soon as the seedlings are of sufficient size, and plant out in autumn or early spring, as may be most convenient.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

BOOKS.

Gardens of England.*—"Gardens of England, Present and Future," one is inclined to think would be a good title for this interesting volume, for the notes appended to the pictures are rather thoughts suggested by them than merely descriptions of the actual gardens shown, and Mr. E. T. Cook has dipped largely into his recollections of many beautiful gardens in England other than those pictured here, given us of his own experiences in the garden; lastly, and best of all, compressed into a comparatively small space simply numberless suggestions, based on broad lines, whereby we all, given we are possessed of that infinite capacity for taking pains which amounts to genius may, failures notwithstanding, become possessors of gardens, beautiful to their utmost capacity, whether they be great or small. Passing, for the moment, over the first few chapters, pride of place must be given to the Rose, and here, in "Amongst the Roses," we have one of the most, perhaps quite the most, interesting chapters of the whole book, while of the pictures which give rise to these notes that of "The Pergola, Brantwood, Surbiton," besides making a charming picture of itself, serves to show what may be done with Roses in a garden in the suburbs where expert knowledge and unceasing care has been brought into play, as here. Miss Parsons has been very happy in the moment she has chosen for her sketch, the clustered pink Roses against the deeply blue sky and the sunlit foreground forming an altogether beautiful scene. Mr. Dowdeswell, of Art fame, is the owner of this delightful garden. The author gives a goodly list of Roses, containing most of those best worth growing, dwelling more particularly on climbers and Chinas than is usually the custom. We join him in admiration of beds of Laurette Messimy and Mme. Eugène Résal; these two associated make perfectly delightful beds when carpeted with Tufted Pansies, either cream or palest mauve. The picture he gives of the rosy flowers of Camoens peeping out from under the snow, in his own garden, reminds us of a letter we once read from an Englishman living in Persia to his mother, in which he exclaimed at the curious sight presented by the fields of "Attar" Roses, the ground covered with snow, while the Roses were in full bloom. This, we believe, is no uncommon sight there, and is not considered in any way detrimental to their use for perfume. But it is impossible to dwell at length on the various chapters in their turn. The beauty of simple grouping. We are in perfect agreement as to the undesirability of planting in lines; still, that there can be no hard and fast rule is emphasised here by the fact that one of the daintiest colour sketches in the book faces these suggestions for simple grouping, that of "Waxwell Farm, Pinner," in which rows of Daffodils nod over a grass alley, and is, as Mr. Cook says, entirely charming. The last four chapters, "Spring," "Summer," "Autumn," and "Winter in the Garden," the last contributed by Mr. S. W. Fitzherbert, are of much interest, and full of useful suggestions for the garden that is still to be; but we cannot now do more than give special commendation to some of the illustrations not yet mentioned. The first, "The Sundial, Woodside, Chenies," is extremely tender and delicate in tone; "The Dovecote," equally good, strikes a deeper, richer note; while the last of all, "Moonlight, Golder's Hill," is endowed with a quiet restfulness which is wholly pleasing. If we have any fault to find with this book, it is its weight to hold, but where so much that is good is given, it is, perhaps, ungracious to find fault at all. M. H.

* "Gardens of England." Painted by Beatrice Parsons and described by E. T. Cook. Published by Messrs. A. and C. Black, London.

LEGAL POINT.

MARKET GARDENER'S CLAIMS.

[In reply to "D. S. O."]

THE rights of a market gardener to compensation for improvements, &c., depend very much on whether he is entitled to claim the benefit of the Market Gardeners' Compensation Act or whether he has merely the rights of the Agricultural Holdings Acts, 1883-1906. It is very troublesome to put any meaning on an Act which does not put out the new legislation clearly, but by reference to previous statutes; but it appears to be that the Market Gardeners' Act only applies if either it has been "agreed in writing" that the holding, if created on or after January 1, 1896, shall be treated as a market garden, or if created before that date it was on the commencement of the Act used or cultivated as a market garden with the knowledge of the landlord. In the earlier holdings the improvement for which compensation is given, or a right of removal is allowed, must have been executed prior to the date last mentioned without the tenant having previously received notice of the landlord's dissent. Before dealing with some general points, we may as well point out to our correspondent that he gives no information on the date when the tenancy which he took over in 1901 was originally first created. This point is of some importance, as he steps into the shoes of the former tenant, while the present landlord similarly takes over the rights and obligations of the former landlord.

"Sheds," if erected by the tenant, are comprised in the words "erections or enlargement of buildings." If the 1895 Act applies as described above, the tenant can demand compensation; but if only the Agricultural Holdings Act is applicable, then there is no compensation unless the erection was with the written consent of the landlord, although there may be the right of removal as a fixture in certain cases. "Greenhouses" are governed by the same rule, and as regards these there might be a right of removal, even at common law, although it is otherwise generally in a residential tenancy.

As regards "crops," under the Agricultural Holdings Act the only claim to compensation which could arise would be in connexion with "fruit bushes" placed on the holding with the landlord's consent in writing, while under the Market Gardeners' Compensation Act, 1895, written consent is immaterial and the list of crops is somewhat extensive. There is a right under the later Act as regards Strawberry plants, Asparagus and other vegetable crops. As regards fruit trees and fruit bushes, there is a right to compensation if they are permanently set out; but if not permanently set out there is a right of removal only, which is to be exercised before the termination of the tenancy. The time for removal in this case resembles the right of removal of an ordinary tenant at common law as regards his fixtures, differing from that under the Agricultural Holdings Act, which can be exercised within a reasonable time after its termination if the landlord has not availed himself of his option of purchase. BARRISTER.

PUBLICATIONS RECEIVED.

"Kew Gardens," by A. R. Hope Moncrieff, and illustrated by T. Tower Martin, 6s. net. Messrs. A. and C. Black, Soho Square, London, W.
 "The French Garden," by C. D. McKay, 6d. net. *Daily Mail* London.
 "The Country Home" for July, 6d. net. Messrs. A. Constable and Co., Limited, Orange Street, Leicester Square, London, S.W.
 "Bulletin on the Dipping of Nursery Stock in Lime-sulphur Wash." New York Agricultural Experimental Station, Geneva, N.Y.
 "The County Gentleman's Reference Catalogue," 6d. Messrs. Barnicot and Pearce, 44, Fore Street, Taunton.
 "The Perfect Garden," by Walter F. Wright, 6s. net. Grant Richards, 7, Carlton Street, London, S.W.
 "Kew Bulletin for June," 4d. Messrs. Wyman and Sons, Limited, Fetter Lane, London, E.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Foxglove raceme with curious terminal flower (*G. Francis and others*). It is not very unusual for Foxgloves to appear with a large, bell-like flower at the top of the raceme, and every season brings its quota of these. They indicate a freak of Nature, and little is understood about them. It is generally accepted, however, that they are the result of high cultivation continued through several generations. They certainly are not the result of a cross between Foxgloves and Canterbury Bells, as such a cross is impossible.

Phlox stems diseased (*M. H. C.*).—The stems of the Phlox showing the thin growths are teeming with eelworms (*Tylenchus devastatrix*) and to the presence of these the poor growth of the plants is due. This eelworm is very often spread from place to place in manure, especially when horses have been fed on Clover hay. It is a pest extremely difficult to deal with, and attacks a very wide range of dissimilar plants, Onions, Clover, Beans, Hops, Oats, Stocks and Wheat being among them. Probably the best method of getting rid of the pest is to apply a manure that will urge the plants into vigorous growth, and it has been found that in certain cases a mixture of sulphate of potash (three parts) and sulphate of ammonia (one part) applied to the soil in the spring at the rate of 1½ oz. to 2 oz. the square yard has had beneficial results and checked the progress of the pest, but probably the best thing to do, especially if the plants are very badly attacked, would be to burn them and give the soil a thorough dressing with lime.

Information about window-boxes and caterpillars (*Subscriber*).—Yes, window-boxes are used outside the window. Their size and shape varies according to the size of the sill outside, as they are usually made to fit this. They should, however, always be at least 9 inches deep. Wood is chiefly used in the construction of these boxes, boards three-quarters of an inch in thickness being best for the purpose. Sometimes a metal casing is placed inside the wooden box, especially when plants in pots are plunged in the boxes. The usual way in this country is to make a number of holes half an inch or more in diameter in the bottom of the box, then place in a 2-inch thick layer of broken pots, bricks or other rough material, and finally fill in to within 1 inch of the top with good turfy soil, such as is used for potting, the plants being put direct from pots or boxes into this. If it is desired to retain plants in their pots, the latter are stood in the box and packed round and up to their rims with Cocoanut fibre. Each box should have three bars of wood 1 inch thick nailed under the bottom outside, so as to raise the bottom of the box a little way from the window-sill. Various methods of ornamentation are employed for the fronts of these boxes. Fancy tiles are sometimes used, other growers prefer to paint the front of the box, but the most general system is to nail pieces of virgin cork in a rough and natural manner to the fronts. A good plan is to have one permanent box and about three others to fit into it. The latter are then taken out of the windows when shabby and replaced by others that have been prepared in reserve. We cannot advise you as to the best plants to use, as we do not know the climatic conditions in your country. To destroy the caterpillars procure some Paris Green (Blundell's) and dissolve 1 oz. in 10 gallons of water, taking care to have it well mixed. Then spray the plants with this mixture, using a syringe that will give a very fine spray for the purpose. Coat every part of the foliage with the liquid. It will be necessary to keep it well stirred while applying

it. This substance is poisonous, and must not be used within a fortnight of gathering the fruit. If you cannot obtain Paris Green procure some white Hellebore Powder, freshly ground, from the chemist, and mix 2½ lb. with 10 gallons of water, keeping it well stirred while using. Spray with this as advised for Paris Green. A week after the application of either mixture give the plants a heavy syringing with clean water.

FRUIT GARDEN.

Cherries casting their fruit (*W. J. S.*).—The casting of the fruit in the way you mention is a sure indication of something being wrong at the roots. The Cherry succeeds best in a deep, well-drained, cool and rather heavy soil. Yours is probably of a light and warm nature, and therefore deficient in some essential constituents necessary to successful fruiting. If our surmise is correct, we advise you to give your trees a good soaking of manure water (from the stable or farmyard) every three weeks during the summer, and in the autumn (early in November) to remove the surface soil until a good body of roots is come to, then add a top-dressing of good heavy loam mixed with an equal quantity of rich, well-decayed manure from the stable or cowyard, and apply it 6 inches deep over the roots, treading it firmly down. Give the trees another soaking of water just before they show signs of growth in late winter. The overcrowding of the trees in summer with superfluous growth must be avoided or the fruiting shoots and buds of the trees cannot be properly developed and ripened.

Pear dropping its fruit (*Skatta*).—The failure of your Pear tree to carry to maturity its crop of fruit must, we think, be attributed to imperfect fertilisation of the flowers, on account of the want of pollen on the anthers. To prevent similar failures in future you should give particular attention to the summer pruning of your tree, in order to expose the current season's growth to the action of light and heat by cutting away needless bearing and thereby preventing overcrowding of branches, bearing in mind that the success of next year's fruit crop depends very greatly on the proper development and ripening of the shoots and buds of this year's growth.

MISCELLANEOUS.

Names of plants.—*E. S. M.*—1, Possibly Vandal, an old Gallica Rose; 2, Blairi No. 2; 3, Pitord, an old Hybrid Perpetual; 4, Pride of Waltham; 5, Sanchette, an old Gallica Rose; 6, Nepeta violacea.—*W. Scott.*—1, Campanula pusilla; 2, C. portenschlagiana; 3, Allium Moly; 4, Polemonium cornutum album; 5, Lotus uliginosus.—*M. P. Holt.*—1, Cannot identify; 2, Felicité Perpetue; 3, Climbing White Pet.—*A. M. C.*—1, Begonia Rex variety; 2, send better specimen; 3, Senecio articulatus; 4, Sidalcea candida; 5, Campanula glomerata dahurica; 6, Lathyrus sativus.—*E. S.*—The Dianthus is Crimson Bedder.—*H. Inman.*—Polygoun cuspidatum.—*F. L.*—1, Hypericum calycinum; 2, Juglans nigra (the Black Walnut).—*J. H. M.*—The Rhododendron is a well-known variety, its name being *R. fastuosum* flore-pleno.—*W. de H. B.*—The Rose sent is Reine Olga de Wurtemberg. It is not at all a good autumnal bloomer. There are one or two stray flowers produced.—*F. W. D.*—The Rose is Killarney.—*H. Inman.*—A variety of Rosa alba, probably Mme. Audot.—*Rose Bloom.*—Could you send us a more developed bloom with a longer piece of the growth and foliage? The buds sent we are unable to identify.—*E. G. P.*—The large Tea Rose is White Maman Cochet, and the climbing variety Alberic Barbier.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

HOLLAND PARK SHOW.—JULY 7 AND 8.

ORCHIDS.

FROM MESSRS. HUGH LOW AND CO., BUSH HILL PARK, ENFIELD, came an extensive and artistically arranged group of splendidly grown plants. *Cypripedium macrochilum* giganteum, *Coleogyne dayana*, with its long drooping raceme of curiously-coloured flowers; a very fine batch of *Cypripedium niveum*, *Cattleya Mossiae* *armoldiana* Snee's variety, C. M. Neptune, *Bulbophyllum claptense* and a large plant of *Coleogyne pandurata* were a few of the most noticeable in a really remarkable collection.

Messrs. Stanley and Co., Southgate, N., put up a small group of well-flowered plants of *Cattleyas*, chiefly Mendelii and C. Mossiae varieties. Many of the flowers here though were evidently past their best.

Messrs. Moore, Limited, Rawdon, Leeds, had a very pretty little group, the arrangement of which deserved the highest praise. Three large pillars draped with Maiden-hair Ferns and Orchids were erected at the back with

beautiful examples of choice Orchids tastefully placed among suitable greenery in the front. *Brassia verrucosa*, *Cypripedium bellatulum*, *Cattleya gaskiana* alba, C. gigas (very fine indeed), C. Rolfe magnificum, together with some very interesting botanical specimens, including fine plants of *Zygopetalum rostratum* were well shown.

Messrs. Sander and Son, as usual, put up a very extensive and comprehensive group of plants in the finest possible condition. The arrangement was in the form of an undulating bank, with bays filled with the choicer dwarf-growing types. *Cypripedium bellatulum* was displayed in profusion, and numerous *Odontoglossum* hybrids, finely coloured flowers of *Laelio-Cattleya Martinetti* Rex, *Miltonias*, *Cypripediums* and many interesting botanical specimens.

From Messrs. Charlesworth and Co., Heaton, Bradford, came a very beautiful collection of superbly-grown plants, these being remarkably floriferous. Such things as *Cattleyas*, *Miltonias*, *Odontoglossums*, *Laelio-Cattleyas* and many others were profusely displayed. *Cattleya Warneri* alba, *Laelio-Cattleya Golden Oriole*, *Lycaste Skinneri* alba, *Barkeria elegans*, *Trichopilia bachousiana*, *Bartholina pectinata* and *Stanhopea tigrina* were a few that especially appealed to us.

CARNATIONS.

Messrs. James Veitch and Sons, Limited, Chelsea, had a very fine group of Malmaison Carnations, containing splendidly-grown and well-flowered examples. A few of the best were Duchess of Westminster, Mrs. Trelawney (rose scarlet), Albion (rose salmon), Maggie Hodgson (crimson), H. J. Jones (crimson), Dragut (cherry red), Miss O. B. Simpson and Yaller Gal (yellow shades), both being very good.

Messrs. Hugh Low and Co., Enfield, had a sumptuous lot of Malmaisons, among which Irene, a salmon pink variety, the result of crossing Lady Grimston and Princess of Wales, stood out very conspicuous. Certainly it is a very charming flower. The Colonel, a red-scarlet flower, and a seedling yellow named Amber were also fine. Lady Mary Hope, with orange shading, is an exceptionally good flower, and apart from these were many seedlings of great promise.

Sir George Faudel-Phillips, Bart., Ball's Park, Hereford (gardener, Mr. Fitch), had a grand display of pot-grown Malmaisons, superb examples of the best-known varieties, in some instances carrying two or three dozen flowers each.

Messrs. Peed and Sons, West Norwood, S.E., also exhibited finely-grown examples of pot-grown Malmaisons in variety.

Sir Daniel Gooch, Hylands, Chelmsford, was an exhibitor of Malmaison Carnations, the pot-grown plants displaying much cultural skill.

Messrs. William Cutbush and Son, Highgate, N., had a very extensive and comprehensive exhibit of the best American Carnations with others of British origin. Princess of Wales, King Arthur, Mrs. H. Burnett, Trojan, Victory, My Maryland, Yaller Gal and White Perfection being among the best. Messrs. Cutbush also displayed Roses of the rambler class in great beauty and much variety.

Mr. James Douglas, Great Bookham, Surrey, had a few of his superbly grown Carnations, such as Germania, scarlet; Peregrine, fancy; Lady Linlithgow, rose; Miss Willmott, scarlet; Mrs. Trelawney, salmon; and others.

Mr. John Ree, Rickmansworth, also exhibited a group of Carnations in variety.

Mr. A. F. Dutton, Iver, Bucks, had a sumptuous group of cut Carnations, representative of Malmaison and the cream of American varieties, a really superb gathering of all that is most desired in these ever-popular flowers. A capital lot of border Carnations also came from this exhibitor.

Messrs. Bell and Sheldon, Castel Nursery, Guernsey displayed a grand lot of these flowers superb in size, quality and freshness. Britannia as shown by this firm was a marvellous flower, and some five or six dozen of its flowers in a vase fully displayed its worth. The President, Winsor, Mrs. Lawsoo, Aristocrat and Mrs. Burnett were all of grand size and colour.

Mr. H. Burnett, Guernsey, was another of the leading exhibitors of Carnations, his flowers commanding attention by their size and beauty. Winsor and Mrs. Burnett were especially good.

Mr. W. H. Page, Tangley Nurseries, Hampton, had a capital lot of Carnations, chiefly of the American tree section, and associated with Lilies in variety made a very effective display.

ROSES.

The Roses from Mr. George Mount, Canterbury, were very fine, and consisted of bold groups of Fran Karl Druschki, Liberty, Joseph Lowe, with masses of White Maman Cochet, Mildred Grant, W. J. Grant and many more in the finest condition.

Messrs. H. Merryweather and Sons, Southwell, Notts, had many good Roses in great variety, Betty, Dean Hole, Florence Pemberton, Mrs. Peter Blair, Mme. E. Souper, Mrs. E. Mawley and others being shown in charming condition.

Messrs. Alex. Dickson and Sons, Newtownards, County Down, had a delightful lot of new Roses. Duchess of Wellington, orange and salmon; Lady Helen Vincent; George C. Wand, cherry red; Molly Sharman Crawford, fine white; Mrs. David Jardine, salmon pink, very charming; Grace Molyneux, flesh pink; and Harry Kirk, yellow and cream, were among the best.

Mr. Robert Chaplin, Joyning's Nursery, Waltham Cross, staged a very fine lot of Roses on a table extending to 60 feet in length, and representative of the best types of this flower in its many and diverse sections.

Messrs. B. R. Cant and Sons, The Old Rose Gardens, Colchester, exhibited a capital lot of Roses, such as Hugh

Dickson, Charles J. Grahame, Antoine Rivoire, Mildred Grant, Gottfried Keller, White Maman Cochet, together with a delightful lot of garden Roses in many shades of colour.

King's Acre, Limited, Hereford, displayed Roses in really superb style, those of the rambler class and others, such as Mildred Grant, Mrs. E. Mawley, Caroline Testout and Souvenir de Pierre Notting contributing to a fine display.

Messrs. George Jackman and Son, Woking, had an admirable lot of Roses, Tea, rambler and garden varieties in great variety making a very charming group.

Rose American Pillar, a new single-flowered variety, exhibited by Messrs. Cannell and Son, Swanley, promises to be one of the most delightful of all pillar Roses. The flower is of large size, rose carmine in colour, with nearly white base. An ideal Rose for the garden.

Messrs. R. and G. Cuthbert, Southgate, had a very fine group, in which Lilies, Humeas and Roses, the latter chiefly of the rambler and Polyantha class, combined their delightful fragrances in one pleasing whole, at the same time affording, by the grace and elegance of the plants employed, a rather unusual display.

Messrs. Paul and Son, The Old Nurseries, Cheshunt, filled a delightful corner in tent No. 1 with the choicest of pillar and garden Roses, those such as Jersey Beauty and White Himalaica being exceptionally good as pillar sorts. Wallflower, also a rambler, was in excellent form. Of other good sorts we select Fisher Holmes (dark red), White Maman Cochet, Marquise de Sinety, Hybrid Tea (flesh yellow), Mrs. W. J. Grant, Mme. Melanie Souper (flesh pink), White Maman Cochet, Mrs. Paul (a glorious cluster Rose with large flowers), Mme. Ravary and Frau Karl Druschki were all noticeable and good.

Messrs. William Paul and Son, Waltham Cross, exhibited a very fine lot of Roses in pillar form and in the cut state. We noted Waltham Rambler, Earl of Warwick, Merveille de Lyon, Dr. William Goodson, Victor Hugo, Jersey Beauty, Kaiserin Augusta Victoria and Celia (a lovely pink flower) among many charming varieties.

From Messrs. Hobbies, Limited, Dereham and London came a very remarkable display of Roses, rambler and other sorts prevailing in standards, arches and pillar groups, while in many diverse ways were seen such as Progress, Mme. A. Cbatenay, Dean Hole, Liberty, Sunset and the like, a really choice exhibit arranged with taste and skill.

Messrs. Frank Cant and Co., Braiswick Nursery, Colchester, had a magnificent lot of Roses, needless to say in the height of perfection. White Maman Cochet, Frau Karl Druschki, Pharasar, Maharajah, Dean Hole and Mrs. Aaron Ward were all superb examples in a really splendid lot.

Mr. Charles Turner, Slough, had many beautiful Roses. Souvenir de Catherine Guillot (a lovely orange and salmon), White Maman Cochet, Maman Cochet and quite a host of garden and decorative Roses.

FRUIT AND VEGETABLES.

Messrs. Hugh Low and Co. of Bush Hill Park exhibited berries of the new Blackberry named Low Junior. This is a reputed cross between the Loganberry and Blackberry. It has the vigorous habit and the same shaped fruits as the former, the colour and flavour, however, being that of the Blackberry. A very beautiful and commendable fruit.

From S. Heilbut, Esq., Hollyport, Maidenhead (gardener, Mr. G. Camp), came a handsome group of fruit trees in pots, Figs, Cherries and Nectarines being shown in very fine condition, the Cherries being particularly well fruited.

Messrs. J. Veitch and Sons, Limited, of Chelsea exhibited some grand examples of fruit trees in pots. Figs, Peaches, Nectarines, Currants, Gooseberries and Grapes were shown in all the latest varieties, the trees being most remarkable on account of the very prolific manner in which the fruits were borne.

Fruit trees in pots also came from Messrs. George Bunyard and Co., Maidstone. These were splendid examples of high-class culture and reflected much credit on those responsible for their well-being. Apples, Plums, Peaches, Nectarines and Cherries were very freely shown. Strawberries were also shown in splendid condition by this firm, the varieties Latest Laxton, Louis Ganthier, The Bedford, Goliath and Waterloo being particularly attractive. The few dishes of Apples grown last year and included in this exhibited were most interesting.

Messrs. Adam Parker and Co., Waltham Cross, staged fruits of Tomatoes Comet and Sunrise. These were an even, well-finished lot with beautifully clear skins.

From Mr. S. Mortimer, Rowledge, Farnham, Surrey, came a beautiful and extensive exhibit of Melons, Tomatoes and Cucumbers. The Melons were a very well-finished lot, and included such good varieties as Sutton's Invincible, Sutton's Windsor Castle, Hero of Lockinge, Royal Favourite and Blenheim Orange. Tomatoes Sunrise, Hanwell Glory and Up-to-Date were well represented. The two new Cucumbers, Faultless and Evergreen, were also well displayed, the fruits being of very perfect form.

Lord Liangatock, The Hendre, Monmouth (gardener, Mr. Comber), exhibited a very fine collection of Pine-apples and Strawberries, all the best varieties of the last-named being staged in very fine condition. President Loubet, The Bedford, Bedford Champion, Fillbasket, Reward, Laxton's Latest, Givon's Late Prolific and Trafalgar were all in superb form. The Pine-apples were represented by the variety Queen.

The exhibit of vegetables shown by the Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. E. Beckett), was admittedly the best of its kind in the show. First-class produce of all kinds was most artistically arranged, Cucumbers, Potatoes, Broad and French Beans, Lettices, Turnips, Vegetable Marrows, Spinach, Cabbages, Beetroot, Tomatoes, Radishes, Celery, Cauliflowers and numerous other kinds being shown in all the latest varieties.



DAFFODILS.

BEDOUIIN (Large White).

FIREFLAME (Yellow).

SUNRISE (White and Yellow).

THE GARDEN

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"THE GARDEN" FLOWER SHOW.

IN connexion with the above exhibition, which is to be held on the 29th inst. in the Royal Horticultural Society's Hall, Vincent Square, Westminster, London, we repeat what we said last week regarding the sending and staging of exhibits. The Hall will be open on the afternoon and evening previous to the day of the show, and exhibits that are sent must reach there not later than 9 a.m. on the day of the exhibition. Those bringing exhibits will be admitted until 10 a.m., and all exhibits must be in readiness for the judges at 11 a.m., when all exhibitors must leave the Hall. Readers and their friends will be admitted at 1 p.m. until 7 p.m., on presenting the coupon published in THE GARDEN for July 18 and 25. Exhibitors will, of course, be re-admitted at 1 p.m. Exhibits may not be removed until 7 p.m. *We wish to impress on all intending exhibitors that the 25th inst. is the latest date on which the entry forms can be received.* A full report of the exhibition will be given in our issue dated August 8.

their judging may have been disappointing to many who had novelties on trial, as every raiser of what he considers to be a new variety is apt to regard it in the same light as a mother considers her first babe, yet this reticence to give awards only serves to enhance their value when they are granted and, moreover, gives the public the right to expect something good in the varieties honoured.

The silver medal and a first-class certificate were unanimously awarded to a variety named George Stark, sent to Reading by Mr. A. G. Stark of Great Ryburgh, Norfolk, by whom we believe it was raised. It is really a Spencer or waved form of Queen Alexandra, and we need only say that it is more vigorous and produces more stems carrying three flowers than the older variety. First-class certificates were also granted respectively to the varieties Mrs. A. Ireland and Mrs. H. Bell. The former was raised and sent to Reading by Messrs. Dobbie and Co. of Rothesay and Marks Tey. It is a delightful Spencer bicolor, the white and deep blush colouring being most charmingly diffused. Mrs. H. Bell came from Mr. Robert Bolton, Carnforth. It is a beautiful variety of rich cream and pink colouring. Kitty Lea, sent by Mr. F. E. Hallam, Moseley, Birmingham; and Romani Ronnii, sent by Mr. Hugh Aldersey, Aldersey Hall, Chester, were considered by the committee to be synonymous with it. Constance Oliver, a deep pink and cream variety sent by Mr. W. Lumley, Down Nurseries, Denvilles, Havant; and Paradise Ivory, a beautiful ivory-coloured variety from Miss Hemus, each received an award of merit.

Many varieties were so badly mixed that it was quite impossible in the case of novelties to make out which flowers were correct, and the task of fixing even the older varieties seems to be an almost impossible one. The following are a few sorts that were considerably better than most, and were as true as one can reasonably expect—if all were as true growers would have little to complain of in this respect: Evelyn Hemus, from several sources; Elsie Herbert, from Mr. C. W. Breadmore; Princess Victoria, sent by Messrs. Dobbie and Co.; Marbled Blue, from Messrs. Sutton and Sons (Hester, from Miss Hemus, is synonymous with this variety); Helen Pierce and Miss Willmott, sent by Messrs. G. A. Bunting and Co.; Herbert Smith and Helen Lewis, from Mr. R. Sydenham; Hannah Dale, from Messrs. Dobbie and Co.; Helen Lewis, from Messrs. E. W. King and Co.; St. George, from Messrs. Hurst and Son; Queen Alexandra, from Messrs. Bunting and Co.; The King, from Messrs. Dobbie and Co.; Mrs. Harcastle Sykes, from Mr. R. Bolton;

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

TRIALS OF SWEET PEAS.

FRIDAY and Saturday, the 10th and 11th inst., were important dates in the history of the now-popular Sweet Pea. On the first day the floral committee and members of the National Sweet Pea Society inspected the trials of varieties so ably conducted by Mr. Charles Foster in the gardens of the University College, Reading, and which constitute the official trials of the society; and on the second date over fifty members inspected the trials made by Messrs. Hurst and Sons at Kelvedon and Messrs. Dobbie and Co. at Marks Tey. Probably there is no other horticultural society in existence which conducts trials similar to those held at Reading during the past and present year, trials that have been rendered necessary owing to the sportive character of the flower in whose interests the society exists.

It augurs well for the future of the society that eleven out of the twelve members of the floral committee, under the chairmanship of Mr. Walter P. Wright, travelled to Reading for the purpose of adjudicating as to the merits of varieties grown there, Mr. Martin Hitchins having to come from St. Austell in Cornwall, Mr. Malcolm from Duns and Mr. T. Jones from Rnabon, the other members also having more or less long journeys to undertake. The results of

John Ingman, sent by Mr. F. E. Hallam and Messrs. Dobbie and Co.; Gladys Unwin, from Messrs. Bunting and Co.; Countess Spencer, from many sources; Enchantress, from Mr. F. E. Hallam; Clara Curtis, sent by Mr. W. Bolton; Mrs. Collier and James Grieve, from several sources; Paradise, from Miss Hemus; Nora Unwin, sent by several; Etta Dyke, from Mr. C. W. Breadmore; Chrissie Unwin, from Mr. W. J. Unwin; May Perrett, White Waved, H. J. R. Digges and Purple King, sent by Mr. H. Eckford.

Many varieties, especially in the cream, pink and white shades, seemed to be very much alike, and probably the society will later on publish a further list of too-much-alike varieties. A resolution was passed by the floral committee to the effect that in future novelties be only accepted for trial from the actual raisers, and we should like to see those represented by numbers only also excluded. Mr. Leonard Sutton very kindly entertained the visitors to lunch, and an excellent tea was provided by Mr. Owen Ridley, chairman of the college council.

Among the members who visited Kelvedon and Marks Tey on the second day were Messrs. Arthur and Leonard Sutton, Mr. W. A. Bilney, Mr. Robert Sylenham, Mr. John Green, Mr. C. W. Breadmore, Dr. Boxall, Mr. Titt, Mr. Moss, Mr. E. W. King, Mr. Malcolm, Mr. Martin Hitchin, Mr. T. Jones, Mr. W. P. Wright, Mr. William Deal, Mr. Herbert Smith and Mr. G. Stark. The visitors were received by Mr. N. N. Sherwood and Messrs. William and Edward Sherwood and Mr. Cuthbertson at Kelvedon, and conducted over the Sweet Pea trials by these gentlemen. St. George, the gold medal variety of last year, was the most interesting variety here, owing to the fact that it was raised by Messrs. Hurst and Son at Kelvedon. In addition to the vast stock of Sweet Peas, an extensive and most interesting trial of culinary Peas was inspected by those interested. At the lunch kindly provided by Mr. N. N. Sherwood and Mr. Cuthbertson reference was made by the former to the fact that it was owing to a conversation held on the farm, where the morning had been spent, that the National Sweet Pea Society was called into being. After lunch the visitors were conveyed to Mr. Sherwood's pleasant home known as Prested Hall.

On arriving at Marks Tey an inspection of the Sweet Peas grown there by Messrs. Dobbie and Co. was made under the able guidance of Messrs. William and David Cuthbertson and Mr. A. Ireland. Many beautiful things were seen, and the health and vigour of the plants was freely commented upon. Mrs. Bieberstedt is a beautiful French grey variety, resembling Frank Dolby in general colour, but being less rosy in the standard and belonging to the plain or unwaved section. Mrs. A. Malcolm was the deepest cream-coloured sort seen, and it, undoubtedly, has a good future in store for it. Mrs. A. Ireland, described above, was in grand form, its freedom of flowering rendering it specially valuable for decorative purposes. The Unwin stock of Etta Dyke was very fine, and Mid Blue found many admirers. It is a deep heavenly blue-coloured variety.

After inspecting the Sweet Peas the visitors were kindly entertained to a welcome tea by Mrs. Miss and Mr. Cuthbertson. The value of such trials as these cannot be over estimated, and those at Reading constitute one of the best features of the comparatively young, but lusty, Sweet Pea Society. The arrangements of both outings were exceedingly good, and reflected great credit on the hon. secretary, Mr. C. H. Curtis.

FORTHCOMING EVENTS.

July 28.—Southampton Royal Horticultural Society's Carnation Show.

July 29.—THE GARDEN Flower Show, Royal Horticultural Society's Hall, Vincent Square, Westminster.

NOTES OF THE WEEK.

Horticultural Education Association conference.—The second annual conference in connexion with the above association was held on Friday and Saturday, the 17th and 18th inst., at Ridgmont and Bedford, under the presidency of Mr. A. E. Brooke-Hunt, chief inspector of the Board of Agriculture. The members were met at Ridgmont Station by Mr. W. F. Neild, manager of the Duke of Bedford's experimental fruit farm, and conducted by him to the farm, where they were met by the director, Mr. Spencer Pickering, who conducted the visitors round the farm and explained the various experiments that are being carried out. Tea was kindly provided, and eventually the members left for Bedford. After dinner at the Embankment Hotel a paper was read by Mr. J. C. Newsham on the illustration of horticultural lectures. A brisk discussion followed, in which all the members present took part. On Saturday morning a visit was made to Messrs. Laxton Brothers' nurseries, where the numerous stocks of Strawberries, Raspberries, Apples, Currants and other hardy fruits were inspected under the guidance of Messrs. Edward and William Laxton and Mr. Anderson. Excellent arrangements were made by the hon. secretary, Mr. Walter P. Wright.

Report on agricultural education.—The report of the Departmental Committee on Agricultural Education, of which Lord Reay was chairman, has been signed and presented to the President of the Board of Agriculture and Fisheries and will be published shortly.

Electricity and growing crops.—Much has been heard during the past few years concerning the application of electricity in various forms to growing crops, the experiments being attended in each case with more or less good results. Sir Oliver Lodge has recently described in the daily Press some experiments that have been carried out with gratifying results in connexion with farm and garden crops. Without going into any technicalities, the system is briefly to stretch over the field or plot to be treated a number of slack wires fixed to posts high enough for loaded waggons and other farm implements to pass underneath. The wires are supported on the posts by high tension insulators and then fixed to a generator that supplies positive electricity at a potential of 100,000 volts. The cost is said to be very small. Under the treatment Strawberries showed an increase of 35 per cent., Mangolds 25 per cent. and Raspberries showed a marked increase of crop on young plants but scarcely any on old plantations. Wheat also showed an increase in one instance of 40 per cent.

Strawberry exhibition and conference.—A highly interesting and useful conference and exhibition of Strawberries took place in the Goold Hall, St. Andrew Square, Edinburgh, on the 14th inst. under the auspices of the Scottish Horticultural Association. At the exhibition there were about fifty exhibits on view, some of these coming from a great distance. The fruit was generally of capital quality, and some of the exhibits were specially fine. The best of the old standard varieties were shown, as well as the newer ones which have just acquired a reputation. A seedling raised by Messrs. James Grieve and Sons received a favourable mention from the judges. Among the leading exhibitors to whom awards were made were Messrs. W. Smith, R. Aitken, Galloway; A. Maekinnon, Moffat; and Mrs. Vass. Mr. W. Smith, Lambton Castle, sent a fine dish of Reward, which was awarded a certificate of merit. Several awards were also made to new culinary Peas sent by Mr. Stewart, Panshanger, Herts, these being remarkably good and likely to gain favour when put into the market. There was also a good attendance at the conference which was held later, when the president, Mr. James Whytock, occupied

the chair. A number of those present took part in the discussion, and several practical points were well put by some of those present. On the call of Mr. M. Todd, hearty votes of thanks were accorded to the exhibitors and to Mr. Whytock for his services in the chair.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

A pretty Rose for a bed.—Mme. Tillier is the name of a very pretty Rose growing in these gardens, and I suppose it is a Polyantha. Be that as it may, it is a free-flowering dwarf Rose of a most distinct and sweet colour which I cannot describe, neither have I met anyone who could, but it has been likened to crushed strawberry. As to flowering, the quantity of blooms one is able to gather during late autumn is astonishing, and I think the colour is then more pleasing than earlier in the season. It also appears quite hardy. It lasts well, and has very prettily-shaped buds indeed, which when half expanded are delightful.—THOMAS ARNOLD.

The summer treatment of Christmas Roses.—We often hear complaints of Christmas Roses not flowering satisfactorily and also at the present season of the plants losing their foliage. I am convinced that the two chief causes of this are too much sun and want of moisture in the early part of summer. Christmas Roses should not be exposed to the full glare of the sun. They enjoy semi-shade and an abundance of moisture, and occasionally this should be in the form of liquid manure from the cow-shed, with a little soot added. We had the greatest difficulty with these plants for some years, and were told by local experts that this was all due to unsuitable soil—too much free lime. However, we persevered, and by finding a partially shady place and fairly good soil, and observing a few details here given, our bed of Christmas Roses has improved year by year, and I think it looks more promising than ever before at the time of writing. What we do is as follows: As soon as the plants finish flowering the surface soil is lightly pricked over. A thorough dressing of a well-decayed mixture, consisting of lawn-mowings, leaves and old spent hot-bed, with a little soot added, is placed all over the bed. I know of nothing which will retain the moisture so well in hot weather as this. The young leaves come up through this dressing strong and healthy. We take especial care that the plants do not become dry during the growing season. During the past spell of very hot weather we have given these plants an abundance of water and an occasional soaking of liquid manure. They are now looking well, and I hope we shall see a good crop of flowers soon after Christmas Day. The variety is *Helleborus niger maximus*, which is a good one, with long stems and large white flowers. The ordinary one with short flower-stems and small leaves is very poor compared with *maximus*. I think that early summer is the time to pay a little extra attention to these Roses. A crop of flowers will most certainly follow a good crop of leaves, and we can only have the latter on this limy soil by giving the plants attention during the summer months.—THOMAS ARNOLD, *The Gardens, Cirencester House.*

Carpenteria californica in Scotland.—In the south-west of Scotland the beautiful *Carpenteria californica* is quite a success in gardens near the sea and in mild places further inland, and it is gratifying that it is proving amenable to the conditions which prevail there. The other day I saw a large plant of it in bloom in the garden of Mr. W. D. Robinson-Douglas at Orchardton, close to the Solway

and a few miles to the south of Dalbeattie, Kirkcudbrightshire. There it has been grown on a south-west wall for several years, and this season, despite the somewhat trying weather conditions of last winter and spring, it has passed through these unharmed and is flowering with great freedom. The charming white flowers are heightened in beauty by the freshness and the profusion of the foliage with which this plant was clothed. *Carpenteria californica* also does admirably in the garden of the Right Hon. Sir Herbert Maxwell, Bart., at Monreith in Wigtownshire, but the conditions there are a little more favourable than those at Orchardton.—S. ARNOTT.

Dimorphotheca Ecklonii aurantiaca.—We grow these very easily under glass with masses of flowers, and afterwards plant them out, cutting them right over, when a new lot of bloom follows very shortly. For a succession of plants we grow from cuttings and pot on. No doubt the present hot, sunny weather is just what the plant needs to bring it to such perfection.—N. B. PULFORD, *Netherwood Bank, Dumfries.*

Sweet Pea prospects.—The account of the "Prospects of the Sweet Pea Season," by Mr. Walter P. Wright, is one of the very greatest interest to all lovers and growers of this delightful plant. The arctic weather of this spring lowered the hopes and aspirations of the cultivator down to zero, but since the advent of May the plants have made such marvellous growth that here we have been able to cut blooms three weeks earlier than has been the case for the last six years. Plants put out of pots the first week in May never grew so quickly and at the same time built up such strength that they are now able to produce some really wonderful flowers—three flowers to a raceme, and in many cases four, while two is the exception. The account of the sportiveness of the plant given by Mr. Wright I can bear out in all its details. The old theory of cross-fertilisation by insects must be dismissed, seeing how the flowers are fertilised, and in many cases the legume or pod has made some growth before an insect is able to open the flowers. My theory is this: In a few isolated cases there might be sports retaining those characters for ever which they possessed on first appearing, but in the majority of cases they are dormant characters, reappearing from a variety of a far back generation of the parents of, say, for demonstration sake, Gladys Unwin. My way of thinking may be wrong, but they are without a doubt recessive characters reappearing. If raisers of new varieties would give a little more time to the growing they would at once see if the colours were really dominant or not, instead of growing them for a year or two and then booming them as settled. Take for instance Countess Spencer, which I have growing in a clump of fifteen plants. Six are true, four are a dreadful-looking magenta, two are white, three have a tendency towards mauve. If this variety had been grown for some years instead of putting it into commerce, I think the raiser would have been so disgusted with it that he would have relegated it to the refuse fire. After this season I shall bid farewell to Countess Spencer, with the conviction, after some years of deep disappointment with her, never to again extend to her kindness in any way. I suppose after the National Show on the 24th inst. we shall hear what the opinions of the various growers are regarding the introduction of the bacillus to the soil in producing exhibition blooms; those opinions when they appear I am afraid will be a surprise; but more about this later. If the observations of the different growers, North and South, are reliable, then I think all growers will for once meet on an equal footing, and let us hope the tug of war will be such that the judges will have to call in an arbitrator to make peace between them (the judges).—G. CLAPHAM (gardener to E. Woodhouse, Esq.), *Calverley, near Leeds.*

TREES AND SHRUBS.

SOME INTERESTING TREES AND SHRUBS.

VIBURNUM TOMENTOSUM.—This is a fine flowering shrub, and grows as flat as a table, with enormous masses of flowers. *Viburnum plicatum* is now a perfect picture, with large balls of flowers as white as snow; a most beautiful plant for the shrub garden. These plants need liberal treatment to bring out the best results.

Shuartia pseudo-camellia.—This was introduced from Japan and is a handsome shrub, almost a tree, for there is in Sir Edmund Loder's garden a specimen upwards of 25 feet in height; it bears creamy white flowers resembling a single Camellia and is very free in flowering; the foliage, in addition, is very handsome.

Styrax obassia and japonica.—The latter is a very effective shrub in early summer, and usually bears myriads of flowers, which hang downwards. The plant is hardy. *S. obassia* flowers much later and has considerably larger leaves, which are heart-shaped and sometimes 8 inches to 10 inches in diameter. The flowers are sweet scented, pure white and hang in long racemes. Seed was saved from these last season. Both of these plants ought to be grown by all lovers of hardy shrubs; they are quite hardy and are of easy culture.

Eucryphia pinnatifolia.—This beautiful flowering shrub from Chili should be in every garden. It blooms quite freely in August. The flowers are white, and have stamens in profusion after the style of a St. John's Wort (*Hypericum*). It is not difficult to grow, and it does not object to being transplanted if this is carried out in the early stages sufficiently often. We have moved many this season and have no reason to anticipate any ill effects; it is easily raised from seed or layers.

Desfontainia spinosa.—This is an exceedingly interesting plant, which bears during the end of June and through July and August long, tubular, bright scarlet flowers tipped with bright yellow. We have found it hardy, although it is tender in most counties. It has stood 20" of frost with only a similar protection to that given to Tea Roses, viz., a little dry Bracken. This beautiful plant was introduced through Mr. Lobb, and I believe it first produced flowers at Exeter. W. A. COOK.

Leonardslee Gardens, Horsham.

LEMOINE'S MOCK ORANGE (PHILADELPHUS LEMOINEI) AND ITS VARIETIES.

THE recent editorial remarks in reference to these beautiful shrubs on page 307 and the fact that an award of merit was lately bestowed upon the variety *Rosace* should serve to direct renewed attention to these dwarfier forms of the Mock Orange. From the small space they occupy these Philadelphiaeuses are particularly adapted for small gardens, and their simple cultural requirements commend them to the amateur whose space and knowledge of flowering shrubs is not extensive. The birth, so to say, of these dwarfier Mock Oranges dates back for more than twenty years, as it was in the autumn of 1887 that the first *P. Lemoinei* was distributed. It was a happy thought of M. Lemoine of Nancy to cross the small-growing *Philadelphus microphyllus* (then recently introduced) with the European Mock Orange (*P. coronarius*). The result was *P. Lemoinei*, which still remains one of the most popular. Since then numerous other varieties have been distributed, that known as *P. Lemoinei erectus* being sent out soon after the other. It is more upright in growth than *P. Lemoinei* itself, but in other

respects is a counterpart. Others of this section which, as far as my experience extends, are among the best include *Avalanche*, a large, single flower; *Boule d'Argent*, double white; *Gerbe de Neige*, more vigorous than *Lemoinei* and with larger flowers; *Manteau d'Hermine*, semi-double flowers, borne in great profusion; and *Rosace*, above alluded to, with large double flowers. Beside these a great many other varieties have been distributed by M. Lemoine, notably, *purpureo maculatus*, which stands out from all the Mock Oranges in general cultivation by reason of the purplish blotch at the base of each petal. This, we are told by the raiser, owes its colour to the influence of *P. Coulteri*, a Californian species, too tender for general cultivation in this country. At all events, *purpureo maculatus* does not inherit any of the tenderness of its ancestor and is in every way a desirable form. The typical *P. microphyllus*, which has played such a prominent part in the production of the dwarf race of Mock Oranges, has flowers with the fragrance of ripe Apples. This fragrance is, to a great extent, reproduced in all the *Lemoinei* section, which renders them preferable to the stronger-smelling *P. coronarius*. In the cultivation of *P. Lemoinei* and others of that set the best results are obtained by cutting the plants back hard immediately after flowering and thus encouraging the annual production of stout, wand-like shoots. These will be well developed by autumn, and the following season will flower profusely. After cutting back a stimulant, either in the shape of liquid manure or a top-dressing of well-decayed manure, will be found helpful. H. P.

INSECTS ON IVY.

IVY is always associated, in our mind, with old walls, quaint gateways, ancient trees, venerable horse fronts and similar respectable environments in harmony with our ideas of restfulness and peace and the dignity inseparable from age. An "Ivy-covered wall" conjures up the picture of a time-worn secluded enclosure of artistic beauty, hallowed by a pervading sense of sentiment and quiet, and one cannot but express a feeling of regret that flies should have such an unfortunate affection for this plant, although no doubt the fancy has sufficient reason and attains useful results.

Even as late as the second week in November last year bushes of Ivy were swarming with a large fly of the appearance of a blue-bottle, making the plant one on which we can only look with disfavour.

There is something rather repulsive about flies, more especially those of the blue-bottle variety, and it is distinctly an unpleasant surprise when one is first confronted with this seething buzzing blue-black mass on a bush of such quiet picturesque refinement as our well-beloved Ivy.

It seems to be entirely the flower-heads which form the attraction, though the whole plant, leaf and all, is covered with the insects, except on misty damp days, when everything is wet. On several occasions I have noticed another fly of very venomous aspect, like an attenuated horse-fly, also apparently regaling itself on Ivy food, and when this is so an insect murder is nearly certain to be enacted, the victim being, in all cases I have observed, the blue fly.

It does not appear that the ripe blossom is the entire object of their visit, for I have seen them in crowds over a bush on which there were but two or three flower-heads open, and yet from their movements they seem to be in search of food. Their partiality seems to be chiefly for the common Ivy, but I am not yet quite convinced that there is any Ivy immune from their attentions.

The fact should be borne in mind, I think, when one contemplates planting it on a house front or as a bush in close proximity to a dwelling, for where an insect congregates in such numbers as to be a disturbing element it becomes a real nuisance. E. CURWEN.

THE FRUIT GARDEN.

BLACKBERRIES AND THE LOGANBERRY.

It is only during quite recent years that much attention has been given to the Blackberry as a garden fruit, the inhabitants of the United Kingdom having previously contented themselves with the fruit as it was produced in a wild state.

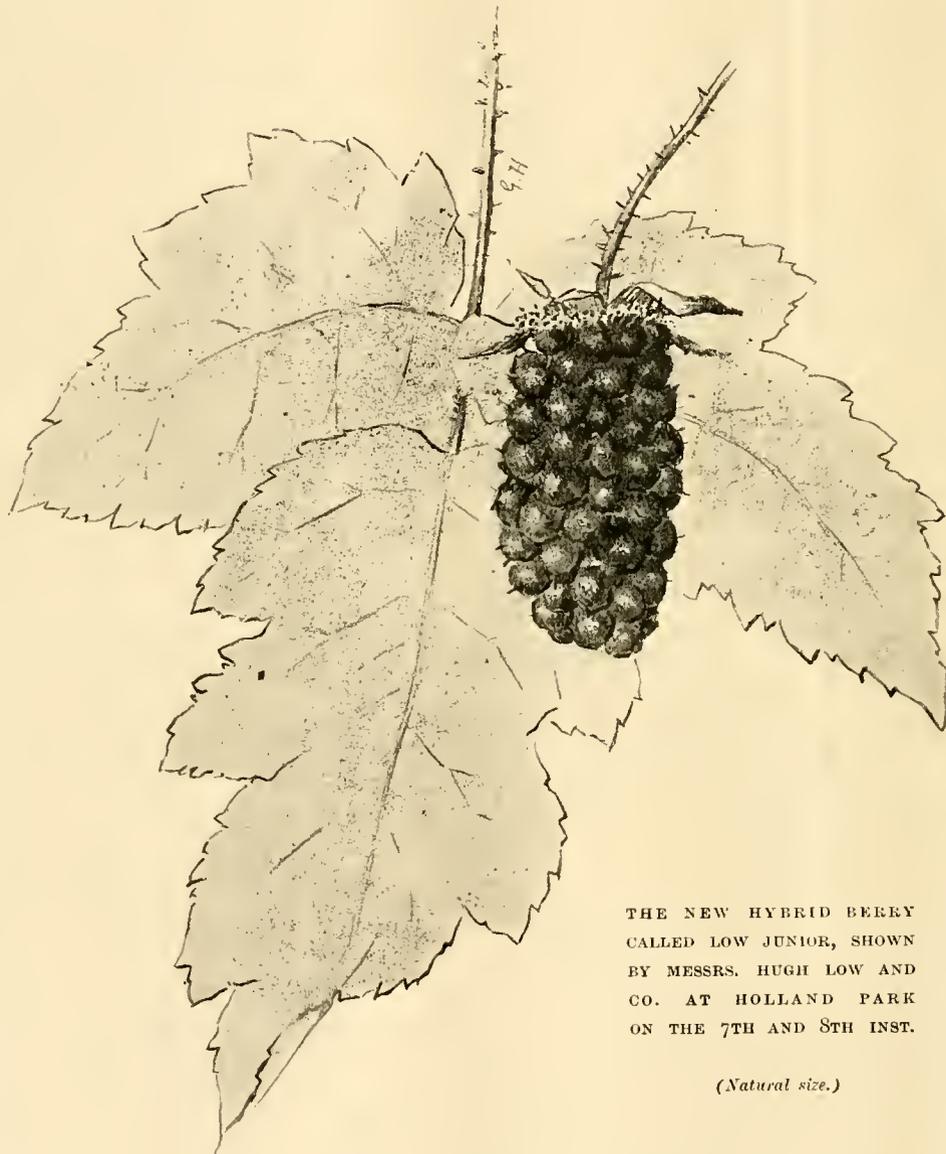
That even this differs to a considerable extent is a fact well known among country children, some berries being much more fleshy and possessing a considerably superior flavour to others. With the introduction of some larger-fruited varieties from America fruit growers began to see the possibilities of the Blackberry, and in most good gardens one or more varieties now find a place, the Parsley-leaved being a great favourite with many. It was only natural that when the Blackberry came to be recognised as a legal inhabitant of gardens that hybridists should turn their attention to it, and a reputed result of their labours was the now well-known Loganberry, said to be the result of a cross between the Raspberry and Blackberry.

This is now recognised as a valuable plant for producing fruit for preserves of various sorts, but the acid flavour of the fruits render it of little use for dessert. This trouble has now been overcome by a further cross between the Loganberry and the Blackberry, the result being fruits resembling the Loganberry in shape and size but possessing the colour and flavour of a first-class Blackberry. Fruits of this were exhibited by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, before the Royal Horticultural Society at Holland Park on the 7th and 8th inst., when the fruit committee granted it an unanimous award of merit. It is named Low Junior, and the illustration is from a sketch and is a natural size.

Both the Loganberry and its new ally delight in a deeply worked rather moist soil, and they are eminently suited for training on arches, pergolas and pillars. Their culture is really very simple, this consisting in removing the old fruiting canes as soon as all fruit is gathered and retaining young ones to take their place, precisely as in the case of Raspberries. Copious supplies of water and weak liquid manure during the summer, with a mulching over the roots of well-rotted manure during hot weather, is greatly appreciated. The Loganberry is very easily

propagated by pegging down the young canes in summer so that the tip of each touches the soil. Roots are soon emitted from the shoot at the point where it touches the soil and a young plant is quickly formed. This may be severed when large enough and planted into a nursery bed or odd plot to eventually develop into a large specimen.

In addition to being useful for training over arches or pergolas the Blackberries and the Loganberry may also be grown in rows and trained to wires or tied to stakes, the same as practised with Raspberries. Being of a vigorous character they naturally need more room in which to



THE NEW HYBRID BERRY CALLED LOW JUNIOR, SHOWN BY MESSRS. HUGH LOW AND CO. AT HOLLAND PARK ON THE 7TH AND 8TH INST.

(Natural size.)

develop, a point that should not be overlooked when planting is done, 3 feet between each plant and 6 feet between the rows being none too much.

The introduction of the Berry Low Junior suggests that we have at present only touched the fringe of a new and useful race of fruiting plants that may in the future take a prominent position in the great fruit industry of this country. I believe that Messrs. Laxton Brothers have a new fruit which is the result of a cross between the Loganberry and a Raspberry, but probably we shall hear more about this later. H.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

AN INTERESTING CONTRIBUTION FROM HERTS.

Mr. Clarence Elliot, Six Hills Nursery, Stevenage, Herts, sends several interesting border subjects. He writes: "I am sending a box of flowers for your Editor's table. The gorgeous *Gerbera Jamesonii* is very fine with me just now. Too often this plant is starved in pots. Far better plant it out in the cool greenhouse or frame, or even in the open, with good mellow loam well enriched with cow manure. If grown in the open it should be given a warm, sheltered position and the protection of ashes or such-like in winter. When any difficulty arises in keeping it through the winter in the open it is a simple thing to lift the plants in autumn, pot them and so store under cover till the following spring. *Gerbera Jamesonii* is invaluable as a cut flower, for the large, gorgeous, vermilion-scarlet blossoms are of a fine Marguerite form, and borne singly on strong, slender, graceful stems 1 foot to 18 inches long, they seem to 'arrange themselves' and last two or three weeks in water. Perhaps if required for cutting only it would be best to grow them planted out in a frame. In any case they must be given plenty to eat and drink during the growing period. *Tunica Saxifraga flore-pleno* is a newcomer, and promises to be a great acquisition on the rock garden. In fact, it is an acquisition, for I have a group of it here and it is quite charming. It may be classed with the double form of *Gypsophila paniculata* and the double white *Arabis* among those few plants which are really improved by doubling, or rather which, through doubling, give us something distinct from the type, valuable and attractive, beautiful though the type remains. My plants are literally covered with the lightly-borne double pink blossoms. The

other flower which I send is the little-known, seldom-grown *Michauxia campanuloides*. The plants grow from 4 feet to 6 feet high. First a rosette of narrow, reddish, serrated leaves, then a tall stem, from which are thrown innumerable branches, forming a narrow pyramid, and then come the flowers, hundreds of them. The buds open curiously. The petals lengthen into a closed, pointed balloon, then they split from one another except at their tips, so that there is a pointed, egg-shaped balloon of white slats, with spaces between. One by one the white petals free themselves and curl back till the flower resembles a large Martagon Lily, pure white, slightly tinged with purple and with a very prominent pistil. This lovely plant is quite hardy, and should be grown in good loamy soil in a warm border. Like most of the *Campanulas*, it dislikes severe drought."

THE TULIP TREE.

Mr. H. Henderson, The Gardens, Brookman's Park, Hatfield, Herts, sends flowers and foliage of the beautiful Tulip Tree, which adds so much interest to our gardens at the present moment. Our correspondent mentions that the tree in the park is 80 feet high and covered with flowers.

DELPHINIUM FANNY STORMONTH.

Messrs. J. Stormonth and Son, Kirkbride, Cumberland, send flowers of a very beautiful perennial Larkspur or Delphinium, which they well describe as a glorified *Delphinium Belladonna*, from which the senders raised it some years ago. It has all the properties of its parents, viz., loose arrangement of bloom, lovely colour and freedom of flowering. The bloom is large and of great substance, and the plant is strong in growth. We think it will supersede all others of this type. It is unequalled for cutting, and provides a colour which is all too scarce.

A NEW BLACK CURRANT.

Messrs. Hugh Low and Co., Royal Nurseries, Bush Hill Park, Enfield, send us a fruiting branch of a new Black Currant named Resister. This appears to be a very free-fruited variety, the medium-sized berries being of good flavour. The raisers claim for it that it is a resister of the dreaded big bud, and are prepared to supply a few plants for trial at a low cost to anyone who has trouble with the big bud pest.

VIOLAS FROM SUSSEX.

Mr. J. Barnes, Storrington, Sussex, sends good flowers of bedding Violas. He writes: "Kindly find enclosed a few of my Violas. These are from plants grown in the ordinary way in my garden. The white is a seedling I raised in 1907, and the striped blue and white is a sport from Lady Grant, of which I have made several plants. You will see how the hot sun has faded the edge of Mrs. Chichester. These were grown on a hot, sandy ground with no shade whatever. The only thing I am surprised at is that any of them lived, but now it is cooler I hope to get better blooms. I do not claim that these are good flowers, but I thought you would like a few for your table."

FINE SPRAYS OF SWEET WILLIAM.

Messrs. C. S. Daniels and Son, Wymondham, Norfolk, send us some of the most remarkable varieties of Sweet Williams we have ever seen. The flowers are not only large, but the colour is delightful—warm crimson with a white edge to the individual bloom. We hope such Sweet Williams as these will be largely grown in English gardens, as they are certainly worthy of a place alike in the humble cottage plot and the gardens of the wealthy.

POPULAR CONFUSION IN NOMENCLATURE.

NASTURTIUM—TROPÆOLUM.

THIS is one of the most flagrant instances of the extraordinary manner in which a name has been given to the wrong plant and the inexplicable persistency in the application once the false christening has been effected. Here there is no real confusion but only in the mind of the uninitiated. The matter is quite clear and well defined, but the public has not yet grasped the distinction in technicalities, and still persists in error in spite of the wide diffusion of garden literature which by now should have put the case straight. In the ordinary amateur garden world it is next to impossible to inculcate the fact that what is called *Nasturtium* is not a *Nasturtium* at all, and has not the remotest connexion with it. "*Tropæolum*" is the only possible term applicable to this delightful plant, and even of those who habitually use this term many will refuse to repudiate the other. I should wish to see a firm stand made by all who have a love of flowers and like to have them dignified by their own proper titles.

So frequently is the suggestion resented as an unnecessary pedantry when the Latin name is put forward as the only claimant, more especially as it is not an easy word either to spell or speak. However unwilling to flourish Latin or Greek names in the face of the general populace, it is in this case imperative to designate correctly. The English name is stated as "*Indian Cress*," which substitute we are not very likely to adopt, and the plant belongs to the family of *Geranium*. A *Nasturtium* with a right to that name is a totally different plant, one quite insignificant and uninteresting, whose English equivalent is "*Water Cress*," the origin of the name arising from the effect this plant has when eaten, *Nasus tortue*—tormented nose. Moreover, it is allied to the *Wallflowers*.

Why we should deny the name to the well-known esculent and apply it to another sort of Cress is curious, yet the anomaly continues to be perpetuated year after year. But, once we begin to teach our children to apply the titles correctly and get our gardeners to appreciate the designation it will not take very long to uproot the persistent error, and we shall wonder retrospectively how it came to have so long and sturdy an existence. E. F. C.

THE ROSE GARDEN.

ROSE KLEINER ALFRED.

(DWARF POLYANTHA.)

IN the cross-fertilisation of Roses nothing strikes the worker more than the wonderful vagaries that result totally different from what one might reasonably expect. I know years ago rosarians were very sceptical as to the statement sometimes made that a certain Rose originated from a certain cross, but I would advise all who so doubted to have a try themselves, and I guarantee they will quickly be undeceived. The announcement by Herr Lambert that this lovely Rose originated from Anna Marie de Montravel, crossed with Shirley Hibberd, one is inclined to doubt, seeing that it is a flower more after the style of *L'Idéal* in colour; but evidently we never know what we may obtain and there is no telling what novelties may yet be in store for us from the increasing interest which the cross-fertilisation of the Rose is evoking. Kleiner Alfred would seem to me to spring rather from Leonie Lamesch than Anna Marie de Montravel, as it is a far better grower than the latter. In

any case it is a charming addition to this very pretty race of diminutive perpetual-flowering Roses.

This Rose would make a delightful groundwork to standards and pillars of *L'Idéal*, especially where this latter succeeds well, which is not always the case. Where it does, there is no sweeter or prettier Rose. It may be successfully grown as a bush for bedding, pruning it rather long and tying over any long shoots that spoil the evenness of the bed; but to see it in perfection I would suggest half-standards for it. The heads are then a mass of bloom. A little but very charming single Tea Rose that could be mingled with the two sorts named, especially as an edging, would be Miss Willmott. This has the beautiful admixture of tints found in *L'Idéal*, with a very small single flower.

LYON ROSE.

This remarkable novelty was well exhibited at the meeting of the Royal Horticultural Society on April 28, by Messrs. William Paul and Son, Waltham Cross, and it was evident, from the interest it aroused, that it is going to be a popular favourite. As with many of the Hybrid Teas possessing the apricot or ochre-red tints, some blossoms were more intensely coloured than others. Those highly coloured were of remarkable richness in this almost undefinable shade of colour. The flower reminded me very much of Paul Ledé in the intensity of its colouring, but with a form between Kaiserin Augusta Victoria and Mme. Soupert. Some blossoms were more like the latter, others like the former, and in some instances the blossoms were a salmon tint with the ochre-red suffusion. In a cool season this beautiful novelty will be grand enough for exhibition, and at any time it must take a foremost place as a garden Rose, and also as a unique variety for pot culture. It is said that M. Pernet-Ducher produced this novelty from a cross between Mme. Soupert and a seedling from Soleil d'Or, and one can readily detect the influence of the latter in the wood and foliage, although the perpetual-flowering propensity of the Hybrid Tea predominates. The vigour of the plant and its general erect growth renders this Rose one of the most valuable introductions of recent years.

THE WICHURAIANA ROSES.

SINCE the advent of *Rosa wichuraiana* a considerable change has been brought about in the free-growing or rambling garden Roses. The Japanese *Rosa wichuraiana* has only been made use of in gardens for about fifteen years, and even now it is not nearly so well known as its numerous offspring. Its chief characteristics are its prostrate habit, long scandent shoots (which in a single season may grow anything between 12 feet and 20 feet in length), glossy green sub-evergreen leaves and panicles of white, fragrant flowers, which are borne later than those of most Roses, being at their best in July and August. It was quickly taken in hand by the hybridist, and a remarkable race of free-growing and free-flowering Roses is the result.

In the earlier days of crossing the Polyantha Roses were largely used for the second parent, but during late years the Tea section has been called into requisition. Some of the earliest American-produced hybrids were extremely beautiful, and mention need only be made of such things as Pink Roamer and South Orange Perfection to emphasise the fact. A little later we find such varieties as Jersey Beauty and Gardenia, containing Tea blood and extremely beautiful when in bud; then came the various hybrids of European origin with which the names of Transon and Barbier are identified. These have the floriferous character of the Tea Roses, with delightful fragrance and bud colouring,

the flowers being borne from axillary buds and also in terminal panicles as in the Japanese parent.

One of the most lovely of all the varieties is Alberic Barbier, a variety with cream, open flowers, which in the bud stage are buff and beautifully formed. The leaves are rich in colour and are carried throughout mild winters. A good companion plant is Auguste Barbier, a variety with red flowers. Elise Robichon is an exceptionally free-flowering sort with pink flowers, while other good sorts are Edmond Pronst, flesh: Clothilde Soupert, white, flushed pink, very double; Paul Transon, yellow and red in bud, pinkish white when open; and Adelaide Moullii, cream, flushed pink.

A further group of wichuraiana Roses is represented by Dorothy Perkins, at present one of the most floriferous varieties we possess, and a favourite with everyone by reason of its delicate pink flowers. For forcing it is doubtful whether it has an equal, while under certain conditions it

grow these Roses is to bud them on stocks 6 feet to 8 feet high. If this is done, beautiful weeping plants result, the pendent branches being perfect cascades of flowers. Grown in this manner they make excellent subjects for specimen plants on lawns, or are useful to break up the formality of beds of dwarf-growing Roses. Like other Roses they rejoice in rich, loamy soil, and pay for an occasional application of rotten manure or manure water. R. wichuraiana is the easiest possible Rose to propagate, as cuttings of half-ripe wood in summer or ripened shoots in winter root with freedom; cuttings placed in pots of sandy soil in slight heat in July root under a fortnight. This trait in the character of the parent is also noticeable in the case of the progeny, for all can be increased without difficulty. K.

ROSE GARDENIA.

ALTHOUGH one of the first of the hybrids obtained from R. wichuraiana, this beautiful variety is

THE FLOWER GARDEN.

PERENNIALS FROM SEED.

SIMPLEST methods of culture often succeed to perfection, an instance of which is the ease with which immense quantities of herbaceous plants can be obtained from seed sown during July and August out of doors. When failure in this branch of gardening has to be recorded, it is generally owing to a sour condition of the soil or the neglect that causes even the best soil to become bad. It is necessary to give water in times of drought and to constantly use the hoe, both to subdue weeds and to create a porous condition of the earth. Naturally, this hoeing can be more safely performed when the seed has been sown in drills, for the spaces in between can be kept clear of all vegetation and the discriminating eye will not be needed to determine whether a new green sprout of growth belongs to weed or cultivated plant. In the drills hand-weeding alone can be pursued, and every weed should be pulled up while still in its infancy.

The best position for seed-beds is undoubtedly a semi-shady one at this season of the year, but an open piece of ground can be used if sheets of brick-weighted paper are used to protect the drills. A reliable method is to lay a single row of bricks 3 feet apart on either side of a drill or couple of drills, place sheets of newspaper upon these, then add another brick on the top of each already in position, which will effectually hold down the paper even in the windiest weather. Only one row of top bricks need be lifted when the papers have to be turned back and watering performed. As soon as the seedlings are a few inches high, shading can be dispensed with so long as the soil is kept cool and moist by a mulch of loam and leaf-mould and constant evening waterings. The mulch can be applied just along the drills, worked up around the seedlings, not all over the bed.

Pansies and Violas can be sown for a fine show early next summer, and in nearly all localities will be strong enough to put out in ornamental beds and borders this September or October. When they are a long time appearing, so are quite small plants then, or where the winter is likely to prove exceedingly damp and cold, it is wise to leave the plants growing in the drills 6 inches to 8 inches apart until March. The magnificent colours obtainable in Pansies from seed

nowadays should be taken advantage of for lawn and front garden beds as well as borders, while Violas prove delightful for the same purposes. For carpet hedging or the formation of neat edgings it will be best to use cutting-raised plants of varieties noted for dwarf habit, since vigorous seedling Violas are generally tall.

Polyanthuses and hybrid Primroses flourish from outdoor sowings if shaded while young; the silver and gold-laced Polyanthuses are reckoned exceedingly meritorious and come remarkably uniform from seed, while giant yellow and red are always sure of appreciation. Dean's hybrid Primroses are of innumerable lovely colours and most floriferous.

Myosotis in all its varieties, Iceland Poppies, Aquilegias, Anubrietas, Arabis, Alyssum, Daisies and Crucianella stylosa sown now will give plenty of blossom next year without involving



ROSE GARDENIA ON A BANK IN COLONEL H. MOORE'S GARDEN AT HIGHER WOODCOMBE, MINEHEAD, SOMERSET.

does equally well out of doors. A companion to it is found in Lady Gay, while other good varieties are Hiawatha, with single, deep red flowers; and wichuraiana rubra, with single, pink flowers. The varieties Crimson Rambler and Carmine Pillar have been used largely by the hybridist, and numerous pretty hybrids are abroad which have not been distinguished by separate names.

These free-flowering and free-growing Roses are eminently fitted for planting in positions where they can practically grow at will, and if they are given some old fence, bush or tree to ramble over, so much the better, for they are never more favourably placed or more demanding of admiration than when growing in riotous luxuriance over some informal support, the flower-laden branches intertwined with dark foliage or hanging in elegant streamers from high tree branches. Another delightful way to

still one of the best. Just now upon a four-year-old plant there are some 300 or 400 buds, which, when developed, will be quite as large and of a similar tint of canary yellow to the Tea Rose Mme. Chedane Guinoisseau. These Roses require a deep root-run of good loam, and should be given a few tree stumps to scramble over. They are full of healthy vigour, the buds being set off by glistening leaves. A variety which resembles Gardenia is Alberic Barbier, but the buds are of a paler tint and the expanded flowers nearly white. No one should miss an opportunity of adding both these to their collection, and if they have a few spare Briar stocks insert a few buds on those with the tallest stems. They make perfect weeping trees, and are fitting companions to Dorothy Perkins, Euphrosyne, Aglaia and such like. The Rose illustrated is in Colonel Moore's garden, and the branches have rooted in the ground, forming a series of own-root plants.



SWEET ROCKETS BY PATH IN AN OLD FARM GARDEN.

much labour; indeed, it is surprising how few gardeners raise perennials in this fashion, but prefer to employ pans and boxes under glass. Of course, seed-sowing in frames and cold greenhouses in summer is very certain work, yet there is often difficulty in finding sufficient space, and the appearance of the glass houses at their floral season is sacrificed for the sake of hardy seedlings that do not require protection.

All the beautiful perennial Dianthus that prove so valuable for bedding out can be safely sown in shaded drills and planted out in September, or left to grow on undisturbed; this saves having to raise them in February and March in heat. Antirrhinums (both tall and dwarf), Sweet Williams, Brompton Stocks, Campanulas of all heights, Honesty, Foxgloves and Mimulus may be dealt with in perfect confidence of happy results.

Lastly, a seed-bed in semi-shade that can be left undisturbed should be used to sow *Anemone coronaria*; the soil must be rich and the seed barely covered with sand. Seedlings can be moved if great care is exercised, or may be left 6 inches apart, to provide a harvest of cut flowers.

E. J. D.

THE ROYAL FERN.

(*OSMUNDA REGALIS*.)

A CORRESPONDENT writes asking for information about raising *Osmunda regalis* from spores. This, commonly known as the Royal Fern, is by no means a difficult subject to increase by means of spores if a few simple items are borne in mind. In the first place, the spores are often shed before (to a superficial observer) they appear to be ripe. The fertile fronds should be gathered directly the earliest spore cases commence to open, and if laid in a piece of paper in a dry place the others will quickly reach that stage and discharge their contents. It will be noted that the spores

themselves are of an uncommon light green colour. Then prepare some soil by mixing together equal parts of yellow loam and peat, with a good sprinkling of silver sand. This compost must then be baked in order to kill all insects and any vegetable organisms that may be contained therein. Next, take some clean pots 5 inches in diameter, put a layer of broken crocks in the bottom and fill with the prepared compost, which must be pressed down firmly and made quite level. A little of the soil may be passed through a sieve with a quarter of an inch mesh and a thin layer of the fine portion placed on the top of the other compost. When finished it should

week-end cottage on the Chiltern Hills at the end of May the plants were beginning to grow big and strong, but it was a complete surprise to me to find, when I went down three weeks later, that the whole border, which I suppose is about 20 yards long, was one mass of bloom, so much so that I cut down a large number of plants, and the discarded blooms when laid on the lawn made a heap at least 3 feet high. I am, naturally, more than satisfied with my threepennyworth of seed, and cannot help saying that I think it is a pity this beautiful and decorative flower should be neglected.

H. P.



SWEET ROCKETS AFTER CUTTING DOWN.

be about half an inch below the rim of the pot. Next stand the pots nearly up to their rims in a vessel of water so that the soil becomes completely saturated. Then take them out and stand to drain for a little time, and while the surface is still wet sprinkle the spores very thinly thereon and cover with a pane of glass. This will maintain the regular moisture necessary for germination. When water is needed stand in a vessel as before. A nice shady spot in the greenhouse is best for these Ferns. If they come up too thickly they must be soon pricked off.

THE SWEET ROCKET.

I ENCLOSE two photographs of my garden that I think may be interesting to some of your readers, for they show a walk of the old-fashioned Sweet Rocket, which, I am sorry to say, seems to be far less planted than was once the case. This year it has flowered very freely with me, and the walk which the plants border has been a really beautiful sight. I sowed seed last spring, and transplanted seedlings later in the year and others early this spring until I grew tired of doing so, when I threw away a great many. When I left my

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE GREENHOUSE AND CONSERVATORY.—I am putting in another batch of cuttings of the fancy, show and regal Pelargoniums that should provide plants for flowering in the late spring and early summer next year. To encourage growth Bouvardias should be given every attention. From this time forth I refrain from pinching back the growths, otherwise their flowering period will be delayed. I am potting up a batch of young plants, placing them in larger pots and in rich soil. Lilies that have flowered under glass I am standing outdoors in a partially-shaded position. Cinerarias that were pricked off as recently advised should in most instances be ready for their first pots. Use soil made up of good yellow loam two parts and one part of leaf-mould and coarse sand well mixed. At this stage I should use rather more leaf-mould should the loam be inclined to be heavy.

Roses may be budded. Select, if possible, showery weather and bud carefully. I have recently plunged my pot Roses outdoors in a sunny position for the growths to ripen. Well-rooted plants will appreciate a liberal top-dressing of manure. This is a good opportunity for removing old and useless growths from dwarf Roses, as well as the weakest shoots that can never be of much service.

Chrysanthemums.—These will need more attention from this time. Plants of the late-flowering sorts must not be pinched back or stopped again this season. Grow on to the terminal buds, *i.e.*, the last series of buds that are developed, and these will make a beautiful display in mid-winter. Those who wish for large blooms of the November-flowering varieties should retain the "crown" buds during August. Side shoots must be removed from the axils of the leaves,



1.—BRIAR STOCK, SHOWING TWO VIGOROUS SHOOTS READY FOR BUDDING.

in this way concentrating all the energies of the roots on the development of plump buds and handsome flowers subsequently. Keep the soil between the plants of early-flowering varieties in the outdoor garden hoed over at least once a week, also see that all plants are staked and the growths secured by a loop-like tie, as we are sure to experience boisterous winds in the near future.

The Vegetable Garden.—Continue to plant Celery, taking care to see that the soil in the trenches is kept well moistened. Now is a good time to make a sowing of Tripoli Onions for next year's supply. Sow in quarters that have been deeply tilled and liberally manured. Greater success follows when the seed is sown thinly. I am lifting my early Potatoes, planting the same quarters immediately subsequent thereto with winter Greens. Seeds of the spring Cabbage should be sown immediately if this has not been done already. For winter use I am now making a sowing of Brown Cos Lettuce. Plants from an earlier sowing should be planted out without delay. My early Celery is growing away freely, being benefited by frequent applications of liquid manure. Mushroom beds may be made up outdoors at this period; a recent article dealt with this subject in detail.

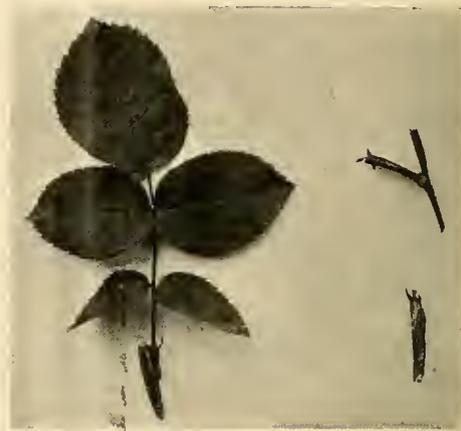
The Flower Garden.—To maintain plants in health seed-pods should be removed most persistently. The layering of Carnations should now proceed apace. This is a very sure and ready means of increasing stock of these plants. The earlier Narcissi may be planted. Bulbs of new sorts should be acquired in good time, as the results are invariably better when this work is carried out at this early period. Sow seeds of the perpetual-flowering Stocks on a warm border. Primroses, Polyanthuses and Daisies may be divided with comparative ease. This is a simple way of increasing stocks of these showy hardy plants. The beautiful yellow Tree Lupine (*Lupinus arborens*) is a more or less shrubby plant. There is also a very beautiful variety named Snow Queen. I prefer to sow the seeds in a box or pan, afterwards placing it in a frame. When sown outdoors they fall a ready prey to slugs.

The Fruit Garden.—Old beds of Strawberries should be done away with, and the quarters trenched and heavily manured previous to planting with spring Cabbage later on. New beds of Strawberries must be planted in the immediate future. This work should be done in good time. Continue to layer Strawberries until a sufficient supply has been obtained. During this month Pears, Apples, Plums, Peaches and Cherries may be budded. D. B. C.

HOW TO BUD STANDARD ROSES.

EVERY beginner who is an enthusiastic admirer of the Queen of English flowers, the Rose, aims at being able to bud his own Roses, notwithstanding the fact that he quite fully realises that it is a matter requiring some application of thought. It is a simple matter after all, provided proper means be taken to prepare the stocks and buds beforehand, and that the work be done in good time. The most suitable time to carry out this operation is during the months of July and August. It is a most interesting and fascinating occupation, as we derive by union with the common Briar Roses of the most delightful kind, providing we have the necessary buds of the different types and varieties.

We have endeavoured by the photograph



2.—ROSE BUD ON LEFT AS REMOVED FROM A ROSE SHOOT. ON THE RIGHT THE LOWER FIGURE ILLUSTRATES THE SAME BUD WITH LEAF-STALK SHORTENED, AND THE UPPER FIGURE THE BUD WITH PITH AND WOOD REMOVED READY FOR INSERTION.

that was taken from the hedgerow last year. Here will be seen two vigorous shoots that have sprung from the main stem, and these are in fine condition for dealing with at the present time.

The first thing to acquire is a supply of suitable buds, and each of these should be plump and easily seen. Buds of this kind are usually to be obtained from nice free-growing shoots of an old or vigorous Rose tree. The first thing is to cut the leaves away, except perhaps about half an inch to an inch of the lower portion. This makes a very convenient handle with which to control the bud. This is severed from the free-growing shoot before alluded to, and when detached from the Rose the shoot should be about 1 inch long, and should be cut away with a sharp knife. The bud it will be observed in Fig. 2 is of shield-like form, and the centre of wood or pithy substance should be removed therefrom, taking great care, however, not to damage the "eye" in the operation. As a matter of fact the centre portion of the shield may easily be removed with the thumb nail by holding the shield in the left hand and using the thumb nail to effect this end. The great thing, however, is to carry out the work promptly, and if this cannot be done and the bud be injured in the course of dealing with it, it is better not to use it at all but to select another one. An incision is then made in the bark of the stem it is proposed to bud, and the illustration in Fig. 3 gives a good indication of how this should be done. The incision in the illustration is shown on the side of the shoot in order that the would-be operator may see for himself how this should be done. It should really be made on the upper part of the growth and not on the side as indicated in the illustration. It really represents an elongated letter T. The cut should be about 1 inch long, and should be done with the greatest care, so that the knife does not cut too deep. In the case of the cross cut, if made much below the bark there is just a risk that the strong winds may snap the shoot and destroy one's prospect of success. The insertion of the bud in the incision made requires a little care. The bark should be raised on both sides with the bone end of a budding knife, taking care in the operation not to split the bark, otherwise the result may not be satisfactory.

The illustration in Fig. 4 shows the shield-like bud inserted in position ready to be tied, and if

this be trimmed off at the top, in the case of it being longer than the incision made in the bark, the top end must be detached so that the bark of the bud is absolutely and entirely submerged in the incision made.

The next thing is to securely tie the bud in position. This may be done by the aid of raffia. The second illustration in Fig. 4 shows exactly how the ties should be made. Do not tie the bud tightly, but only moderately tight, leaving the eye just visible after the ties have been made. In the event of very dry and trying weather succeeding the budding operations, it is a good plan to give the roots of the Briar a good application of water. In the course of a month or so, the eye, which was the new Rose shoot in embryo, should begin to swell, and when this is visible it is well just to loosen the tie to prevent the bark becoming cut, but care must be taken

LIME IN THE GARDEN.

THE value of lime in the garden is apt to be overlooked by the amateur, yet it forms one of the most valuable substances that we can procure for many purposes, and a well regulated garden should never be without a good supply. Made into a wash it is most valuable for applying to the stems and main branches of fruit trees during the winter for the purpose of destroying lichen and insect pests, and applied to the inside walls of greenhouses and frames it answers a similar purpose. Where a cheap shading for glass structures is desired lime wash applied to the outside of the glass by means of a syringe affords an effective though temporary shading, and where slugs abound it may be mixed with soot and used as an excellent deterrent of these ravenous creatures. In conjunction with sulphate of copper and water it forms the famous fungicide known as Bordeaux mixture. However, the principal use of lime in the garden is as an application to the soil. Many old gardens exist where the ground has been heavily manured year after year, with the result that it has become what gardeners term "manure-sick" or sour, and it is with soil of this character that an application of lime is likely to give the best results. Its action on plant foods is to render them quickly available for the plants, and to reduce any harmful acid that may be present to a non-harmful and oftimes beneficial condition. It is safe to assert that the majority of gardens, except where Rhododendrons and similar plants are grown, would have their fertility considerably increased by a judicious application of lime.

When and how to apply it are questions that naturally accrue. Lime proper should always be applied when the ground is vacant, as then there is no fear of tender roots being injured. A good dressing for ordinary purposes is half a pound to a square yard. This is best applied as slaked lime. A good plan is to place the fresh lime in small heaps on the plot to be dressed and allow it to remain thus until by the action of the air it falls into a fine powder, when it should be distributed evenly over the surface and then dug in, taking care to mix it with the soil as thoroughly as possible. A crop may be planted on the plot a few days afterwards without any fear of injury. Where clubbing in Cabbages, Turnips or allied plants is troublesome this application of lime should always be given when the plot is prepared for these crops, as it is one of the best preventives known of this terrible disease. It may be applied at any season of the year to vacant ground, but where used among the roots of fruit trees it is best applied in late autumn or early winter. Stone fruits often fail to swell their crops properly owing to a deficiency of lime in the soil, the fruits dropping off in large quantities during the stoning process.

For herbaceous borders and other places permanently occupied by tender-rooted subjects a safer dressing is chalk. This has not the burning properties of lime, and may be used among ordinary plants at the rate of 1lb. to the square yard with advantage. It should be crushed as fine as possible and worked into the soil by means of a handfork or similar implement.

SUITABLE SOIL FOR ROOM AND WINDOW PLANTS.

(Continued from page 353.)

PEAT is not so indispensable as loam; indeed, if a loam possessing plenty of fibre—i.e., decayed and decaying roots of grass and other herbage—be obtained, peat is rarely necessary. Its chief use is for Ferns, Azaleas, Heaths, foliage plants and any subject that likes a hard, close root-run and is likely to occupy the same pot for a considerable time. Peat is obtained in the same way as loam, viz., it is taken from the top of a common. It, however, differs in character from loam in that it is brown or blackish, full of fibre, sand-



4.—ON THE RIGHT IS A PORTION OF STEM SHOWING HOW THE BUD IS INSERTED, AND ON THE LEFT THE BUD IS PROPERLY SECURED IN POSITION BY RAFFIA TIES.

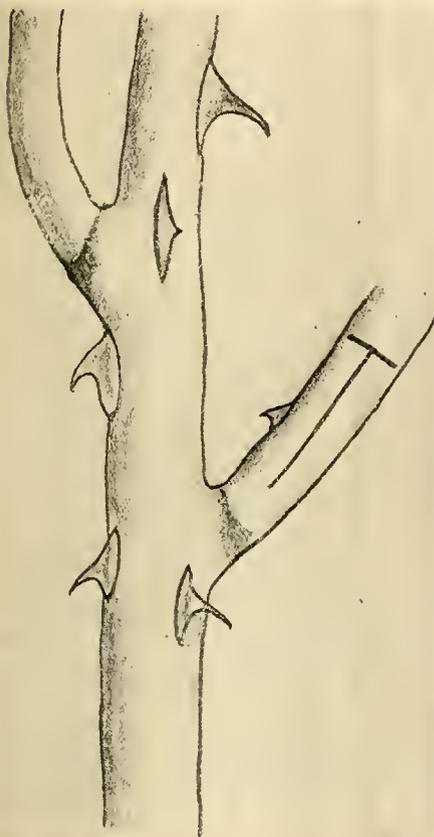
and strong roots, and of a light, spongy nature. In using peat, the thick, fleshy roots encountered, which are those of the Bracken Fern, should be removed and thrown away.

Leaf-mould is the residue from a heap of leaves after decaying. Leaves, preferably Oak or Beech, are collected from a wood, stored in a heap and tightly trodden down; a piece of fairly fine meshed wire-netting may be placed round the heap for a few weeks after its formation to prevent the leaves blowing away. When very dry weather follows the leaf collecting, it is sometimes wise to throw a few pails of water over the leaves to settle them down and hasten their decay. Turning once or twice at intervals of six weeks may be practised with advantage, and the decayed leaves should be ready for use in from nine to twelve months. E. J.

(To be continued.)



5.—A YOUNG STANDARD ROSE TREE, THE RESULT OF BUDDING A BRIAR LAST YEAR.



3.—PORTION OF BRIAR STEM SHOWING THE SHAPE OF THE INCISION. IN ACTUAL PRACTICE THE INCISION IS MADE ON THE UPPER PORTION OF THE LATERAL AND NOT ON THE SIDE AS SHOWN.

not to expose the bud fully until it is growing away freely. Some buds are rather quicker in their development than others, and in many cases they will remain in a dormant state all the winter, especially when the budding is done quite late in the summer. In the succeeding spring, the Briar shoots may be cut back quite close to the Rose buds that have been inserted, and as the sap rises in the early summer the Rose shoots will grow away freely, but should be secured as they grow, as there is always a danger that the wind may cause the buds to break out until they are well established.

Fig. 5 is a good illustration of a budded standard Rose the first season after the Briar was budded. Two shoots will be observed growing away freely, and each with several Rose buds well developed.

THE TOWN GARDEN.

BORDER CHRYSANTHEMUMS.—These plants are so serviceable for the town garden, and, moreover, are so easily grown that it is a matter for surprise that they are not far more frequently seen. By making a judicious selection abundance of flowers can be had from the late summer until the threshold of winter, and they will always be welcome for cutting as well as for the embellishment of the borders. Unfortunately, many people who have them find them so accommodating that they think the plants are perfectly well able to look after themselves, and the result is that after planting they are not accorded any attention. This is an error for which the grower must pay a price. During the present and the early portion of next month each plant should be gone over thoroughly with a view to the removal of shoots for which it is clear that there is not ample space, and also for watering with clear water and liquid manure as may be deemed necessary. In regard to the latter, it may be pointed out that the plants are like those grown for exhibition in their partiality for good food, and this must be provided. After the plants have been heavily watered and had their soaking of liquid manure the cultivator should wait until the surface has become sufficiently dry for loosening, and then apply a mulching of sweet manure above the roots. The water that is given subsequently will pass through this covering and the food contained therein will be carried down into the soil, while the dressing will also prevent the waste of food by the constant evaporation. One of the greatest pests with which one has to contend in the culture of these plants is the maggot which burrows in the leaves, and when the attack is severe considerably weakens the plants and effectually prevents perfect flowering. I make it a rule to spray once in every two or three weeks with a weak solution of paraffin, soft soap and quassia, and even then some maggots are sure to gain a footing; but these do not live long, for they are promptly crushed between the thumb and finger.

CLIMBERS ON WALLS.—The town garden gains so immensely by the inclusion of climbers on the walls that it is quite imperative that they shall receive the best attention it is possible to give. In the matter of pruning I should always say the less the better, as it is the free, rampant habit which makes the plants so delightful, but it is seldom wise to neglect it entirely, as they are then apt to become thickets of growth which can never produce satisfactory blooms. Therefore, let discretion be used and only allow sufficient shoots to comfortably occupy the allocated space. It is, however, in the matters of watering and feeding that the majority of climbers come worst off, for many otherwise careful amateurs never give a second thought to the climbers. To facilitate the application of water and liquid manure make a wide, shallow saucer round the stem, loosen the soil a little and fill time after time as may be required, following later with liquid manure; this done, fill in the saucer with two or three inches of short, sweet manure and the work is done.

PANSIES.—It has become customary to rely almost exclusively upon the raising of seeds for the supply of Pansies, but when one has a variety of which one is especially proud it is essential that cuttings shall be rooted, as seedlings will not come true. The present is an excellent time for insertion to produce plants that will bloom early next season, and later on other cuttings can be inserted for succession. Short-jointed shoots springing from the base should be chosen and inserted firmly in some convenient position; as the losses during the winter may be severe it is well to take about three times as many cuttings as are really wanted.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FLOWER GARDEN.

AQUATICS AND BOG PLANTS.—These should have the weeds pulled away from the roots, so that they have plenty of room for making proper development. *Spiraea palmata*, *S. astilboides*, *S. japonica*, *S. gigantea* and many others are now in perfection, and *Butomus umbellatus* is flowering unusually well this season.

Hardy Ferns.—These require an amount of moisture, which in hot seasons must be supplied by artificial means. Do not use the water cold from a tap, as this may give the plants a check. Ferns require a certain amount of shade, but not darkness, and when grown under large trees see that sufficient light is afforded by cutting away some branches. A mulching of leaf-soil, to which a little bone-meal and soot has been added, makes a capital top-dressing.

Shrubs and Roses.—Flowering shrubs which have finished blooming should be pruned back into the required size and shape. Some need but little pruning and others a lot. Roses must have all seed-pods removed as soon as possible after the flowers are over, so that subsequent blooms have all the strength possible. Give copious supplies of water, both sewage and clean, and a little guano.

KITCHEN GARDEN.

Horn Carrots.—Sow these for pulling during the autumn. If the soil is dry, thoroughly soak it before drawing the drills, and a few mats may subsequently be placed over for a few days should the weather be hot and sunny.

Celery.—Water this well and syringe with insecticide to keep off an attack of maggot. Get late batches planted as soon as possible, and do not let the plants flag. Get in more seeds of Endive and Lettuce and prepare ground for sowing Cabbages next week and again ten days afterwards.

PLANT HOUSES AND FRAMES.

Pot on all kinds of winter-flowering plants, such as *Bouvardias*, *Carnations*, *Cyclamen* and *Poinsettias*, also *Primulas*, *Cinerarias*, *Campanulas* and *Geraniums*. Repot *Roses* that require it, and keep all pot *Roses* well supplied with manure water and keep down all insects. It is better to plunge the pots in ashes.

HARDY FRUIT.

Peaches and Nectarines.—Expose the fruits of early varieties to the sun as much as possible, so that they get a good colour. The young growths should be kept tied or nailed in, and the trees syringed twice daily during very hot weather. Peach growing will then become a pleasure. Some good short manure should be placed over the roots to keep the soil cool.

FRUIT HOUSES.

Melons.—Continue to set the flowers of these in houses and frames, and water with liquid manure when the fruits start swelling.

Peaches must not be allowed to suffer from drought; water copiously and often all trees carrying heavy crops. Allow plenty of air, top and bottom, to late houses.

Late Grapes.—The houses containing these must be damped thoroughly several times daily, especially during hot, sunny weather, and where borders are outside and in let both be mulched with some short manure. The outside border may also want more water than the inside, especially when in full exposure to the sun.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CHRYSANTHEMUMS.—Plants grown as trained specimens must now be regulated and tied. They will by now have filled their pots with roots, and will require feeding. With the large number of shoots and flowers these specimens are expected to perfect, naturally more liberal feeding will have to be indulged in than is the case with plants which have to produce only a limited number of flowers. Thoroughly syringe the plants two or three times daily, and damp the surface of the ground on which they are standing frequently during hot, dry weather. Dust the undersides of the foliage occasionally with black sulphur to ward off attacks of mildew.

Orchids.—Admit plenty of fresh air during the hottest portion of the day. Close the top ventilators in the warm house early in the afternoon and give the plants a good syringing overhead on every favourable occasion. Reduce the bottom ventilation towards the evening in order to avoid much fire-heat.

FRUITS UNDER GLASS.

Strawberries.—When once the runners have become fairly well rooted in their pots, these should be cut away and moved to a position where they will be shaded from the midday sun and stood thickly together for the first few days, as the pots then prevent each other becoming too hot and dry, and the young plants are thus inured gradually to the loss of sustenance they incur through being cut away from the parent plants. As they become able to bear it, it is advisable to stand them more thinly preparatory to potting them into their fruiting pots, which should be done by, or very soon after, the end of the month. Before potting it is advisable to turn the young plants down on their sides and to syringe them thoroughly on the undersides with water in which a good quantity of flowers of sulphur has been mixed.

KITCHEN GARDEN.

Spring Cabbages.—I am no advocate of very early sowings of this important vegetable. I make my principal sowing at the end of July, and, provided good seed is used, it need not be sown thickly; in fact, thick sowing is ruinous. I make a second sowing from the middle to August 21 of good second early varieties, and plants that are to be wintered in frames will be quite forward enough if sown at the beginning of September. If sown earlier, large, ungainly plants which lift badly and are prone to run to seed after flagging from removal in spring follow. Sow the Red Pickling Cabbage at the second sowing, and it is also advisable to sow a little with the third for frame protection.

Rhubarb. Do not be led away with the erroneous idea so often entertained that in order to make the best jam and wine Rhubarb ought to be in a semi-withered condition. Those who desire quality in either will do well to take the sticks which result from the secondary growth, which occurs in most vigorous Rhubarb beds and is now at its best.

FLOWER GARDEN.

Herbaceous Borders.—Many inmates of the borders show unmistakable signs of the effect of the continued drought, and in all cases where watering is practicable a thorough soaking should be given. Tufted Pansies, for instance, are not likely to throw cuttings in quantity unless they get more moisture than is this year naturally provided. A good soaking will also be necessary to secure a second growth and display of flowers on the *Pyrethrums*; at present they are not moving an inch. Seed-boxes of herbaceous plants sown during May or June will want attention in the way of watering.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Boltonia latiflora and Michaelmas Daisies (Cape Colony).—As the popular name of Michaelmas Daisy is confined to the perennial Asters, you cannot properly exhibit *Boltonia latiflora* as a Michaelmas Daisy. A list of the best tall-growing varieties of Michaelmas Daisies is difficult to give without knowing whether you prefer small or large-flowered varieties, or both, while the number available is exceedingly large. The following, growing 3 feet or upwards in height, are all first-class: *Coombefishacre* Brightness, lavender, medium; *cordifolia* Ideal, lavender, small; *Edwin Beckett*, lavender, medium; *ericoides* Sensation, white, small; *gracillimus*, rose pink, small; *King Edward VII.*, mauve, medium; *lævis*, blue, small; *Novæ-Angliæ* Mrs. J. F. Rayner, crimson, large; *Novi-Belgii* Captivation, pink, medium; *N.-B. Edna* Mereia, rose; *N.-B. Fairfield*, white, large; *N.-B. F. W. Burbidge*, heliotrope, large; *N.-B. William Marshall*, mauve, large; *puniceus pulcherrimus*, blush, large; *Shortii*, lilac, small; *turbinellus albus*, white, large; and *Osprey*, pink, small. The *Amellus* varieties should also be grown, but these are not tall growing.

Information about *Pœonia Cambesedesii* (W. West).—*Pœonia Cambesedesii* is a native of the Balearic Isles and Corsica. It was first found in the Island of Majorca in 1896, and then introduced into cultivation in this country. Plants flowered at Glasnevin in April of 1907, and it was figured in the *Botanical Magazine*, t. 8161. Its nearest ally in the genus is *P. corallina*.

Diseased Ostrich Plume Asters (M.).—The Asters have been attacked by a fungus, probably a species of *Fusarium*, but they were packed so that it was quite impossible to investigate them properly. Whether the fungus is a parasite or merely a follower of some other cause of death must, in the absence of suitable material for investigation, remain a mystery. All plants should be carefully packed in tin boxes, and on no account should they be wrapped in cotton wool; damp moss is much better.

Information about a Sweet Rocket (E. Ashton).—The Rocket has evidently taken on a fasciated growth, a by no means unusual occurrence in flowering plants and shrubs, and due in all probability to a breakdown or rupture of certain cells, or at any rate some interference with the normal conditions within the plant. In the Rose, Sweet William, *Euonymus* and *Lily* numerous instances occur each year, the freak becoming more or less permanent in the latter group at times. In all cases it ranks as a disfigurement, and the blossoming is by no means improved by its presence.

TREES AND SHRUBS.

"Orange" plant in the open (Mrs. C. M.).—The sprays you send are those of *Ægle sepiaria*, a plant which has many synonyms, one of the commonest names in gardens being *Citrus trifoliata*. You appear to be very successful in the culture of rare shrubs, and there are a great many things which would thrive excellently in your garden. The following *Rhododendrons* are worth trying: *Grande*, *Falconer*, *Hodgsonii*, *barbatum*, *griffithianum* (Aucklandi), *arboreum*, *campylocarpum*, *glaucom*, *yunnanense*, *racemosum*, *cinnabarinum* and *Thomsonii*. Other suitable plants are *Escallonia macrantha*, *E. rubra*,

E. langleyensis, *E. philippiana*, *Ceanothus veitchianus*, *Tricuspidaria dependens*, *Jasminum primulinum*, *Mertens Ugni*, *Magnolia Watsonii*, *M. parviflora*, *M. Campbelli*, *Grevillea sulphurea*, *Myrtles* in variety, *Eucalyptus* in variety, *Fuchsia Riecartoni*, *Cordyline australis*, *Eucryphia pinnatifolia*, *Styrax japonica* and *S. Obassia*.

When to prune Rhododendrons (C. S.).—You do not say in what condition your *Rhododendrons* now are. If they are, on the whole, shapely bushes, you will not need to do more than remove odd, straggling branches here and there, and that is best done in April. If, on the other hand, your plants are very loose in habit, they will require well cutting back to induce a more bushy character. You will not need to remove old branches if they are healthy; new growths may be expected from quite old wood. The flower-heads should always be removed from *Rhododendrons* before seeds have time to form.

Holly leaves attacked by insects (W. S. B. Pirbright).—Your Holly hedge is suffering from an attack of the Holly fly (*Phytomyza ilicis*). The fly punctures the leaves and lay eggs in the tiny holes. These eggs hatch, and the resulting grubs feed on the inner portions of the leaves, causing the brown, dead patches. It is a difficult thing to deal with, and your best plan at the present time will be to gather up and burn as many as possible of the old leaves, and syringe the hedge once a week for six weeks with a liquid composed as follows: Mix 1 lb. of soft soap and 1 pint of paraffin together to form an emulsion, then place the mixture in 8 gallons of clear water, stir well up and spray over the whole of the hedge. Next year repeat the operation, but commence the spraying about the early part of April.

Amelopsis Veitchii dying (Burn Rocks).—It is impossible to say what is the matter with your *Amelopsis Veitchii* without seeing the plant. It not infrequently happens that large and, to all appearances, perfectly healthy plants suddenly die without any apparent reason. Sometimes this plant is attacked by scale insects rather badly and that eventually causes death. Some root injury, too, may have taken place or the soil it is growing in may have become sour. The most likely thing to suspect, however, is root injury. It is improbable that it will start into growth again.

FRUIT GARDEN.

Young Gros Colman Vine diseased (J. R.).—The malady from which your Vine is suffering is a disease little known, but from time to time we have had experience of its ravages, which has been invariably confined to young Vines, and generally to the varieties *Alicante* and *Gros Colman*. We have always attributed the cause to an attack by a very minute species of red spider, and this also was the conclusion come to some years ago by the scientific committee of the Royal Horticultural Society. Mr. Barron, in his "Book of the Vine," says of this disease that the late Mr. Blackmore of Teddington, who had directed special attention to this malady, had suggested that in lack of an authorised name it should be termed "diphtheritis," as he suspected it to be of a fungoid nature. Mr. Barron very truthfully describes the first symptom of the disease as "a contraction of the margins of the half-grown foliage till the leaves become like a cup inverted; then the stem loses its crisp, clear substance, goes dull and is channelled with lines of shrinkage, the tips of the shoots become flat and flaccid, all the gloss is lost and the vigour gone, and the disease descends from leaf to leaf until the whole tissue is hardened and the young wood becomes of a dirty black tint." We would advise you to cut away the parts very badly attacked, and to steep the affected shoots remaining in a strong mixture of sulphur and soft water. Those branches which cannot be steeped should be painted over with the mixture, which is best left on for three days. This treatment we have found to be effectual in stamping out the disease

without harming the Vines. Encourage new growth in the Vines during summer by every means in your power, and they will come round all right in time. Keep a vigilant look-out for the disease next spring, as it is almost sure to reappear for a season or two, and apply the same remedy before serious damage has been done.

Branch of Ribes with abnormal growth (H. B.).—The curious growth on the stem of *Ribes* is of the nature of a burr or knaur, and these are usually caused through the effort made by the plant to heal up a wound made by insect attack or some other cause, such as a chance cut by a knife, hail and so on, while in many cases their origin is very obscure. In the present instance it appears that a callus was first formed and then the cambium went on forming new tissue, both wood and bast, as in the stem, until at last this great swelling was produced and the exciting wound completely obliterated and the cause of the wound entirely hidden. It is not a gall in the sense that it is made by an insect, or rather through an insect, for a dwelling-place, as somewhat similar growths on Oaks are.

Plum trees to bud (A. B. C.).—Provided the stock in question is growing freely and in good health, and the sap running freely at the time of budding, there is no reason why you should not be successful in budding any variety of Plum you wish on the stocks you mention. The middle of August is a good time to carry out the work. If bush trees are required, the buds should be inserted a few inches above the ground, and higher, of course, if standard trees are desired. The stock is prepared for the insertion of the bud by making an upright cut (in a smooth part of the bark) $1\frac{1}{2}$ inches long, with a transverse cut at the top 1 inch long, the two cuts together forming the letter Γ in this position. The edges of the bark on both sides of the upright cut should be lifted gently up by the handle end of the budding-knife prepared for this purpose, in order to receive the bud, which must have been previously prepared. The way to do this is the following: Cut off a branch of the current year's growth of the variety you wish to bud, cutting the leaves off at the top of the stalk (not at the bottom), and place immediately in water. Select a plump bud and cut out with a sharp knife (deep enough to secure a thin piece of hard wood underneath the bud) something in the shape of a wedge, retaining the leaf-stalk attached. When the bud has been cut out as directed, gently raise the bark, commencing at the base of the bud, stripping it off the piece of wood to which it is attached. This must be done with much care, as if the centre or the eye of the bud is damaged in the operation the whole of the work will be nullified. All you have to do now is to carefully insert the bud in the slit prepared for it, taking care that the edges of the bud are well lapped over by the bark of the slit part, leaving the eye of the bud at the end exposed with the leaf-stalk still attached, finishing off by tying down with soft matting firmly, but not too tight. In winter the top of the stock must be pruned back down to the inserted bud, and the growth from this bud for the first year must be protected by tying to a stake fastened to the stock or pushed into the ground.

Peach, Apple and Pear leaves diseased (C. A.).—The leaves from your Peach tree are suffering from the attack of aphides. Syringe or spray the tree with a solution of paraffin emulsion or an insecticide sold as "V 2" at once, again in the course of a week, and again just before the leaves fall. When all have fallen, and before the buds show any sign of opening in the spring, spray with a caustic alkali wash or "V 1." Your Apple trees are attacked by the caterpillars of the winter moth (*Cheimatobia brumata*); at least, that was the only insect I could find on them. Spray the leaves with arsenate of lead or Paris green, and, if the trees have been very badly attacked by these caterpillars, early in October place sticky bands round the stems of the trees and keep them in working order until no more moths are about. These bands should be long enough to go quite round the stem and to slightly overlap. They are best made as follows: Take a strip of calico or some similar material of the requisite length and about 6 inches wide, lay it in a strip

of waterproof paper such as buttermen use, of the same length but rather wider, turn the edge of the paper over the calico, and place the hand with the paper underneath round the stem some 4 feet or 5 feet from the ground and tie it with two strings (at the top and bottom) tightly round the stem so that the moths cannot crawl underneath; then smear the calico thickly with cart-grease in which there is no tar. The object of the hands is to prevent the female moths, which have no wings, from making their way up the stems. If the paper is stout enough, the grease may be put on it without using any calico, but the grease must be kept off the bark. The leaves of your Pear tree are apparently infested by a fungus named *Entomospodium maculatum* (the leaf-scald fungus). Spray with diluted Bordeaux mixture and collect and burn all dead leaves.—G. S. S.

Removing wireworms from viney border (W. D.).—The wireworm as a rule feeds near the surface on surface roots, and the best way we know of killing it is by burying (a few inches deep) pieces of Carrots, Turnips or Potatoes, sticking a skewer through each piece to indicate where they are for daily examination. This, if persevered in, will rid the border in time, as they prefer this food to the roots of trees. No insecticide we know of may be used strong enough to kill this grub without endangering the safety of the roots, but we have known good results to follow an application of lime, soot and guano to the border in driving them away. Mix these ingredients up in equal quantities, say, a gallon of each, and spread fairly thick over the border, having lightly forked it before watering the same copiously in. Vapourite and Kilogrub, if applied according to the directions, ought to effect a clearance.

KITCHEN GARDEN.

Mint Diseased (J. E. K.).—The specimen of Mint you send is badly affected with a deadly fungus commonly called cluster-cups, which also sometimes attacks Anemones. We fear that the only way to stamp it out is to dig up the whole bed and burn every portion of the plants. Then procure a fresh stock and form a new bed as far away from the old one as possible. You may, if you like, try cutting off all diseased growths just below the ground and burning them, then thoroughly spraying the soil and the remaining growths with weak Bordeaux mixture. This will sometimes effect a cure.

Black spots on Tomato fruits (J. M. and also H. W. D., Sussex).—This is a disease from which the Tomato suffers, and is of the same nature as the Potato disease, a fungus well known by its occasional terrible ravages on that tuber. Generally the cause of its attacks on the Tomato is the applying of too much water at the roots and too close and humid an atmosphere in the house in which the plants are growing. There is no cure for the spot once it has attacked the fruits, and the best way is to pluck off and burn all affected Tomatoes. To prevent its spreading give more air night and day, providing a little heat in the pipes at the same time. Water the plants carefully and give them plenty, but never let them be over-soddened at the roots. Take some of the old surface soil away near the stems and replace it with a dressing 2 inches deep of sweet loamy soil, mixing with it a little fresh horse manure. The plants will soon make new roots in this material, and, we hope, soon grow away from the disease.

Mushrooms: Failure in their growth (H. A.).—We think the fatal mistake you made in forming your bed was in the use of droppings alone in its composition. Thus formed it would heat too quickly and violently, and afterwards collapse into a cold, sodden mass of useless dung (for this purpose) with no warmth or life in it. You should have mixed with the droppings at least one-third of its bulk of the short straw litter which always collects with the droppings; this helps to moderate the heat, and also to add to its long continuance. It is difficult even for an expert to grow Mushrooms successfully in the height of summer, either in out of door beds or sheds, and we would advise you to defer beginning until the last week in August. This is too big a subject to deal with in an answer to a question, but we hope to refer to the subject in some detail before the time stated. In the meantime, we would recommend you to buy a very useful work on the subject by John F. Barter, a man with a long life's experience in

the growth of the Mushroom for market. Post free 1s. 2d. Address: J. F. Barter, Mushroom grower, Napier Road, Wembley R.S.O., Middlesex.

French market gardening (E. R. M.).—We have pleasure in giving the names of two market gardens in which the French system of gardening is carried out. There is another establishment in the Vale of Evesham, Worcestershire, of which, however, we have not the address. The Manager, Anglo-French Garden, Thatcham, Newbury, Berks; Paul Aquatius, French Market Garden, Mayland, Essex.

Cauliflowers attacked at the roots (C. West).—I have carefully examined the root of your Cauliflower plant, and cannot find any trace of insects or fungi. The tap root was extremely hard and woody, so much so that it was quite difficult to cut it with a knife, which would point to defect in their cultivation. Perhaps they were checked in their growth when first planted out by the weather. The ants could not have been the cause in any way.—G. S. S.

MISCELLANEOUS.

Climbing Roses for wooden wall (E. C.).—Two fine varieties would be Mme. Jules Gravereux and Françoise Crousse, but if the wall is a dark colour we should replace the latter with Mme. Hector Leulliot.

Destroying Nettles (H. C. B.).—We do not know of any means of destroying Nettles beyond constantly hoeing up the annual varieties and digging out and burning those of a perennial character. The Narcissi bulbs which have been in the ground for some years should be lifted at once, all the small offsets removed, and the large bulbs planted 6 inches apart in September. The smaller offsets would be best planted rather thickly in a nursery bed for a year or two until they attain flowering size.

Suckers from budded Roses (M.).—The reddish shoots sent are from what is known as the "Coster" stock, a stock much used in France to bud Roses upon. You must be on the alert to remove the suckers as soon as you observe them, for they will soon kill a plant owing to their great vigour. The following six climbing Roses would be found very suitable to grow on a south-west wall to flower late in the autumn: Mme. Alfred Carrière, Dr. Rouges, François Crousse, Kaiserin Friedrich, Mme. Hector Leulliot and Lady Waterlow.

Pelargonium leaves diseased (W. Hay).—The Pelargonium leaves look as if they had been badly attacked by aphides and thrips which had been destroyed by the petroleum emulsion, but which in its turn had injured the leaves and caused the spots thereon. Although there are traces of fungus, it appears to us to have originated after the injury, and is therefore not the cause of it. Spraying with a solution of potassium permanganate will check the fungus. Beside this, the piece of stem enclosed was deformed after a manner that is often to be found in some varieties of Pelargonium. The cause of this trouble is somewhat obscure, but it is generally regarded as owing to the varieties most affected having been raised by a long course of in-and-in breeding, thus leading to a weakly constitution. This trouble has caused the bright-coloured varieties of the show section to almost drop out of cultivation, as from their debilitated state it is next to impossible to obtain a satisfactory specimen.

Learning the nursery business (Enquirer). If your circumstances in life will admit of your paying a premium as a nursery pupil, then your best course would be to seek for admission as such into some good nursery at once, such as that of Messrs. Hugh Low and Co., Bush Hill Park, Enfield, Middlesex, or Messrs. Paul and Sons, Waltham Cross, Herts. Of course, there are many other nurseries round London; whether they would take a pupil we do not know. We have assumed that in mentioning "nursery" work you mean an ordinary tree, shrub, fruit tree, greenhouse and hardy plant nursery such as are those named. As an articulated pupil you would not only be taught the business, but you would have ample leisure to become familiar with the names of all the things grown in the nursery, how raised, their cultural requirements and very many other things, for nursery work covers very wide ground indeed. Assuming, further, that you cannot enter a nursery as a pupil, you would have to seek admission as a labourer, and, as you appear to be quite ignorant of the work, we fear a long time would elapse before you could earn wages. But if without means no other course is open to you. It is of little use at your age to get into a private garden, because the knowledge obtained there would be of little use in a nursery. If you could have started in a nursery as a boy you would have gleaned much useful knowledge by this time. As it is, under any circumstances it will need ten years' close application to fit you to control a nursery. It does, indeed, need such a wealth of experience and knowledge. Our leading nurserymen to-day are those who have grown up in the business from childhood.

Names of plants.—B. H.—*Iris fetidissima variegata*; 1, *Rose Bouquet d'Or*; 2, *Rose*, cannot identify.—W. Angus.—*Habenaria biflora chlorantha*.—S. H. Bickham.—*Sedum Cepica*—H. Jones.—1, *Adiantum cuneatum elegans*; 2, the typical *A. cuneatum* or a slight seedling form; 3, *A. c. lawsonianum*.—J. L. Cox.—*Pisum elatius umbellatum* (the Crown Pea). It is not usually grown for culinary purposes.—A. Buckingham.—1, *Larix Leptolepis*; 2, *Quercus lucombeana* (the Lucombe Oak); 3, *Q. lucombeana* var.; 4, *Q. rubra* (the Red Oak).—G. Holykins.—The fruiting specimen is *Staphylea pinnata*; the other is *Polygonum cuspidatum*.

SOCIETIES.

COLCHESTER ROSE AND HORTICULTURAL SOCIETY.

THE annual summer show of the above society was held on the 8th inst. in the Castle Park, the old castle forming a splendid background to the show tents. At the entrance Messrs. R. Wallace and Co. had a delightful exhibit of Water Lilies and rockwork set in growing Grasses and hardy plants. Roses, as one would expect, formed the leading feature, and here was a feast indeed, the Rose giants at home contributing their best, and that well-known amateur Mr. O. G. Orpen taking no less than five firsts in strong competition. The amateur classes were very fine, and the table decorations a striking feature. Fruit was only an average quality, but vegetables were good and plentiful, and the splendid Asparagus staged by Mr. A. J. Harwood was most noticeable.

ROSES.

For forty-eight blooms, distinct, there were some grand flowers, Messrs. B. R. Cant and Sons being first, Messrs. Prior and Son second and Messrs. Frank Cant and Co. third. It will be noticed that Colchester held its own, and this remark applies to most of the open classes.

In the class for eighteen distinct varieties Messrs. B. R. Cant and Sons, Messrs. Frank Cant and Co. and Messrs. Prior and Son won in the order named. For twenty-four garden or decorative Roses Messrs. B. R. Cant and Sons were first and Messrs. F. Cant and Co. second. The Mayor of Colchester's Rose medal for the best Rose in the open classes was taken by Messrs. B. R. Cant with a grand bloom of *Gvonne Vacherot*, a perfect bloom of porcelain white with pink markings. Mr. W. Leggett, Colchester, was first for a grand stand of eighteen single distinct trusses, and Mr. O. G. Orpen a close second. For garden or decorative Roses the Rev. J. H. Pemberton, Havering-atte-Bower, was first with splendid blooms, Mr. O. G. Orpen second and the Hon. W. Lowther-Campsea, Campsea Ashe, Wickham Market, third. Dr. Pallett, Earls Colne, was first in the smaller amateurs' class, and secured the medal for the best Rose other than Tea with a very fine bloom of *Frau Karl Druschki*. Mr. O. G. Orpen took the medal for the best Tea with a magnificent bloom of *Maman Cochet*.

GROUPS AND PLANTS.

The best group arranged for effect was a fine exhibit staged by Mr. T. Hetherington, Borechurch, Colchester, Mrs. Larpent, London, being second. For a table of plants the premier award was secured by Mr. T. Hetherington, Mr. W. Olle being second and the Right Hon. J. Bound, Birch Hall, Theydon Bois, Colchester, third. For the best plants for table work Messrs. W. Diaper, Colvin and Mumford were successful in the order named. For baskets of plants the leading exhibit came from Messrs. Saltmarsh and Sons, Chelmsford, Mr. H. Kettle, Colchester, being second and Mrs. Larpent third.

CUT FLOWERS.

A very large area was devoted to these. Sweet Peas were staged in profusion and herbaceous flowers were good. For twenty-four bunches, distinct, of herbaceous flowers Messrs. R. W. Wallace and Co., Kilmfield Gardens, Colchester, had a very fine exhibit, Mr. A. J. Harwood, Colchester, being a good second and Mr. C. Jacobs, Ipswich, third. In the smaller class the Hon. W. Lowtherby was first with very choice flowers well set up, Dr. F. H. Cooke being second. For Sweet Peas in the large class Mr. T. Cross, Messrs. Saltmarsh and Sons and Messrs. E. W. King and Co. won in the order named. In the smaller class Captain Cantley and Major Buckle won, and also in several other Sweet Pea classes.

TABLE DECORATIONS.

These were a special feature and strongly contested, Roses mostly being employed for the work. The premier award was secured by Mrs. Butcher, Ipswich, with a delightful arrangement of Tea Roses and coloured foliage. Miss Bunting, Tolleshunt d'Arcy, was a close second with single Roses and Mrs. Hitchcock, Witham, Essex, third, there being thirteen exhibitors. Mrs. A. J. Harwood was granted an extra award. The prize for the best *epergue* was awarded to Miss A. F. Harwood, Mrs. Waller-Copford being second.

FRUIT AND VEGETABLES

The best six dishes of fruit were staged by Mr. Andrews, gardener to the Hon. W. Lowther. The best Grapes came also from Mr. Andrews, who staged very well finished Hamburgs. Mr. Osborne exhibited large Muscats, but these were not quite ripe. The last-named exhibitor had the best Peaches, Mrs. Larpent being second. The best dishes of Strawberries came from the Hon. W. Lowther in all the three classes, both for flavour and size. The collections of vegetables were remarkable for quality and required close judging, the premier award being secured by the Right Hon. J. Bound (gardeur, Mr. Bishop), Mr. Andrews being a close second with even dishes, but losing two points only in the Peas.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

THE quarterly meeting of this society was held at the Horticultural Hall, Vincent Square, on Monday evening, 13th inst., Mr. Thomas Winter in the chair. Six new members were elected, making a total of forty-five this year so far. The usual quarterly grants were made to old age members on the benevolent fund. The amount of sick pay for the month was £41 18s. This is rather heavy for this time of the year. The meeting closed with a vote of thanks to the chairman.

THE GARDEN.

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EXPERIMENTS AT THE DUKE OF BEDFORD'S FRUIT FARM.

MUCH has been written in the past about the remarkable results which have been obtained from experiments carried out at the Duke of Bedford's experimental fruit farm at Woburn, under the directorship of Mr. Spencer Pickering and the management of Mr. W. H. Neild. Many statements that have been made respecting these experiments have been on the one hand exaggerated or on the other misunderstood, so that many erroneous ideas have been circulated.

We recently inspected the many trials or experiments now being carried on, and a few particulars concerning the more important of them may be of interest to our readers. We wish it to be distinctly understood that we, nor those responsible for the carrying out of these experiments, do not advocate the general adoption of all the methods that have given good results at Woburn, because on different soils and in different localities the results might not be nearly so satisfactory. So far as we could ascertain, every possible precaution is taken to conduct the experiments on strictly scientific and practical lines, nothing being left undone that is likely to make the results obtained reliable.

It has, of course, long been known that grass growing over the roots of fruit trees is detrimental to their well-being, and elaborate experiments carried out at Woburn fully confirm this. Even where trees were well established before the grass was allowed to grow, the ill effects were plainly seen, and records kept show that the fruit crop was considerably reduced. Where the roots of the trees were grassed over immediately after planting, or before the trees had become well established, the ill effects were even more pronounced. It is not known exactly in what way the grass harms the trees, but it has been conclusively proved that it is not by the exclusion of air nor the extraction of food or moisture.

This summer a series of experiments in spraying trees in full leaf with various neat petroleum spirits have been conducted and the results have certainly been most surprising. One spraying with these spirits was made on June 28 at midday during bright sunshine. It was found that White Rose paraffin, while killing all insect life, was not injurious to the foliage. Motor and other lighter spirits damaged the leaves very much, as also did oils heavier than

White Rose, such as solar distillate. In the former case the damage was visible within half-an-hour of the spraying, but in the latter it was not noticeable for several days. Other sprayings made with the same oils at 6.30 p.m. in damp weather gave similar results.

Manuring experiments carried on during the past fourteen years have been rewarded with remarkable results. Apples, for instance, of similar varieties, of the same age, and given similar treatment, except as regards manuring, proved that the manure applied during the last fourteen years has done no appreciable good. In each instance a normal plot is retained and this has artificial manure equivalent to twelve tons of animal manure to the acre annually. Other plots are given artificial manures equivalent to an amount of manure under or over this quantity, and others again are given natural manure over or under the twelve tons per acre. Other plots had no manure at all. The records kept for fourteen years past show that none of the plots during that time have varied more than 2 per cent. or 3 per cent. in their crops. On a light sandy soil elsewhere similar experiments have proved that a normal dressing of manure was beneficial.

Gooseberries at Woburn gave quite different results. Some bushes planted fourteen years ago have been the subjects of experiments in manuring ever since. Some have had no manure and they have practically died out; others have had twelve tons of manure to the acre each year and others, again, thirty tons to the acre. The amount of fruit in the last two instances has not varied much, but where the thirty tons per acre were used the bushes have made much more wood. Artificial manures used at rates equivalent to those of the natural manures have given very little better results than no manure at all, the bushes having almost died out. In the case of Strawberries artificial manures and animal manure have given equally good results.

Pruning is a subject that is often much discussed. At Woburn the experiments have proved that in the case of newly-planted trees it was best to cut them back before the buds burst. Those that were not pruned until a year after planting had only produced half the crop over a certain number of years as compared with those pruned the first winter after planting. Some trees planted ten years ago have never been pruned since, others were pruned at planting time and have not been touched again, some have been lightly pruned annually, and some have been cut severely every year. The trees that have had the least cutting have given the best and heaviest crops, but the growth of those not pruned at all is too dense, and, in the case of some varieties, rather straggling. Most of the

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

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trees experimented with were of bush form on the Paradise stock.

Planting has long been regarded as an operation that needs a considerable amount of care if good results are expected, yet the experiments at Woburn are quite in opposition to this. All sorts of planting have been tried, and the best results have attended what we should term a very bad method. Small holes, just large enough to cramp the roots into, were made, and after inserting the roots the soil was rammed quite hard around and over them. Trees planted thus have given better results than those planted in orthodox fashion, although for the first six months after planting growth was not so rapid. The growth of these trees has averaged nearly 50 per cent. more than from those planted in the usual way.

One more experiment must suffice for the present. Some small nursery stock of Apples infested with woolly aphids had to be dealt with, and it was found that the simplest, safest and most efficient method was to immerse the plants, roots and all, in water maintained at a temperature of 115° Fahr. for ten minutes. We give the above results of experiments so that readers may hear both sides of what have long been debatable points, and we have no possible reason for doubting their accuracy. The Duke of Bedford in financing this experimental station is doubtless doing a work that has long been needed, and, although the experiments and results are in many cases in opposition to generally-accepted ideas and practice, they are, at least, worthy of consideration by all those engaged in the culture of hardy fruit.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

August 4. — Royal Horticultural Society's Exhibition of Flowers and Fruit, Vincent Square, Westminster; 1 p.m. to 6 p.m.

"The Garden" Flower Show.—At the time the paper is going to press, the flower show organised by THE GARDEN is being held in the Royal Horticultural Society's Hall in Vincent Square. The entries have exceeded our anticipations and many beautiful collections are staged, especially in the classes devoted to hardy flowers. It is impossible to give a report of the show this week, but a full account will appear in our next issue.

Hedgerley Flower Show.—A pretty village show took place in the grounds of Mrs. Stevenson, Hedgerley Park, near Stoke Poges, last Wednesday. There are few sweeter places in England. It was one of those flower shows with the village sports, which have such an influence for good in out-of-the-world corners where there is little to interest the inhabitants.

Midland Daffodil Society.—The general meeting was held at Birmingham on the 20th ult. Professor Hillhouse presiding. Mr. E. M. Crosfield was elected president for 1908-9. The new show classification of Daffodils as compiled by the Royal Horticultural Society was adopted as the basis of the 1909 schedule. The accounts showed a satisfactory balance of nearly £70. Mr. R. Sydenham was re-elected as treasurer, and the Rev. Joseph Jacob and Mr. Herbert Smith as joint secretaries.

Scottish Horticultural Associations' excursion.—A party of between twenty and thirty members took advantage of the opportunity afforded by the annual excursion of the Scottish Horticultural Association on the 18th ult. to visit Drummond Castle, Crieff, in conjunction with the Dundee and Broughty Ferry Horticultural Associations and the Bridge of Earn Horticultural Society, the whole forming a good-sized company. The noted gardens of Drummond Castle were viewed with much pleasure, and the members were impressed with

the excellent manner in which they are maintained by Mr. J. Jeffrey, Lord Ancaster's gardener. The gardens have been described so frequently that it is unnecessary to give further detail, but it will be sufficient to say that all the old distinctive features have been maintained and a number of improvements effected, apart from the formal gardens, within recent years. Splendid weather was experienced.

The fruit trade in Perthshire.—The prospects of this year providing a profitable one for the Perthshire fruit-growers are most unpromising, the low prices which are being obtained for Raspberries being the cause of great disappointment. Some Raspberries are being offered retail at prices so low as to be unprecedented. There are signs, however, that better prices may soon prevail, although much uncertainty exists. Apart from the cost of picking and general cultivation, the high rents paid for suitable fruit farms make the present situation an anxious one for many fruit-growers.

PRIZES FOR READERS. AUGUST.

THE BEST ROSES FOR AUTUMN FLOWERING.

- A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF-A-GUINEA

are offered for the best essays on the above subject, with hints on the management of the hybrids and varieties mentioned. The object of this competition is to encourage the cultivation of the Rose for the enrichment of the garden in the late months of the year.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The essays must reach this office not later than Monday, August 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinion expressed by correspondents.)

The Tulip Tree (Liriodendron tulipifera).—The notes in THE GARDEN for July 18, page 348, on this beautiful tree may perhaps be supplemented by the following additional notes. With regard to the beauty of the trees there can be no two opinions. Nicholson, in his "Dictionary of Gardening," describes it as "a splendid tree, resembling an erect growing Plane in habit." It may not be generally known that the genus Liriodendron is Monotypic, that is, having only one species, namely, tulipifera. Though the tree is a favourite one in English plantations, it is said not to produce its flowers before the age of twenty to thirty years. Some years ago a very fine tree grew in the Royal Gardens, Kew, not far from the Cumberland Gate. Near the base of the trunk a large burr had formed, which, on being cut through,

was found to present no special character of figure, the ingrowing bark being interwoven with the knots which would unfit it for inlaying purposes. Some examples of these burrs or veins do, however, show a fine figure which would quite fit them for furniture work. It is, however, for the plain, even grained wood of the tall trunks that the commercial value of the Tulip Tree has been established, under the various names of American Whitewood, Canadian Whitewood, Canarywood, Yellow-wood or Yellow Poplar. The wood is now very extensively imported into Liverpool from New York for cabinet work, joinery, turnery and many other purposes. For ebonyising it is said to be peculiarly adapted in consequence of it taking the stain well. The hulk of the wood when freshly cut is white, and is very easily worked, but the yellow wood, hence the name Canarywood, is somewhat harder, and is said to be produced by trees growing in moist, low-lying ground.—JOHN R. JACKSON, *Claremont, Lympstone, Devon.*

Rose Monsieur Tillier.—The Rose mentioned by Mr. Thomas Arnold on page 358 is Monsieur, not Madame, Tillier. It is a Tea Rose, and was raised by M. Bernaix of Lyons in 1891. I always regret that it is not better known and more generally grown in England. I first saw it in the Paris Exhibition of 1900, and have grown it largely ever since, as it is never out of flower, and its singular and brilliant colour, described by M. Bernaix as "carmine red, shaded with brick red," makes it a most conspicuous object in the garden. No one seems to know it, and everyone admires it.—ROSE G. KINGSLEY, *Keys, Eversley, Winchfield.*

The seasons when plants flower. As one who reads a good deal on gardening matters, both books and periodicals, and sees most of the trade catalogues, and tries to keep abreast with the times, it has often struck me that in describing flowering shrubs and plants in general, and herbaceous plants in particular, how seldom the time or month of flowering is given. All other information is there. The name (and often the synonyms), history, pedigree, habitat, height, colour, shape and growth of flowers, and the best way of cultivating and increasing the stock, its utility and so forth are described, but never a word about the month in which it may be expected to flower. To those who require their gardens to be looking their best at a particular time of the year it is an important matter to know. Personally I always want my garden to be at its best and a wealth of colour in every direction through May, June and July, and I sacrifice a great deal to achieve my ambition. Every flower has its season, sometimes a long one, but generally very brief, and the knowledge of these seasons is a thing that a good gardener must make himself acquainted with. Many people do not enjoy the country till rather late in the year, and so their appetite for garden colour is supplied by the beautifully-laid-out parks, and then on retiring to the country they hope and expect to find their own private places at their best in July, August and September. How often they are disappointed and find that the Rose garden is bare and the herbaceous border untidy, overgrown and a waste, and little left to see except a few Michaelmas Daisies, Dahlias and Chrysanthemums, and the Sweet Peas a tangled mass of seed-pods. Others like to enjoy their gardens in the spring and try to make a display with Hyacinths, Daffodils and Tulips, and take an immense amount of trouble over the rock garden. It is not everyone by any means who resides in the country that enjoys his garden all the year round, but even those who do like to know the season of the flowering of the plant or shrub of which they read, and perhaps hesitate to purchase because they do not know when it flowers or what to plant alongside of it. I know personally that this fact has often proved a quandary to me till I had to buy my experience, and waste a couple of years perhaps. One might

write *ad lib.* on this subject, but I should just like to throw out a hint to those who write on these subjects.—A. E. S.

Iris Kæmpferi.—Lovers of these beautiful Japanese Irises would have experienced a great treat could they have seen the superb show made by them in the Royal Horticultural Society's gardens at Wisley recently. Not merely in scores or hundreds, but literally in thousands were they to be seen, and all in contiguity to moisture. On the margins of the small ponds close to the wild garden they have bloomed superbly, so also on the margin of the large pond on the other side of the grounds, and then they fill the whole of the small stream which runs for several hundred feet through the grounds. Here they seed freely and reproduce themselves in that way. Should any inferior form present itself it is pulled out. That these beautiful flowers do thus seed shows how thoroughly they have acclimatised themselves at Wisley. It would be a kindly act on the part of the council of the society if it authorised the garden superintendent to furnish notice through the gardening papers beforehand as to when any specially attractive feature at Wisley would be at its best.—A. D.

Lupines at Trusley Manor.—The Lupines here make a grand show in rough shrub beds; of course, it is the quantity that makes the effect, which from a distance is charming. I planted them some three or four years ago, the plants being raised from Carter's mixed seed in the spring. The beds are very large, the plants are allowed to seed themselves and young ones come up in hundreds. We have them in flower nearly the whole year, as the seedlings flower the same season. The colours vary much, from pure white to dark purple.—E. CLEMENTS.

SWEET PEAS AND OTHER FLOWERS AT SUTTON'S.

NO matter what time of the year one visits the extensive trial grounds of Messrs. Sutton and Sons at Reading there is always something of interest to be seen, but it is perhaps during the summer and early autumn months that the grounds are most attractive, as then the numerous annuals and other hardy flowers, for which the firm is so famous, are at their best. We recently inspected the various stocks of flowers there, and to mention all the good things seen would occupy several pages.

Sweet Peas naturally came in for a large share of attention. In addition to all the good standard varieties, which were well represented, some trial rows, the results of various crosses, were most interesting. Readers who are interested in these flowers will all remember the beautiful variety known as Sutton's Queen that the firm exhibited last summer, and of which we gave a coloured plate some time ago. Apart from several other merits that this Sweet Pea possesses, it can claim to be the precursor of a new race, noted particularly for the graceful form, delicate colouring and large size that the flowers possess. We saw quite a number of rows, the result of crossing Sutton's Queen with other varieties, and in practically all of them the parentage of this variety was highly manifest. Some exceedingly pretty flowers were among them, and if they can only be fixed the Sweet Pea world will be

considerably enriched. Gladys Unwin is another sort that has been employed extensively for crossing, and this work has also given some interesting and good results.

Pansies and Sweet Williams are specialities at Reading. A bed of the former, from seeds sown last autumn, were still producing good flowers, a plot occupied with spring-sown specimens just coming on to take their place, so that by sowing twice in a year flowers can be had the whole summer through. It is surprising how easily a display of these charming plants can be obtained from a packet of seed, no glass being required at any time in their career. Sweet Williams are old-time favourites that appeal to all, especially as they have been so much improved during recent years. Sutton's Giant White is a type that attracted our attention. The flowers are pure white, with smooth edges, the huge trusses of flowers reminding one forcibly of Phloxes. Many of the individual flowers easily covered a florin. The firm's large-flowered mixture contains some beautiful varieties with even larger

pink shades so much desired. Of the Opium Poppy varieties, The Cardinal, a bright scarlet sort, and White Swan were a pair that we liked very much. Both have large, beautifully fringed flowers which are produced in abundance.

Clarkias, again, are old favourites that have gained much by careful selection and crossing. In the elegans section we saw a beautiful double variety with rich salmon scarlet flowers that will be a most useful and welcome addition when it is obtainable. Double Salmon is much paler in colour, but a good variety all the same. Brilliant Rose in the integripetala section is really a lovely thing, the dwarf plants being freely clothed with flowers that do not contain any of the objectionable magenta hue found in older sorts. These flowers are excellent for cutting, as also are the beautiful annual Chrysanthemums. Morning Star, Evening Star and Eastern Star are a trio that no garden can afford to be without. The first-named has primrose-coloured flowers, with a deep yellow zone at the base of the petals and a rich yellow eye. Eastern



LUPINES AMONG SHRUBS AT TRUSLEY MANOR, ETWALL, DERBYSHIRE.

flowers, while Sutton's Pink Beauty is a variety with medium-sized flowers of graduating shades of salmon pink.

Sutton's hybrid Nemesias are now well known, the vivid colours and rather compact habit rendering them excellent for massing in beds. Magnificent plants that we saw were the result of seeds sown where the plants were standing. It may not be generally known that these can be easily and successfully lifted when in bloom and potted up for conservatory decoration.

Godetias are hardy annuals well known to most people. A dwarf form of the white Duchess of Albany was particularly good, and a long stretch of that lovely variety, Satin Rose, was most effective. Good as this variety is, Sutton's Dwarf Pink is even more attractive. Crimson King is a deep crimson variety that will appeal to many.

Poppies, despite the transient character of the flowers, are still favourites with us all, and Messrs. Sutton's strain of the beautiful Shirley varieties is particularly rich in those soft salmon

Star is similar, except that it has a prominent dark eye. Evening Star is a uniform deep rich yellow colour. Anchusa Annual Blue is also a plant for every garden where cut flowers are needed. The flowers are practically the same shade of vivid blue as the well-known *Anchusa italica*.

Californian Poppies, as the *Eschscholtzias* are popularly called, are just the things for rather poor soil, and they may now be had in a variety of colours. Mandarin is a beautiful rich orange sort that is now fairly well known, Ruby King has flowers of the prettiest ruby shade and Rosy Queen is paler. Miniature Primrose is a small flowered variety specially suitable for the rockery, where it should prove a real gem. Sweet Sultans, Lavateras and Malopes were doing remarkably well. The former is readily obtained in bright yellow, pure white and various shades of lavender blue. We have never seen a prettier Mallow than *Lavatera rosea splendens*. This has the most delicate rose pink flowers imaginable and forms a most exquisite plant. For poor soil

Malope grandiflora is the annual. The strain we saw at Reading was exceedingly good and the plants remarkably floriferous.

Stocks are still grown extensively, their sweet scent rendering them quite indispensable. Messrs. Sutton have nearly discarded the old Brompton, which is notorious for the large percentage of single flowered plants produced, in favour of a strain known as the branching Brompton. The plants of this branch near the ground and each shoot produced a fine truss of flowers, mostly doubles. Spring bedding Stocks form a race of hardy subjects specially suitable for bedding purposes. They are obtainable in various colours and also pure white. East Lothian and the ordinary German or Ten Week Stocks were also seen in good condition, and that beautiful little white flowered variety known as Sutton's All the Year Round, was quite at home in an open bed.

A selected strain of the Shasta Daisy growing beside the ordinary variety was most interesting. It has much larger and more graceful flowers and is even better adapted for cutting than the type. Some hybrid Lupines, the result of crossing *Lupinus arboreus* with *L. polyphyllus*, were of special interest, many of the flowers being of a most pleasing shade of yellow. Those on the look-out for uncommon plants should secure some of these and also the pale yellow-flowered Foxglove known as *Digitalis Primrose Yellow*. The name aptly describes the colour, which, of course, is quite unique in these plants. *Antirrhinum Carmine Pink* is a Snapdragon that will in future find a place in our garden. The colour is the most taking we have ever seen in these old favourites. If space permitted we could easily double the above list of good things seen, but we must just mention some fine sample lawns from seed sown last autumn. The turf of these is now quite close and already possesses that soft carpet-like texture so much desired.

In a range of glass houses we noticed a magnificent strain of the frilled tuberous *Begonias*, the many colours of which provided an optical feast that was worth travelling far to see. No expense or trouble are spared by Messrs. Sutton to ensure that their stocks are as true and good as human ingenuity and experience can make them, and the success obtained from their seeds fully justifies this rigid selection.

THE ROSE GARDEN.

TEA ROSE MOLLY SHARMAN CRAWFORD.

WHITE MAMAN COCHET has long held a proud position as a white exhibition Tea Rose, although it is really a pale cream variety. Molly Sharman Crawford is a better white, and will doubtless find its way among the best exhibition Tea Roses before many years have passed. As will be seen by the illustration, it has superb form and depth of petal. It was one of four novelties shown by Messrs. Alex. Dickson and Sons of Newtownards, County Down, at



THE NEW WHITE TEA ROSE MOLLY SHARMAN CRAWFORD, EXHIBITED BY MESSRS. ALEX. DICKSON AND SONS AT HOLLAND PARK ON THE 7TH AND 8TH ULT. (Natural size.)

Holland Park on the 7th and 8th ult., when it received an award of merit.

THREE GOOD ROSES.

ROSE RENE ANDRE.—This, one of the oldest of the wichuraiana group, has been remarkably fine this year. I was surprised at the quality of the blossoms which this Rose has

yielded; some were fully 4 inches across. It may readily be imagined what a beautiful picture a young pillar plant bearing such blossoms made, for the colour is a most delightful mixture of pink, yellow and orange, tints it obtains from *L'Idéal*, the pollen parent of the variety. On a tall stem this grand sort is seen to much advantage. The taller the stem the better, for its vigorous growths will soon reach the ground. Ordinary standards of René André are also most interesting, as indeed all the tribe are; but the absence of a perpetual flowering habit detracts from their usefulness, although we obtain stray blossoms on some of the sorts right through the season. Paul Transon is very good as an autumn Rose and it yields splendid large flowers equal to René André. *Debutante* will also blossom a second time, and its lavender-coloured clusters are always welcome although not very durable.

ROSE GROSSHERZOGIN ALEXANDRA. This will be a fine decorative Rose, perhaps surpassing *Kaiserin Augusta Victoria*, which it resembles, for its growth is decidedly more vigorous. This latter will grow well enough in some gardens, in others it is a failure; but the variety under notice should grow anywhere. There is not the exquisite form which we obtain in the older Rose, as the open flowers come rather irregular in shape, but the buds and half open blooms are pretty. It reminds one much of the old Rose *Narcisse*, only that the blossoms are larger. As a standard it is fine, making a good spreading head which cannot fail to be very effective when established two or three years. *Grossherzogin Alexandra* is reputedly a cross between *Merveille de Lyon* and *Kaiserin Augusta Victoria*. There is something about the old Rose *Merveille de Lyon* that enables it to produce grand seedlings. It was from this Rose crossed with *Caroline Testout* that Herr Lambert obtained that wonderful Rose *Frau Karl*

Druschki. It would seem that all the *Baroness Rothschild* tribe (of which *Merveille de Lyon* is a conspicuous variety) is capable of yielding great novelty when hybridised. It is said that the late Mr. Henry Bennett obtained that great production of his, *Her Majesty*, by crossing *Mabel Morrison* (a sport of *Baroness Rothschild*) with the yellow Tea Rose *Canary*; if so it is a wonderful cross. But all who are engaged in the fascinating work

of cross fertilising the Rose know full well the wonderful divergence there is in the results obtained.

ROSE HIAWATHA.—The lovely golden centres of the half-open flowers of this Rose give that marvellous distinct character to the variety that will place it far ahead of other crimson ramblers. There is an elegance about the beautiful clusters that is wanting in such heavy masses of colour that the old Crimson Rambler produces, and I can almost imagine this newer variety displacing the older sort to a large extent. It may not be generally known that Hiawatha makes a delightful bedding Rose if its growths are supported by about 3-foot Bamboo canes. The shoots may be shortened back to this height when pruning, and they will be covered with glorious wreaths of blossom that in the distance appear like some giant scarlet Verbena. Such plants will produce a number of running growths from the base, which may next year take the place of those now flowering. Hiawatha makes also a delightful standard and half standard, and, of course, it is *par excellence* as a weeper on a 6-foot stem, but as an ordinary standard, in which form it is more easily procured, it is a real boon to our gardens in mid-July, providing that bit of colour needed through the waning of many of the high-coloured Hybrid Perpetuals. It is this later flowering habit that renders both it, Lady Gay and Dorothy Perkins so valuable, and when we have the white Dorothy well established, and perhaps a yellow Dorothy, there will be no need to complain of the want of colour on our pergolas and arches in the August months. The flowers of Hiawatha are so wonderfully durable, which places it at the head of single Roses, for one great fault of Carmine Pillar and Jersey Beauty is the transient nature of their blossoms. Another fact worth noting is that it seems indifferent to rain. P.

THE KITCHEN GARDEN.

WINTER GREENS FOR AMATEURS' GARDENS.

THE number of plants of Winter Greens that should be put out depends upon the size of the garden and the number of persons constituting the household. At the present time amateurs will be busy filling up vacant spaces, occasioned by the clearing away of Pea and Bean haulm and the lifting of Potatoes, with plants of Winter Greens. Due allowance must be made for losses through accident and weather conditions, especially frosts.

The number of plants necessary for the supply of six persons from November to June, inclusive, as here given, will prove a reliable guide in the case of fewer or more persons to be provided for. Self-protecting Broccoli, 150 plants; these will be the first to turn in along with Brussels Sprouts, of which 200 plants should be grown. Savoys are also useful for autumn and early winter gathering, and they are always sweeter after being exposed to slight frosts; 250 plants will be required. Broccoli should be planted for gathering from Christmas to June, early, medium and very late varieties being selected for this purpose; 150 plants of each variety, or a total of 450, should be put out. Cottagers' Kale: Of these 100 plants will be sufficient, as nearly all the leaves may be used; and the same number of Sprouting Broccoli will answer the purpose. The best of the produce may be used, and will prove quite adequate for the servants also and visitors. If space does not admit of the planting of the above numbers without undue crowding, it would be better to put in fewer plants and allow them sufficient room to grow in. The soil should be very firm and not too rich, as hardily-grown specimens withstand severe weather better than those with soft, sappy stems and extra large, succulent leaves. Avon.

THE FLOWER GARDEN.

SPARAXIS IN THE OPEN.

ONE of the chief advantages possessed by dwellers in the South-West is that they are able to grow in the open air plants that in the colder districts have to be cultivated under glass. Numbers of plants, natives of South Africa, New Zealand, Australia, Asia Minor, South America and other portions of the globe, may be seen in as vigorous and free-flowering a condition as if they were growing in their natural homes. The bed of Sparaxis illustrated has been planted ten years and has never been disturbed or manured, yet it never fails to produce a profusion of blossom in each succeeding May. In the same garden it is naturalised on a steep, grassy bank, where it is apparently as happy as its neighbours the Narcissi. Ixias also make a brave display in the spring, the lovely *I. viridiflora* being especially charming.

Other bulbous plants that do well in the district are the Zephyranthes of several species;

Bluebell Creeper, is already in full flower, with self-sown seedlings springing up around it; and around the verandah *Mandevilla suaveolens* is clambering, with tiny buds showing everywhere that in August will have perfected into clusters of scented white flowers. *Cassia corymbosa* will soon be a sheet of deep yellow, and will remain in beauty until late autumn; and in September the South African *Leonotis Leonurus* will be decked with whorl above whorl of scarlet flowers, some of the whorls over 14 inches in circumference. Pages might be written of the tender climbers, shrubs, trees and plants that are absolutely at home in the South-West, but for the present these few short notes must suffice.

South Devon.

S. W. FITZHERBERT.

TWO BEAUTIFUL ANNUAL FLOWERS.

I do not think many people realise what a charming annual is the Clarkia, both for beautifying our borders and for decorating the house. The best kinds are Salmon Queen and the double and single White. The colour to avoid is that maenta shade which is often described



A BED OF SPARAXIS IN MR. FITZHERBERT'S GARDEN.

the blue Chilean Crocus, *Tecophylaea cyanocrocus*, which perfects its gentian blue blossoms in the early spring; *Cypella Herbertii*, with apricot yellow, *Tigridia*-like flowers, borne through several months; the lovely blue *Marica cærulea*; the stately *Watsonia Ardernei*, with tall, white flower-spikes often nearly 6 feet in height; the *Cyrtanthus*, including the white *C. McKenii* and the orange Flambeau; in September the Guernsey Lilies, *Nerine Fothergillii* major, glowing scarlet, and the new pink *N. Bowdenii*; the lovely scarlet *Habranthus pratensis*, from Chili; the crimson *Jacoea Lily*, *Sprekelia formosissima*; and occasionally *Bessera elegans* and *Milla biflora*.

Of rare and tender non-bulbous plants that flourish in Devon and Cornwall an extensive list might be given, but it must suffice to indicate a few. The giant Honeysuckle, *Lonicera hildebrandtiana*, is now covered with buds that in August will develop into blossoms 6 inches in length and 5 inches across the mouth. *Buddleia Colvillei* is blooming profusely, and *Abelia floribunda*, both against walls and in hush form, is a sheet of cherry rose. Soon *Mutisia decurrens* will bear its large flowers of glowing orange, and *Bowkeria gerardiana* its white Calceolaria-like blooms. *Sollya heterophylla*, the Australian

in the seed catalogues as "rose," which, when purchased, leads to much disappointment. Clarkia can be sown in March and April, either where it is to flower or the seedlings transplanted when 1 inch or so high. The great thing is to allow the plants plenty of room as they are of a branching growth. Twelve inches each way is not too much. One gets no idea of the beauty of this annual when hundreds of seedlings are crowded into a small space. A large clump of Salmon Queen Clarkia, backed by perennial Delphiniums, is a most striking sight in the border. Clarkias ought to be sown two or three times for succession, as I always find they are valuable plants for cutting and charming for the dinner-table arranged with *Gypsophila elegans*.

Another delightful annual is Sutton's Rose Larkspur; it comes into flower rather later than the Clarkia, and is really at its best at the end of August and September. It is invaluable for cutting, lasting well in water. I have always found that it is somewhat difficult to protect the young seedlings from the depredations of the slugs, so I sometimes sow the seed in boxes and transplant them when large enough into their permanent quarters, allowing plenty of space between the plants. P.

THE FRUIT GARDEN.

FRUITING VINES IN POTS.

THE Vines shown in the accompanying photograph are two year old canes, that is to say, they have been cut back once, and each cane is carrying from five to six bunches or about 8 lb. of Grapes.

To produce canes capable of carrying such a crop the method to pursue is as follows: The very strongest dormant eyes are chosen when pruning the established Vines. The eyes or buds are prepared practically the same as one would prepare a Rose-bud for budding purposes, the only difference being that the old wood is left in the bark and not drawn out as in the case of the Rose. Some gardeners do not split the wood in half as above described, but insert it whole in pieces about 1 inch in length; but my method is the first-named, because there is a greater surface from which roots are emitted and the buds therefore get a stronger start, which is important.

When prepared, and the best time to do this is January, the eyes are laid thickly in saucers of sand, or placed singly in small pots, and pressed in so that the bud is just level with the surface of the soil, and eventually watered in. The saucers or pots should then be plunged into a bottom-heat of 80° with a top temperature of from 65° to 70°. As soon as roots begin to grow well each eye should be potted singly and must suffer no check in this respect. They must afterwards be potted on as required until 7-inch or 9-inch pots are in use, these sizes being found sufficient for the first year. The soil used should consist of the best rich yellow loam procurable, a little lime rubble, wood ashes and either bone-meal or some kind of Vine manure. As the canes begin to ripen off they should be allowed plenty of air and the benefit of all the light and sunshine possible until the leaves begin to fall.

Some of the strongest of the canes will carry a crop the next season, but my practice is to cut all down to three or four eyes or buds. This operation should be performed as soon as the canes have ripened off thoroughly, for if it is

delayed they commence to bleed as soon as they are brought inside to start, and this bleeding is very difficult to stop, hence a great portion of the vitality which should go to support the resulting growths is lost.

As soon as the buds of these cut-back plants have burst into growth the weakest should be rubbed off and the plants repotted, shaking off a large portion of the old soil and potting into such sized pots as will just hold the roots, and again potted on as required into 10-inch or 12-inch pots, using a compost as advised previously. They should be very liberally fed with some good Vine manure specially prepared for building up strong-wooded, short-jointed fruiting canes. I have found Bentley's Vine Border Compound excellent for this purpose, especially the fine grade, this being the more easily assimilated by the roots. This feeding should be withheld as the canes begin to ripen, when they may be placed in the open air and exposed to the full benefit of the sun.

It is my practice to stop the cane when growing to the required length, say, from 6 feet to 8 feet, and so dispense with any pruning back and thus obviate the danger of bleeding. The Vines are brought into a cool house or into a temperature of from 45° to 50° about November to start. At this time water must be very sparingly applied, and indeed great care must be practised in this matter for some time. As the foliage growth is greatly in advance of root action, no manure should be applied until the roots are active, otherwise the soil becomes sour and the roots decay. A capital position is a shelf or narrow stage over hot-water pipes, training the rods up the roof. The temperature should be increased with the progress of growth. As soon as they commence to make new roots a turf may be placed under each pot (the drainage hole having been previously made larger), and the roots will make their way into this. Narrow strips of turf should also be laid around the rims on the tops of the pots. This gives more room for watering, and also soon becomes filled with roots.

They will require copious supplies of water and liberal doses of manure. The finest manure

I have used for swelling up the berries and giving them a perfect finish is Le Fruitier; but too much care cannot be taken in the application of this and in watering; carelessness in these matters will spoil the best crops. Retain as much foliage as possible, for in the case of black Grapes the shade is necessary to give them a good colour and finish. Through a bright spell of sunshine it may be necessary to shade them with canvas or other artificial covering. Artificial manures should be withheld as the Grapes approach ripeness. Their whole general treatment will be similar to that of permanently planted Vines, but more care must be exercised in the matters which have been specially mentioned.

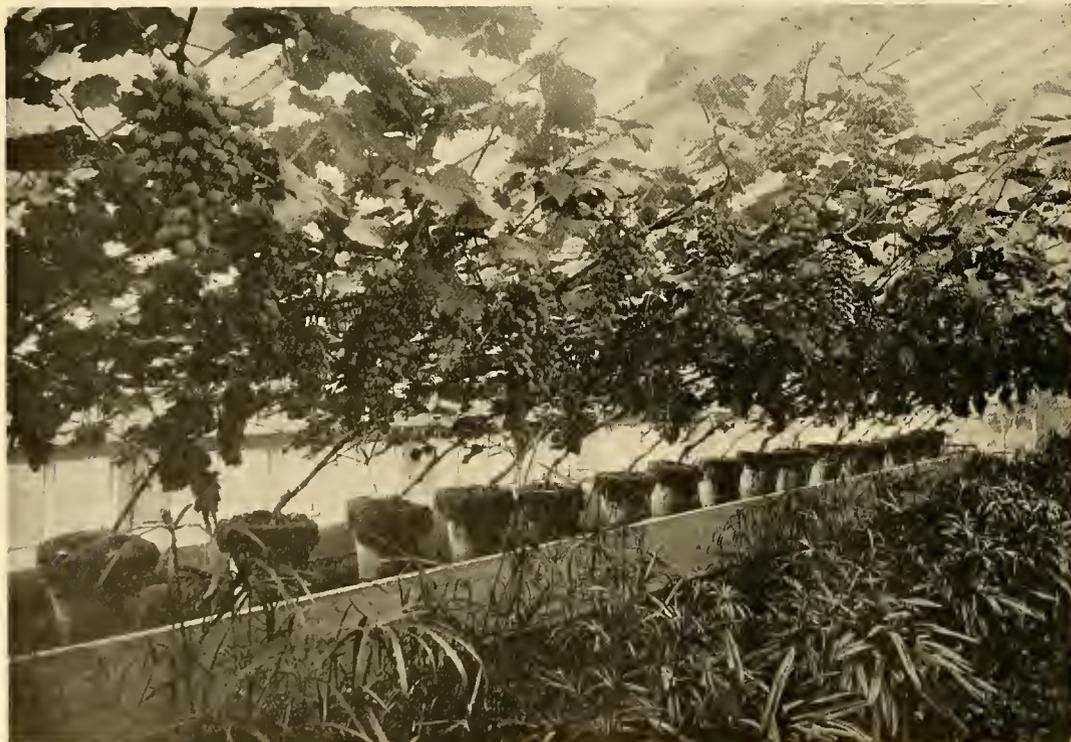
If the Vines are wanted for decorative purposes, they can be grown erect and staked out, or can be trained to any wire support. If it is wished to have them in smaller pots for table decoration, all that is necessary is to split a 6-inch pot in half, making this secure around the cane at the desired height, preferably at a joint where adventitious roots are emitted, filling up with soil made moderately firm. This pot when in position has the appearance of the cane growing through it, and soon becomes filled with roots. When the fruit is ripe and the Vine required, the cane can be severed just below the pot and the growing Vine potted in the desired size and used for decoration.

The Vines in the photograph are growing in 10-inch pots, and the varieties are Black Hamburg, Muscat Hamburg and Grizzly Frontignon. Other varieties which may be grown with equal success are Muscat of Alexandria, Foster's Seedling, Black Alicante, Madresfield Court and Royal Ascot. These Vines could be used for planting out, but our usual practice is to raise a batch each year. This is the most certain way of ensuring a crop. The photograph was taken during June of this year. Such plants are useful for many decorative purposes, and a well-fruited specimen is always interesting and attractive. Many people like to gather their own Grapes, and when these pot plants are available the operation is a very simple one, as the Vines can be taken to any place where they are required.

Ladies especially greatly appreciate this. Of course, the plants must be kept scrupulously clean when required for decorative purposes.

F. C. STAINSBY.

Brocklesby Park, Lincolnshire.



POT VINES AS GROWN BY MR. F. C. STAINSBY AT BROCKLESBY PARK, LINCOLNSHIRE.

COLOURED PLATE PLATE 1353.

ORIENTAL POPPIES.

DURING recent years a great deal has been done in the improvement of the handsome Oriental Poppies, as the varieties of *Papaver orientale* are popularly called. Among the best of the new sorts is that known as Jennie Mawson, raised by Messrs. Mawson Brothers of Windermere, and of which we give a coloured plate. The flowers of this variety are held erect on stout stems, and a clump makes a most welcome addition to the hardy plant border. Unlike most Poppies, the variety now under notice travels well, the blooms that were exhibited before the Royal Horticultural Society on June 25 last year having been exposed to heavy rains before cutting, yet they were staged in such excellent condition as to secure an award of merit from the floral committee.

TREES AND SHRUBS.

AUTUMN-FLOWERING HEATHS.

THE various autumn-flowering Heaths are responsible for almost as effective a display during the latter half of the year as the spring-flowering sorts produce during the earlier season. In some instances the colouring is richer and more striking than is the case with those which bloom from February to May; but the plants are shorter and denser in habit than such species as *Erica lusitanica*, *arbores*, *mediterranea* and *australis*, and they do not possess the striking personality of those plants. When, however, large areas are clothed with species such as *cinerea*, *vagans*, *eiliiaris* or *Tetralix*, they form a glorious feature, and last in good condition from late July onwards for two or three months.

Some of those most suited for garden work are really British plants, and while some are found in restricted districts only, others are prevalent in almost all parts where Heathworts thrive. Selection has, however, done much in the provision of well-marked forms, and while in a state of nature a species may possess but one prevailing colour, the horticulturist possesses forms which show numerous colour changes.

As is the case with the early-flowering sorts, the autumn ones are most effective when planted in large informal masses, each mass being formed of one sort only or composed of a mixture of several species and varieties. Where room is no object large areas may be given over to such sorts of *E. cinerea* or any of those previously mentioned; but for small gardens a very pretty bed may be made up of a mixture of the various sorts, half-a-dozen or so specimens of each being grouped together. No elaborate cultural details are required providing soil fairly free from lime is given, with, if possible, a little peat at planting time. When established it is a good plan to go over the plants in spring and remove the old flower-heads; this has the result of keeping the plants dwarf.

The largest growing of the autumn-flowering section are *E. multiflora*, *E. stricta* and *E. vagans*. The latter is well known under the common name of Cornish Heath, and is met with in a wild state in the southern parts of Cornwall, being very abundant in the immediate neighbourhood of the Lizard. It is found from 1 foot to 3 feet in height, and from July to October may be found bearing a profusion of pink flowers. There is a variety called *alba* with white flowers, while the varieties *grandiflora* and *rubra* are distinguished for their floriferous character and dark coloured blooms respectively. *E. multiflora* is somewhat similar in appearance, but it is more floriferous than the typical *E. vagans*. Like the foregoing, *E. stricta* is a South European plant. It is less dense in habit and more upright. The flowers are red. Although it is stated to be somewhat tender it stands uninjured at an elevation of 1,100 feet in Derbyshire. Of the dwarfier plants, *E. cinerea* is the best known. It grows from 6 inches to 12 inches high and is resplendent in autumn with its rich reddish purple flowers. There are numerous varieties

which are recognised by means of their white, dark purple, red, rose or scarlet flowers, and they are known respectively as *alba*, *atropurpurea*, *atrosanguinea*, *coccinea* and *rosea*. *E. eiliiaris* is a somewhat weak scandent habitated plant with hairy leaves and rather conspicuous red flowers. The variety *mawiana* is of denser, more erect habit, with upright, branched inflorescences of dark red blossoms; it is a very conspicuous variety and worthy of extended culture. *E. Mackaii* is a pink-flowered Heath, showy in its season. The cross-leaved Heath (*E. Tetralix*) is interesting by reason of the curious arrangement of the leaves; it has reddish flowers, but there are forms in which the flowers are pink and others white.

Taken as a whole, these several Heaths constitute a most important item in garden



WITSENIA CORYMBOSA, A RARE AND INTERESTING GREENHOUSE PLANT.

adornment during autumn, and would well repay attention from those horticulturists who do not already possess a collection. K.

A GOOD FLOWERING SHRUB.

VIBURNUM PLICATUM is one of the best flowering shrubs we have in our gardens. Few will last so long in flower, and this season it was in full beauty with us for a month. It was said a few years since that it was useless planting this shrub in the full sun, as the leaves would scorch to such an extent as to weaken the growth. This, however, has proved wrong. I know of no shrub which enjoys the sun so well; indeed, this is absolutely essential in order to ripen its growth and cause it to flower freely. No flowering shrub found so many admirers as this during the past season here, and many enquiries were made as to name and treatment required. The flowers

are pure white, more so, indeed, than in the case of the old favourite *Viburnum opulus*.

Evidently this shrub is not well known yet, judging by the enquiries made. T. ARNOLD.
The Gardens, Cirencester House.

THE GREENHOUSE.

A RARE PLANT IN GARDENS.

(*WITSENIA CORYMBOSA*.)

THIS pretty South African plant is extremely difficult to procure in this country, and after vainly endeavouring to purchase it from British nurserymen I eventually obtained it from the Continent. It is a very rare plant in gardens, and I know

none at the present time except my own where it is grown in the open. It was introduced into this country from South Africa rather over 100 years ago. When New Holland, hard-wooded plants were largely grown under glass it was fairly common in greenhouses, but has now, apparently, quite passed out of cultivation. In conservatories, in the old days, it generally flowered late in the autumn, its Gentian blue blossoms contrasting prettily with the *Chrysanthemum* then in bloom. The plant, which is allied to the *Irises*, is very distinct in habit, the stem being erect and of a firm, woody texture, while the sword-shaped leaves are arranged in a fan-like form at the extremities of the shoots. My plant has now been in the open for three years, and is growing in sandy peat at the foot of a south wall. In the winter it is protected by evergreen branches and has come through the last two winters, which have been exceptionally severe for this locality, without harm. The branching clusters of starry, deep blue flowers, almost 1 inch across, protrude beyond the tips of the leaves, and are very freely borne. Last year the plant in question bore fifty-five flower racemes, each holding from fifty to sixty blossoms, and was an exceedingly pretty sight when in full bloom. Curiously enough this specimen flowered in August, whereas under glass it usually bloomed in November. It is now 2 feet 2 inches in height. It is a slow grower and appreciates abundant moisture during the summer months. This *Witsenia* is now

held to be an *Aristæa*, but is far superior to *Aristæa Ecklonii*, also grown in this garden, its flowers being considerably larger and remaining open the whole day, whereas those of the *Aristæa* generally close about two o'clock and are far less profusely borne. It may be propagated by removing the small leaf-stems at the base of the stem, each with a little of the old wood clinging to it and placing these around the edge of a pot in very sandy peat, surfacing the pot with a layer of sand and watering well. A bell-glass must be placed over the pot and the entings should be shaded and kept close until rooted. If gentle bottom-heat be applied it will induce quicker growth.

The plant is worthy of a place in any garden, but in most localities it would probably need the protection of a cool greenhouse or frame, especially during the winter months.

South Devon.

S. W. FITZHERBERT.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

CHRYSANTHEMUMS. — What are known as crown buds should now be developing in the points of the shoots, and those who wish to produce large and attractive flowers must retain the buds as soon as they are large enough to handle. To retain a bud is to break out the small shoots that evolve immediately round about it. It is not wise to break these out all at one time, but to let it be a gradual process. Plants that have well filled their flowering pots with roots—and this is generally determined by the speedy drying of the soil—should never be allowed to suffer for want of water, and in the case of plants where the buds have been retained feeding with manure water should now be the rule. In our case we apply the liquid manure in weak doses and often.

Cold Frames.—These are a most valuable adjunct of the garden, and in many cases they are not much used at the present time. I make a rule to give both the frame and frame-lights a coat of paint at this season, this preserving them and rendering the surroundings sweet for the occupants when the frames are brought into use. I am just potting up seedling Cinerarias and Primulas. The earliest batch require larger pots at the present time, and these plants must have cool conditions such as the cold frame affords. The present is an excellent time to sow the seeds of a large variety of hardy perennials. I make good use of seed-pans and shallow boxes, sowing the seeds thinly in these, and, when the seedlings are sufficiently large to handle, prick them off in other boxes preparatory to planting them in specially-prepared beds outdoors.

Flower Garden.—This should be a busy period in layering Carnations and Picotees, and even the garden Pinks that are so fragrant and beautiful may also be layered, although it is customary in many gardens to break off pieces with a small heel attached and to root these in a shady border outside, or in frames where they may be shaded. Dahlias are growing freely, in consequence of which I am giving frequent applications of weak liquid manure. It is important that these plants be staked and tied with more than ordinary care, as their growth is so very rapid, and the branching shoots so cumbersome, that unless they are



2.—THE SAME SHOOT SEVERED INTO SEVERAL LENGTHS FOR CUTTINGS. THE SMALL PIECE AT THE TOP IS USELESS.



1.—ROSE SHOOT OF THIS YEAR'S GROWTH. IT IS FIRM AND WILL MAKE TWO CUTTINGS.

secured in good time many valuable shoots will be lost. Weak and superfluous growths should be cut out to let air into the plant, by which means the growth becomes ripened and better flowers develop in consequence. Delphiniums and other flowering plants that are past their best should have the old flowering spikes removed, as they draw upon the resources of the soil so very considerably, which is undesirable when seed is not required. Delphiniums should flower again later on in the year when this treatment is afforded, and their blossoms are often much valued.

Greenhouse and Conservatory.—Winter-flowering Carnations must be staked and tied, and any varieties that the grower is short of may now have the cuttings inserted. The beautiful Funkias, with their showy foliage and flower-spikes, may be stood outside after the blossoming period. In this way they get a fresh stimulus and invariably do well subsequently. Hydrangeas should be propagated by cuttings also at the present time. I always insert the cuttings singly in small pots, placing them in a propagating frame or under a bell-glass, in which case they root very readily. The present is an excellent time for sowing Mignonettes for winter flowering. I always sow the seeds thinly, and keep the plants cool in their early stage, and thus avoid them becoming drawn.

Vegetable Garden.—For late spring and early summer supplies, sow the seeds of the spring Cabbage and Coleworts. The seed germinates quickly at this period, and if not sown too thickly the plants may be pulled later on with little inconvenience to themselves. Turnips sown some few weeks back will now need thinning. They should be left at least 6 inches to 8 inches apart if the plants are to do well, and if this be done speedily the welcome roots will be available in a little while. For later supplies and for winter use a further sowing may be made at the present time. Onions that it is hoped to lift in

the near future should have the tops bent over close to the neck of the bulbs, as this has the effect of causing them to mature much quicker, and when the roots are ready and well ripened it is a good plan to lift at once. Early and semi-early Potatoes should be lifted as soon as possible. It is useless to leave them in the ground once the crop has matured, as the same quarters may be turned into use again and planted with Winter Greens or other vegetables. Lift when the weather is dry. Mushroom beds outdoors should be made at the present time. An article on this subject appeared in these pages recently, and this should be followed in every detail. D. B. C.

PROPAGATION OF ROSES BY CUTTINGS AND "EYES."

We recently dealt with the budding of standard Roses, but as there are so many beginners who would perhaps prefer to raise Roses by other means, we have deemed it wise to give a series of illustrations showing how Roses of all kinds may be raised by cuttings and by the aid of "eyes." Roses are very easily propagated at the present time by cuttings, and this work may be continued for some weeks to come. Much depends upon the selection of the material used. Cuttings are made from shoots of the present year's growth, and they should not be too stout, but be nice and firm. The stoutness of a quill pen is an ideal size. It is possible, of course, to obtain shoots of varying length, but the illustration shown in Fig. 1 is a fair example of what



3.—THE TWO PIECES OF GROWTH MADE INTO CUTTINGS. NOTE THAT THE LOWER LEAVES HAVE BEEN REMOVED.

may be obtained from any ordinary dwarf plant of a Hybrid Perpetual Rose. It will be observed that it is a growth on which blooms have developed, and of sufficient length to make two or three cuttings. The length of the cuttings should be anything between 4 inches and 9 inches, but 6 inches is the most convenient length. A sharp knife, of course, is indispensable, as the cutting through of the stem must be quite clean. The illustration in Fig. 2 shows the same shoot as represented in Fig. 1 divided into three distinct pieces. The two lower pieces of the shoot will make excellent cuttings, while the small portion on the top is of no use whatever, and should be discarded. With the other two proceed to remove the leaves from the two lower joints leaving three to four leaves above in each



4.—PORTION OF SHOOT, SHOWING METHOD OF CUTTING OUT A BUD OR "EYE."

instance, and if the shoot be cut through immediately below that point from whence the lower leaf was removed such shoot will make an ideal cutting. The prepared cuttings as portrayed in Fig. 3 show the same shoots as represented in Fig. 2, with the leaves trimmed off and the cuttings prepared in readiness for their insertion in proper soil.

We prefer to embed our cuttings in a cold frame, and in such a receptacle we usually place on the surface soil 3 inches to 4 inches of light sandy soil specially prepared. This soil is passed through a sieve with a half-inch mesh, and the ingredients thoroughly well mixed before spreading the compost on the surface. This should be levelled and beaten down firmly preparatory to the planting of the cuttings. Insert the cuttings 3 inches apart to the depth of the second joint, from which it will be remembered the leaves were removed. Press the soil firmly round about the base of the cuttings, otherwise the chances are they will not root. Give them a good watering in by the aid of a fine-rosed can, and keep the cold frame closed, shading the same for a few weeks, by which time they should be rooted, when air must be gradually admitted, thus inuring them to more hardy and natural conditions, when their progress will go on unhindered.

In warm weather sprinkle the cuttings lightly with clear water occasionally, as this maintains them in a fresh condition and also checks the attacks of insect pests which might otherwise be found troublesome. If no cold frame is available the cuttings may be placed in pots and covered by hand-lights or bell-glasses, but in each case the cuttings must be shaded from the bright sunshine and be treated to a sprinkling or syringing overhead with clear water at intervals. It may be possible that some beginners who are anxious to raise a stock of Roses on their own roots have no cold frame or even a hand-light. They need not be discouraged, however, as Roses may be raised from cuttings quite easily outdoors if a rather shady border be selected in which to make up a bed of light, sandy soil and the cuttings be inserted therein. Early October is, however, the best time for planting cuttings in the open ground.

There may be growers who prefer to raise a stock of Roses on their own roots from what are known as "eyes." This is a very easy and simple method, and quite a number may be raised from a comparatively small quantity of Rose shoots. To propagate Roses by "eyes" the growths should be removed in the form of a shield, as clearly depicted in Fig. 4. Here, it will be observed, is a portion of a shoot with three or four Rose leaves and "eyes" in embryo

in the axils of the leaves. If the leaf-growth be cut out in shield-like form, as clearly depicted in the photograph in the severed portion above the stem. These "eyes" may be inserted in sandy soil, and will root with comparative ease. The leaf must be severed intact, and not be interfered with in any way. We prefer to insert these "eyes" in very sandy soil in pots or shallow pans, just bringing the shield with the "eye" thereon immediately underneath the surface soil, which, by the way, should be covered with coarse silver sand, and the soil pressed firmly round about them. If the soil be moistened with care the pots or pans may be placed under a hand-light or bell-glass or in a propagating frame where moist conditions may be made to prevail. In this case, too, the "eyes" must be shaded from the sun and the leaves sprinkled twice a day with clear water.

SUITABLE SOIL FOR ROOM AND WINDOW PLANTS.

(Continued from page 365.)

SAND.—Everybody knows what sand is, but for gardening purposes there is sand and sand. Two sorts of sand should be obtained whenever possible, both white, but one so coarse that it is possible to count the component grains; the other sufficiently fine to pass through a coarse pepper-sifter. The coarser sand is indispensable in promoting porosity and free drainage for water in the compost. The finer sand is employed to sprinkle on the surface soil of pots to prevent green, moss-like growth forming, and is also used in striking cuttings and sowing fine seeds. The other ingredients which enter into soil or compost occasionally call for no special mention here, but may well be referred to when their employment is indicated.

SOIL SUBSTITUTES.

Having considered the matter of suitable soil at some length (page 353), we may well give a little thought to soil substitutes, *i.e.*, substitutes that can be employed when the more orthodox or better suited ingredients are not forthcoming. Of course, it will be understood that the use of these substitutes is only advocated when the proper soil, leaf-mould, &c., are unobtainable, though some of them, dried manure, for instance, are, to use the shopkeeper's phrase "just as good."

Substitutes for Loam.—The easiest way to get a substitute for loam, or, in fact, for the whole of the potting ingredients, is to consult a good nurseryman, state to him plainly the facts of the case, and negotiate with him for a bushel or sack of compost. In this case I would counsel the purchase of two kinds of compost, one for flowering plants, the other for foliage subjects. Let me, however, advise readers to obtain the various ingredients and mix their own composts. They will learn to take as much pleasure and feel as much pride in compounding the various soil concoctions as does a cook in the evolution of one of her *chefs-d'œuvre*. Gardening without compost mixing is like photography without developing—like love without kisses. Instead, then, of consulting the nurseryman, cast round for substitutes nearer home. In my part of the country we can obtain an excellent loam substitute almost for the asking. This is the tufts of grass called tussocks, raised in the grass meadows by ants. These are cut off level with the ground by the farmer's men with stout hoes and generally left lying in a heap in the fields. When decayed they make an excellent potting compost, and one that is, undoubtedly, the richer for the deposit of formic acid left in the soil by the ants. Failing these tussocks, most dwellers in country, and even in suburban, districts, have the chance of acquiring road trimmings at a very moderate figure. By road trimmings I mean the portions of grass and soil removed in the autumn from the banks, ditches and greens by the roadside by the orderly men employed by the local authorities or county council. These trimmings

often contain a goodly proportion of road grit, and also, when stored by the roadside, horse manure, and form an admirable substitute for loam when rotted down. If all other sources fail, recourse must be had to the garden soil, and often this may be made into a not-to-be-despised compost. Its chief objection generally is its fineness, which causes it to lie too closely in the pot and impedes the free passage of water. The addition of dried and thoroughly-decayed horse manure, coarse sand, broken brick, or lime rubbish will counteract this want of porosity.

Substitutes for Leaf-mould.—The most natural and the best of these is peat; it is, however, generally so much more expensive than leaf-mould or more difficult to obtain, it should only be used in case of necessity. The chief function of peat and leaf-mould is to build up the stem and leaves of plants, and no compost can be considered complete in which both are lacking. Decayed horse or stable manure, from which all traces of straw have vanished, is another splendid substitute for leaf-mould. It should be thoroughly dried in a warm place and then rubbed through a fine-meshed sieve. This will reduce it almost to powder, in which state it may be used at the rate of one-sixth part to the bulk of compost. Only one other substitute need be mentioned, and that is rotten wood. When this is in a dry and powdery form it is an excellent plant food, and used at the rate of one part to four parts of compost gives good results.

Substitutes for Peat.—Although peat is a good substitute for leaf-mould, leaf-mould can scarcely be considered as a good substitute for peat. The latter is employed almost as much for its elastic, moisture-defying properties as for its manurial ones. Leaf-mould, on the other hand, possesses none of the elasticity or springiness which makes peat so valuable for Ferns and what are known as hard-wooded plants, and is easily destroyed by water, whereas peat is practically indestructible as long as pure water only is brought into contact with it. All things considered, there is only one really satisfactory substitute for peat, and that is the fibrous part of good loam.

Substitutes for Sand.—As sand has no fertilising or manurial properties whatever, but is used solely to promote porosity and drainage, it is obvious that any sharp, not easily caked, substance may displace it in the potting compost. Charcoal, broken into portions as large as Peas, is the favourite substitute, followed by crushed mortar rubbish, broken soft brick, road grit, sweepings from gravel walks and sifted coal ashes. The latter three are cheap and generally easily obtainable, and answer quite as well as sand for potting large specimens or plants which grow quickly and only occupy their pots for a few months. Coal ashes, broken brick and lime rubbish should all be sufficiently fine to pass through a quarter-inch meshed sieve, and all should be kept dry. E. J.



5.—A NUMBER OF BUDS OR "EYES" INSERTED IN LIGHT SANDY SOIL IN A SHALLOW PAN.

THE TOWN GARDEN.

SWEET PEAS.—In one respect these flowers are similar to Roses, they do not thrive as well in town gardens as we should like. This season my plants have flowered satisfactorily, but the stems have seldom exceeded 14 inches in length, although a few have been as much as 17 inches. The plants are now passing over as far as the first crop of flowers is concerned, and I am about to cut them hard down, with a view to the production of new shoots and additional blooms in September. Each one is cut down to within about 20 inches or 2 feet of the ground, and the plants are subsequently generously watered and fed, and it is surprising how quickly they will respond to this treatment, especially if it is found convenient to hose them after every hot day. The disadvantage is that so many growths start away, and it is imperative that the majority of these shall be removed, or it is quite certain that the rows will become such a perfect thicket that it is impossible for beautiful flowers to be produced. Plants from late sown seeds which are still in full vigour should have water and liquid manure as may be deemed necessary, and the blooms must be kept closely picked.

WINDOW BOXES.—These demand regular attention if they are to produce a bright and attractive display for several weeks. It is thought by some amateurs that they call for almost more time than the results merit, but this is not so, for if they are neglected they soon become shabby and are then the reverse of an ornament to a house. The grower who attends assiduously to the removal of dead and dying blooms and leaves, and who sees that the soil never becomes as dry as dust, will derive the utmost satisfaction to himself as well as conveying pleasure to others. It will probably be wise to have recourse to the use of weak liquid manure or to light applications of concentrated fertilisers occasionally from now onwards, and, provided that these matters are attended to with the judgment to which their importance entitles them, it is perfectly certain that the efforts put forth will be generously repaid in the near future.

ROMAN HYACINTHS.—It will soon be possible to procure bulbs of these most exquisite plants, and the sooner the earliest can be potted up the better, as it is impossible to have blooms too soon or over too long a period. If only three pots can be made up at a time in succession at intervals of about three weeks, the results will be most pleasing, as there are few plants so easily grown which bloom at such a welcome season of the year. Procure sound bulbs from a reliable source and place four in each 5-inch pot, and satisfaction is bound to accrue. A suitable compost consists of three parts of loam and one part of leaf-mould, with an eighth of sharp sand all thoroughly mixed; the pots must be well drained and a little moss should be placed over the drainage material. In potting, care is essential that the soil beneath the bulbs is made firm, but not so hard that the roots will not penetrate it, as when this is the case they are lifted right out of the pots; when the operation is completed the nose of each bulb should be nicely showing through the surface. After potting they should be plunged in a bed of Cocoanut fibre refuse or put in a dark place so as to allow of roots being produced in advance of leaf and flower growth. Double Roman and Paper White Narcissi should be dealt with in a similar manner, potting up in succession in order to maintain a protracted display of blooms. Of the two the second-named is justifiably the more popular, but the double flowers are always welcome and they must never be omitted from the bulb order. These bulbous plants will stand reasonable forcing, but it is imperative that this shall not be had recourse to until such time as the plants have made good root progress by a sojourn in the dark.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

HARDY FRUIT.

FRUIT-ROOM.—If not already done, let the fruit-room have a thorough cleaning. Scour the benches with soap and hot water. Any fruits, such as Peaches and Melons, should be taken out while the process is in operation, and subsequently leave plenty of air on the ventilators. These can always be left open at this season if the outer covering be of perforated zinc.

Raspberries.—Norwich Wonder, Superlative, Hornet, Baumforth's Seedling and Semper Fidelis have done well this season, and the fruits have been very fine; these are a good selection for anyone making a new plantation. Where the fruit has been all gathered cut out the old canes so that more light and air can reach the new ones, which should then be tied up and the roots mulched with any manure, such as hot-bed refuse. This will keep them nice and moist and in a growing condition.

Strawberries.—Plant these out as soon as the ground can be made ready for them. Give plenty of room, or plant thicker and take out every other one after the first year. Make the plants firm in the soil and see that they do not suffer from want of moisture. Old Strawberry beds can now be destroyed. The old plants should be raised with a fork (not cut off) and burnt, and the ground cleaned and made serviceable for late Broccoli or similar crops.

KITCHEN GARDEN.

Seed-sowing will be an important item for the next few weeks. Good Cabbages for spring cutting are Carter's Early, Heartwell, Model, Sutton's Earliest, All Heart, Tender and True, Favonite and April, and they form a good succession. Quantities of Turnips should now be sown for the autumn and winter supply, making several sowings at intervals of a week, according to the climatic conditions. Spinach may be sown. The ground should be made rich for this crop and the plants afforded plenty of room; sow again in the third week of the month. Sow Onions Ailsa Craig, Record, Tripoli and White Spanish. These ought to be in by the end of the second week, unless the weather is very hot and dry.

PLANTS UNDER GLASS.

Sow a good batch of Mignonette. Place the seed in 4½-inch and 6-inch pots, which should be filled with rich soil. When the seedlings appear reduce them to about five, and if large spikes are wanted keep all the lateral growths picked off.

Roman Hyacinths.—As soon as these are received pot up a good batch. Use fairly good soil, and place them in an open space under a wall or shed and cover over with 6 inches of fine ashes. Early varieties of Narcissi should be treated the same as Roman Hyacinths.

Greenhouse Plants in flower should be kept cool and shaded on all bright days. Keep climbers clean and in a presentable condition. Water with manure water all plants carrying quantities of bloom. Cut down fancy Pelargoniums as soon as the wood is ripe enough to make cuttings for next season's stock.

Carnations should be exposed now for a month or two, according to the weather. I find the winter or perpetual varieties get very much stronger by being exposed. The earliest batch now filling the flowering pots with roots should be afforded soot water occasionally, and any plants that require stakes must have them at once.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

EARLY-FLOWERING BULBS.—As soon as the Roman Hyacinths, Freesias, double Daffodils and other bulbs which usually flower early come to hand get them potted and plunged outside in ashes or Cocoanut fibre. By potting early the flowers come stronger and are produced early without forcing. Early-flowering bulbs are mostly grown in rather small pots, as they are wanted for the rooms, and the 4½-inch or 5-inch is the best size for them, but for the conservatory, where it is necessary to have masses of one colour, an 8-inch pot filled with Roman Hyacinths, double Narcissi or Freesias make a conspicuous object. The compost for bulbs should be sweet and open. Two-thirds loam, one-third old Mushroom manure or good leaf-mould, with plenty of sand, suits them well.

Schizanthus.—Where this useful plant is required for an autumn display a sowing should be made at once. Sow the seed thinly in a pan filled with light compost, placing it in an unheated frame until the plants are large enough for pricking out; three to five may then be pricked off into a 5-inch pot, in which size they will flower. A cold frame is a most suitable place to grow them in, and when required to bloom in the autumn transfer the plants to the warm end of the greenhouse or conservatory.

FRUIT UNDER GLASS.

Owing to a sudden change from sunshine to dulness extra judgment and care will be necessary in the management of houses containing crops of Hamburg Grapes and in which no fire-heat is being employed. Moisture must be supplied in very small quantities only, and in cases where plants occupy the house no further supply than that which is given by watering the plants will be required.

Melons in Frames.—Melon plants now swelling off crops of fruit in frames must not be treated to overhead syringing during the prevalence of dull, unless weather, nor must the surface dampings be practised. If during the hot weather water was regularly supplied, the plants will not be liable to suffer in this respect for some little time to come. Should cauter make its appearance the old method of applying lime in a dry state to the affected parts must be resorted to.

KITCHEN GARDEN.

Winter Spinach.—As regards the date for sowing this crop the cultivator must be guided by circumstances. The value of a good breadth of this vegetable throughout the winter months is great. To keep up a supply till the spring sown comes in I advise two sowings, one now and another a month later. The earlier sowings will give the early winter supply and the later will bridge over an awkward period should a warm spring follow a mild winter.

Late Broccoli.—No time should be lost in getting out a good breadth of late Broccoli. The present planting may be considered fully late, but from close observation I have noticed that the smaller plants have pulled through severe winters when the larger ones have been killed.

FLOWER GARDEN.

This has been a bad season for getting up seeds of perennials and biennials. A few of the quick-flowering annuals may still be sown for autumn blooming. These will include Nemo-philas, Virginian Stocks, Clarkia pulchella alba, &c. Where seeds have failed from drought sow again now. Intermediate Stocks are lovely for early flowering. Sow thinly, pot up in autumn and keep in cold frames during winter. Only a part of the stock need be potted. Very often they winter safely outside.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

NEW PLANTS.

STANOPEA TIGRINA SUPERBA.—*Stanhopea tigrina* is one of the most handsome Orchids known, but the variety now under notice even surpasses the type in size and colour markings. The large broad sepals and narrower petals have their rich cream ground colour beautifully marked on the basal portions with the deepest rich maroon crimson. The huge labellum and arching column have the paler cream ground thickly besprinkled with maroon dots. The flower shown measured about 7 inches in diameter, and was on a most healthy plant. Exhibited by Messrs. Charlesworth and Co., Heaton, Bradford. First-class certificate.

Odontioda Thwaitesii.—This is a very pretty little member of a useful family. The flowers are of ordinary size and shape, the sepals and petals being of a deep velvety maroon colour. The labellum is comparatively large, and is conspicuous on account of its magenta-carmine colour, the base and the column being of a rich yellow hue. Shown by R. G. Thwaites, Esq., Chessington, Christchurch Road, Streatham. Award of merit.

Angrycum angustum.—This is a native of North-East Rhodesia, and will probably prove a useful addition to this small family. The flowers are small and pure white, with very long, drooping spurs. The blooms are sparsely produced on a rather slender, arching stem. The plant has leaves and the aerial roots characteristic of the genus. Shown by Sir Trevor Lawrence, Bart. Award of merit.

Epidendrum costatum.—As shown this is a dwarf species, producing small flowers of a chocolate crimson hue, the labellum having a blotch of dull green in its centre. Shown by Sir Trevor Lawrence, Bart. Botanical certificate.

Geodorum purpureum.—A plant with large, Calanthe-like foliage and a raceme of small, white flowers with the scoop-like labellum dotted freely with tiny purple dots. It is a dainty little subject and should be useful. Shown by Sir Trevor Lawrence, Bart. Botanical certificate.

Nelumbium speciosum var. Osiris.—This is one of the most beautiful and fascinating aquatics of our acquaintance, and a plant to be grown by all. The *Nelumbium* or "Sacred Bean" is well known for its giant leaves and flowers, and the above-named variety is a splendid advance on the type. Frequently the huge peltate leaves reach a diameter of 2 feet and the handsome blossoms about half that size, and we doubt not the new-comer will quite equal these measurements when fully established. The blossoms as shown were about 10 inches across, the petals of a clear rose colour, deeper at the tips and white at their bases; a really superb variety whose beauty must be seen to be realised. The flowers of the *Nelumbium*, like the giant leaves, are borne on 3-foot-high stems, and these, standing clear above the surface of the water, are seen to the best advantage. Exhibited by Mr. Leopold de Rothschild, Gunnersbury House, Acton (gardener, Mr. J. Hudson). First-class certificate.

Astilbe Arendsii Ceres.—A very beautiful variety, with plume-like inflorescences of a deep pink colour.

Astilbe Arendsii Pink Pearl.—Quite a distinct variety and of a pale pink hue. These were shown by M. Georg Arendo, Rosdorf, Germany, and each received an award of merit.

Summingia hybrida Dr. Maxwell Masters.—This is reputed to be a bigeneric hybrid between *Gloxinia* and *Gesnera*, the rose-coloured flowers somewhat resembling a drooping *Gloxinia*. The foliage is handsome and quite distinct from the *Gloxinia*. Exhibited by M. Ernest Benary, Erfurt, Germany. Award of merit.

Begonia Kewensis.—A white-flowering variety of considerable freedom, and a plant well suited for growing in baskets and in other ways where plants of drooping habit are required. From Messrs. James Veitch and Sons, Limited, Chelsea. Award of merit.

Coriaria japonica.—A valuable and ornamental berry-bearing shrub, especially suited for growing against a wall or even in open positions in the more favoured parts of England. The reddish orange or coral red berries, which are freely produced in axillary clusters, render the plant decidedly attractive. From Mr. M. Pritchard, Christchurch, Hants. Award of merit.

Carnation Cardinal.—A superb border variety of a rich clear scarlet, an ideal flower in every way, and without doubt the finest type of a scarlet self at present known.

Carnation Splendour.—A border variety of a clear bright purple colour, with excellent substance and form.

Carnation Hercules.—This is one of the largest-flowered varieties we have seen, the colour being of a maroon-crimson shade. This variety is said to be the result of crossing an American tree variety with one of the Malmaisons. The above set of three varieties were from Mr. James Douglas, Great Bookham, Surrey, and each received an award of merit.

Rose Lady Godiva.—A very pretty variety of the wichuraiana group, the medium-sized blooms being fully double and of a pink colour in the centre, shading to a flesh tone at the edges. From Messrs. Paul and Son, The Old Nurseries, Cheshunt. Award of merit.

All the above were shown before the Royal Horticultural Society on the 21st ult., when the awards were made.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Sweet Pea plant for examination (Alert).—Your Sweet Pea plant is attacked by the disease commonly known as "streak." What it is or by what it is caused no one seems to know. We believe that the National Sweet Pea Society are investigating the matter. Last year we tried all sorts of fungicides and insecticides, but none did any good. The only thing to do with an affected plant is to pull it up and burn it as soon as the disease is noticed. We hope that some of our scientists will soon discover a remedy or at least a preventive.

Delphiniums, Clarkias and Sweet Peas for examination (E. S. B., Germany).—We have carefully examined the portions of plants that you send, and can find no trace of disease, hence we come to the conclusion that the trouble is of a local character. Do dogs have access to the garden? If so, they may be responsible for the mischief. The obvious remedy if this is so is to keep out the dogs. It may be that the soil in those particular spots where the plants turn yellow contains some injurious substance, but if this is so it ought not to affect plants for three years in succession. The only thing that we can suggest is to water the plants with weak solutions of any nitrogenous manure and thus try and induce them to grow out of the trouble. Soot water for Sweet Peas or any other plants should be diluted until of a golden brown colour. The best way is

to make up a strong solution by placing soot in a canvas bag and immersing the whole in a tub of water, allowing it to remain for a fortnight, shaking the bag round well each day. Dilute as required for use. For a row of Sweet Peas 6 yards in length you could safely use 12 gallons, diluted as advised, once a week, first watering well with clear water.

Planting a bank (A.S.K.).—In all the circumstances we think you might succeed in naturalising such things as Snowdrops, Crocuses and a number of single Trumpet Daffodils, such as Princeps, Golden Spur, Queen of Spain, Pallidus precox, Poeticus ornatus P. fl.-pl., Horsfieldii and any of the single incomparabils. In addition you might also plant Muscari concinnum, one of the most beautiful of blue flowered plants. The bulbs should be planted in autumn, quite thinly and very irregularly, and when completed sow the bank with grass seed. In this case the grass should not be cut till the foliage of the bulbs has died down.

FRUIT GARDEN.

Cherries withering on trees (F. M. D.).—Both branches sent seem to indicate by their half-withered appearance that your trees are suffering from gumming or canker, or from extreme dryness at the root, either of which would account for the wasting away of the fruit and the damage to foliage. If our surmise is correct, the remedy in the first two cases would be to replant your trees in better soil this autumn (end of October), and in the latter case to give a copious supply of weak liquid manure once a week and to place a mulch 2 inches thick on the surface of the soil as far as the roots extend.

Strawberry fruit failing to swell (J. H. M.).—The flowers of your Strawberry plants appear to us to have been destroyed by some species of mildew, which has also blackened and killed the stalk of the flower-spike down to its base; but, strange to say, the leaves you sent appear healthy and unharmed. Have the plants been suffering from dryness at the root while in flower? If so, this condition would be ruinous to them at that stage, and would, moreover, be a strong encouragement to a fungoid attack. The variety Leader being exempt from injury may be accounted for by its being an exceedingly hardy and strong-growing variety. We cannot name varieties of Strawberries by their leaves. If you can send a sample fruit as well as a leaf we will endeavour to do so.

Berries of Foster's Seedling Grapes diseased (T. R.).—Foster's Seedling Grape is one of the easiest Grapes to grow of any we have. Under ordinary conditions of treatment nothing comes amiss to it. We think you have overdone the Vines with artificial manures, causing a certain cessation of healthy root action. Withhold any further supply for the present, and ventilate more freely day and night, so as to give the Vines more rest for a time, when we hope the mischief will be abated.

Cherry fruit not swelling (Anxious).—The cause of the Cherries refusing to swell may, no doubt, be attributed to imperfect fertilisation of the flowers, in consequence, we think, of injury to the bloom by frost or by the long continued spell of cold weather at the time of flowering, and the cause of the strong growth of branches they are now making is in consequence of a lack of restraint of growth which the swelling of a crop of fruit would have exercised. We should at once cut all the side shoots emanating from the main shoots to within seven leaves of their base, and the main shoots we should shorten by one-third of their length. The cause of the tips of the shoots of your other tree dying is, we think, because the roots have penetrated to an uncongenial subsoil. The application of lime was quite right, as the Cherry luxuriates on lime or chalk land.

KITCHEN GARDEN.

Celery damaged (F. D.).—Your Celery is suffering from a bad attack of the Celery fly. A dusting in early morning (when the leaves are damp with dew) with soot will prevent the fly from lighting on the leaves, as they dislike the taste of it. Once the fly has deposited its eggs on the leaves and the maggot is formed inside the only cure is cutting the worst part away and crushing the grubs within the remaining leaves with the finger and thumb.

Grubs on Cabbage plants (Mrs. Corbett).—The grubs attacking your Cabbage plants are those of the Cabbage fly. After the crop is over the soil

should have a good dressing of fresh gas lime or Vaporite, and it is better not to grow any plants of the Cabbage tribe on it next year. I presume from your letter that when your gardener used gas lime the plants were already planted, so that he could not give the soil a proper dressing. The parent flies lay their eggs on the plants just below the surface of the soil. Dipping the plants in a puddle of soot, clay and water, or laying soot or sand soaked with paraffin oil round the plants, is useful in keeping the flies away. Some persons have tried with much success cutting a central hole in a piece of card and passing the stem of the plant through it; the card lying flat on the ground prevents the flies from getting to the roots to lay their eggs.—G. S. S.

MISCELLANEOUS.

Using sulphide of potassium for mildew on Roses (Spray).—The proportion in which to use this is half an ounce of the sulphide to a gallon of water. It is best to dissolve the sulphide in a quart of hot water and then make up to the desired quantity by adding cold water.

The Royal Horticultural Society's examinations (Tutor).—Having a copy of the syllabus and instructions relating to the examinations in horticulture held by the above society, we have sent it to you, as it gives much useful information. Your request relates to the general examination, which is held each year in April. The copy sent is of 1907, but that for the ensuing year will be the same, but the questions set are different, of course. To test your knowledge, you can have the whole of the questions set since the examinations began, information as to which you will have found on the syllabus sent you. Of course, the questions—portions of which are of a scientific character, the rest relating to practical horticulture—get rather harder each year. You will have seen that for all three examinations no less than forty books are recommended for study, but just one or two on each specific subject would be ample. While something would depend on your knowledge of the sciences of botany and plant or vegetable physiology, much also would depend on your knowledge of practical horticulture, knowledge which can be indifferently obtained from books, but which, where that knowledge exists through garden training, books greatly assist. The prices of the books named and their publishers are stated in the list sent. Neither of the three you name are included, yet they give to any student very valuable information. The school teachers' examination is less hard, but in relation to that some questions of a scientific kind are set, and a few at least of these must be answered. Should you need further information, write again.

Names of plants.—*E. S. Martin.*—1, Paul Neyron; 2, Anguste Rigotard; 3, Senateur Vaisse; 4, Viscountess Folkestone; 5, Mme. Welch; 6, Anna de Diesbach; 7, Mrs. W. J. Grant.—*W. J. Ingram.*—The very dark variety we believe to be Baron de Bonstettin, and the other *Triomphe de Caen*.—*A. C.*—*Rosa polyantha simplex*.—*N. G. S.*—Roses: Pink, Caroline Testout; white, Perpetual White Moss and Double White Scotch.—*Miss Eusden.*—1, Mrs. J. Laing; 2, Victor Hugo; 3, Marie Baumann; 4, Clio; 5, Mme. Ravary; 6, Captain Christy; 7, Francisca Kruger; 8, Duke of Edinburgh.—*Hants.*—1, Helene; 2, Bennett's Seedling; 3, Mme. N. Levassieur; 4, probably Dawn, but the blooms had fallen; 5, Tom Wood.

Name of fruit.—*F. C. C., East Sheen.*—Your Raspberry appears to be Baumforth's Seedling, but the fruits were very crushed when received, so we cannot be sure about it.

SOCIETIES

THE NATIONAL ROSE SOCIETY'S PROVINCIAL SHOW, MANCHESTER.

AN INTERESTING DISPLAY.

The National Rose Society held its northern show at Manchester on Tuesday, the 21st ult., making its sixth visit to that city, the first having been made as long as twenty-eight years ago, and it was an interesting fact that three of the exhibitors at the initial show of 1880 were also present and exhibiting on this occasion, namely, Mr. Edward Mawley (the secretary), Mr. Mahlon Whittle of Leicester and the Rev. J. H. Pemberton. The exhibition was held this year in the same grounds but under different auspices, the old Botanical Society of Manchester having ceased to exist and its garden passed into the hands of the White City Company, Limited, under whose auspices the show was held. Fortunately, the show was favoured with the weather, but the flowers showed signs of the rough treatment they had experienced during the last week, and rough petals were numerous; in fact, it was a matter of general surprise and comment that so many good flowers had survived the ordeal. The majority of the Southern gardens being over, those in the Midlands and North had their turn; but the best Roses in the show came from Ireland, Messrs. Hugh Dickson of Belfast and Alexander Dickson and Sons of Newtownards carrying all before them, the first-mentioned firm winning the Jubilee Trophy of the National Rose Society with a splendid box, good in colour, weight and form, that just beat the boxes of Messrs. Alexander Dickson of Newtownards. The amateur trophy was again won by Mr. E. B. Lindsell, the president of the society, but Mr. Eoyes of Leicester ran him very close. The class for new seedling Roses was well filled, and again the Irish Roses were well to the fore,

Messrs. Alexander Dickson of Newtownards being awarded a gold medal for a brilliant-coloured red Hybrid Tea of excellent form and quite strong perfume named G. C. Waul, after the president of the Saitaire Rose Society. It was the best exhibition flower staged, and deservedly got the coveted award. Messrs. Hugh Dickson of Belmont also received a gold medal for a large pure white single Rose named Simplicity, a beautiful Clematis-like sort that we believe was exhibited at Saitaire last year. Here it was shown in improved form in two large stands, and was one of the features of the show, the flowers being 4 inches and 5 inches across. We understand that Kaiserin Augusta Victoria is one of the parents. The third gold medal was awarded to Messrs. B. R. Cant and Sons of Colchester, who staged a beautiful pure white sport of Dorothy Perkins that should prove very useful in the garden. They had six fine Roses that showed the flowers to advantage. Altogether there were ten exhibits for the gold medal. The committee thought the following worthy of a card of commendation: Messrs. Hugh Dickson and Sons, Hybrid Tea; Miss Ward, a good-shaped Lady Ashtown-like Rose, yet quite distinct from that beautiful variety; Messrs. S. McGreedy and Sons of Portadown for a red Hybrid Tea called F. W. Moore (after the curator at Glasnevin) that promises well. This exhibitor also had a very pretty yellowish pink flower called Mrs. Alfred Tate that seemed an improvement on Countess of Gosford.

The awards in the principal classes were as follows: Class 1, the Jubilee Trophy Class: Cup and first prize went to Messrs. Hugh Dickson and Sons of Belmont for a beautiful lot of flowers. A Hugh Dickson in this stand appropriately won the silver medal for the best Hybrid Perpetual in the trade section. Messrs. Alexander Dickson of Newtownards were a close second, with Messrs. R. Harkness and Co. of Hitchin third, whose stand had some fine Hybrid Perpetuals. Messrs. Frank Cant and Co. of Colchester were awarded an extra prize. There were three other competitors and the class as a whole was a very good one.

Class 2, seventy-two blooms, distinct: Here again the Irish Roses carried the day, Messrs. Hugh Dickson being first, Messrs. Alexander Dickson second and Messrs. Frank Cant of Colchester third.

Class 3, twenty-four distinct varieties, three blooms of each: Messrs. Alexander Dickson were first with a first-rate box, some of the trebles being very fine, Messrs. Frank Cant a close second, with a beautifully staged and contrasted box, the flowers being a little smaller, and Messrs. Hugh Dickson of Belfast third.

Class 4, thirty-six blooms, distinct varieties, Division B. Mr. W. H. Frittingham was first, King's Acre Nurseries second and Messrs. G. and W. H. Burch of Peterborough third.

Class 5, sixteen trebles: The same three firms again divided the honours, Messrs. Burch taking second prize instead of third and Mr. Frittingham again winning with a good level box.

Class 6, Teas and Noisettes, eighteen blooms: Mr. George Prince of Oxford was first with some good Roses. The majority, however, showed signs of the weather on their outside petals. Messrs. Frank Cant of Colchester were second and Mr. Henry Drew of Faringdon third.

Class 7, twelve blooms: Messrs. Mattock were first and Messrs. Burch of Peterborough second.

Class 8, twelve blooms, new Roses: This is always an interesting class and there was strong competition. Messrs. Frank Cant of Colchester were first, and their box contained good flowers of J. B. Clarke, Mrs. H. Armytage Moore, William Shean, Mrs. T. Roosevelt, Queen of Spain, Richmond, Mme. Melaine Soupert, M. H. Walsh, C. J. Grahame (an excellent flower), Mme. P. Rivoire, Mrs. John Bateman and Countess of Annesley. Messrs. Alexander Dickson and Sons of Newtownards were second, and their box contained many novelties not yet in commerce—William Shean, Conway Jones (a new dark red of globular shape), Lady Faire, G. C. Waul (a beautiful orange red scarlet), S. T. Wright, Mrs. G. W. Kershaw, S. P. Cowan (an excellent pointed crimson that will be wanted), Harry Kirk, Mrs. David Jardine (a Mrs. T. Roosevelt-like flower, but deeper colour and finer point), Eric Dickson (a beautifully-shaped flower of clear colour—deep crimson), Lady Ursula (pale flesh colour) and Grace Molyneux (a flesh-coloured Rose with peach centre); third, Messrs. B. R. Cant and Sons of Colchester. Messrs. Hugh Dickson of Newtownards had a fine box that the judges had to pass—as it contained a flower of Lady Ashtown, which was not eligible—that would have certainly been in the prize list. It contained a pretty flower of the new Lyon Rose, that was awarded (we think in error) the silver medal for the best Hybrid Tea in the show. Its colour could have been its only recommendation, as there were many finer Hybrid Teas, notably, a Mrs. Theodore Roosevelt in Messrs. Frank Cant's stand.

Class 9, twelve blooms of any white or yellow Rose: This was a very strong class, Messrs. Frank Cant of Colchester again securing first prize with a good box of White Maman Cochet, which also contained the silver medal bloom for the best Tea in the show. Messrs. Alexander Dickson were second with Fran Karl Druschki, and the King's Acre Nurseries of Hereford were third with the same variety. There were many other competitors.

Class 10, twelve blooms of any light pink or rose-coloured Rose: First prize, Messrs. Hugh Dickson, with a beautiful box that won easily of Mrs. Theodore Roosevelt; second prize, the King's Acre Nurseries, with fine coloured young flowers of Mrs. John Laing; third, Messrs. Frank Cant of Colchester, with a good box, close up, of Dean Hole, that might have changed places with second. Possibly the colour was not so good but the flowers were certainly better.

Class 11, for twelve blooms of any crimson Rose: This was again a very strong class and caused the judges some

trouble. Messrs. Hugh Dickson eventually won with a very fine box of Hugh Dickson, good throughout; the King's Acre Nurseries were second with Alfred Colon; and Messrs. Burch of Peterborough third with Horace Vernet.

Class 12, exhibition Roses in vases: Here Messrs. Alexander Dickson of Newtownards were an easy first with Hybrid Teas predominating; second, Messrs. Prior and Sons of Colchester; third, Messrs. Burch of Peterborough. Class 13, for new seedling Roses, we have already referred to.

Class 14, twelve trebles, Teas or Noisettes: The Teas generally throughout the show seemed more susceptible to the weather, and were rough and damaged in consequence. Messrs. Frank Cant were an easy first, but showed their flowers in vases instead of the orthodox box; Mr. G. Prince was second; and Mr. H. Drew third.

In the section for decorative Roses one missed the usual table decorations, bowls and vases that were so popular and always create a lot of local interest; we think they might well be added another year. The trade came forward strongly in the two classes for eighteen and twelve distinct varieties, and the Roses shown were excellent in every way; in fact, created quite a sensation, so that it was difficult to approach the stands. In Class 15, for eighteen distinct bunches, Messrs. Frank Cant and Co. of Colchester were first with a beautiful clean lot of flowers, of excellent quality throughout. Minnehaha (a pink wichuriana), Rosette Legion d'Honneur in fine form, Lady Gay and Dorothy Perkins were excellent, and the bunches were not too thickly crowded. Messrs. Paul and Son of Cheshunt were second, and the judges must have had a hard task to divide them. We were particularly struck with a beautiful Rose of Lady Godiva, a new sport from Dorothy Perkins, pale flesh with deep centre. Marquise de Siney, a fine yellow, was also prominent. The vase of Griss an Teplitz was the only weak spot in a beautiful exhibit. Messrs. Mattock were third with beautiful clean flowers, the smaller Tea section largely predominating; fourth, Mr. G. Prince of Oxford, an exhibit quite good enough to win in the ordinary way. There were several other exhibitors.

In Class 16, for twelve bunches, Messrs. Mattock were first with well-staged flowers in first-rate condition; Messrs. Frank Cant and Co. second; and Mr. Prince third.

Class 17, the Jubilee Trophy, for amateurs: First, Mr. E. B. Lindsell of Hitchin, who had a good stand, wonderful really considering the weather of the preceding days. Mrs. E. Mawley in this box secured the silver medal for the best Tea in the amateur's section; second, Mr. William Boyes, close up, only lost in the last three or four blooms, which were small. Mildred Grant in this stand secured the silver medal for the best Hybrid Tea; third, Mr. Dennison.

In Class 18, thirty-six blooms, the competition was not quite so keen. First, Mr. R. Park of Bedale; second, the Rev. J. H. Pemberton; third, Mr. H. V. Machin of Workop.

Class 19, eight trebles: Mr. Machin was first, and his box contained a fine Horace Vernet that secured the medal for the best Hybrid Perpetual; second, Mr. Leggett of Colchester; third, Mr. R. Park of Bedale.

Class 20, nine blooms of any Rose except Tea or Noisette: Mr. Dennison won well with Horace Vernet, Mr. Machin second with Fran Karl Druschki and the Rev. J. H. Pemberton third with Dean Hole.

In Class 21 Mr. G. Speight was first for eighteen blooms, distinct. We could find no other entries in this class.

In Class 22, six trebles, the same exhibitor was awarded first under similar conditions.

In Class 23, six blooms of any Rose except Tea or Noisette, Mr. Speight was again first and Mr. C. Burgess second.

Class 24, twelve distinct Roses, for growers of under 1,000 plants: First, Mr. Mahlon Whittle of Leicester with a good box.

Class 25, nine blooms: Mr. E. H. Russell was the only exhibitor and was awarded a first prize.

Class 26, nine blooms, for growers of less than 500 plants: First, Mr. Upton of Leicester; second, Mr. S. Price.

Class 27, six blooms: First, Mr. A. M. Buxton of Branchall; second, Mr. C. G. Baron of Hitchin; third, Mr. Munro of Nantwich.

Class 28, four trebles: Mr. Upton of Leicester was first and Mr. S. Price second.

Class 29, six blooms of any Rose except Tea or Noisette: First, Mr. R. M. Munro of Nantwich; second, Mr. M. Whittle; third, Mr. S. Price.

Class 30, for six blooms of new Roses was disappointing, the flowers being small. The Rev. J. H. Pemberton was first, Mr. Leggett, Colchester, second and Mr. H. V. Machin of Workop third.

Class 31, twelve Teas, distinct, Messrs. R. and T. Park of Bedale were first, Mr. Leggett second and Mr. W. Byles third.

In Class 32, nine Teas, Messrs. Park were again first.

In Class 33, nine Teas, for growers of less than 500 Teas, the Rev. J. H. Pemberton was first.

Class 34, six blooms, for growers of less than 200 Teas: There was more competition in this class and the flowers were better; Mr. W. Upton of Leicester was first, Mr. M. Whittle second and Mr. T. G. Russell third.

Class 35, six trebles: Messrs. Park first and Mr. Leggett second.

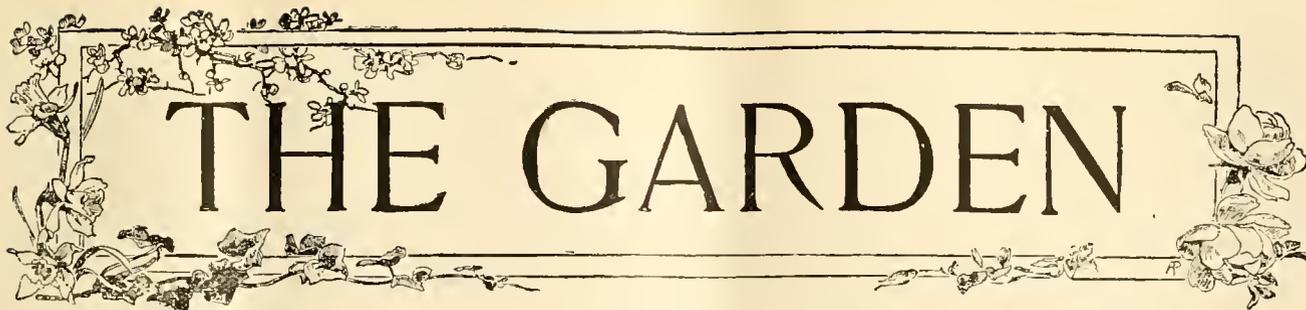
Class 36, six blooms of one variety: Mr. Mahlon Whittle was first, with the Rev. J. H. Pemberton second.

Class 37 was for decorative Roses, and here the Rev. J. H. Pemberton was an easy first with well-staged flowers; second, Mr. H. V. Machin.

The local section was not well filled, and the Roses were only of medium quality. Mr. C. Burgess of Knutsford won the first prize in each class for twelve Roses and six blooms distinct. No doubt the weather had much to answer for. H. E. M.



ORIENTAL POPPIES
(MAWSON'S).



THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Gar W.C.

"THE GARDEN" FLOWER SHOW.

AS one of the oldest readers of THE GARDEN I was much interested in the novel and original idea of a flower show being held under the auspices of a horticultural journal in London, exhibitors being confined exclusively to its own readers. I must say that I felt somewhat perturbed in mind as to whether the idea could be successfully carried out, as many difficulties seemed to present themselves against the possibility of organising a successful exhibition on these lines. However, no sooner had I entered the Royal Horticultural Society's Hall, Vincent Square, where the show (of upwards of 600 entries) was held on July 29, than these fears and doubts vanished and proved groundless. For what did I see? The great Hall practically full of beautiful flowers, ripe fruit and splendid vegetables. Many of these exhibits would have done credit to some of our great premier shows in the provinces or in London.

Table Decorations.—These were arranged down the centre of the Hall occupying its whole length. A most interesting and charming feature it proved to be. Many of the tables were arranged with exquisite taste and true artistic knowledge. The Sweet Peas were another great attraction. One might have been pardoned for supposing that for the moment one had gone back to the National Sweet Pea Society's exhibition, held in this same place a few days before.

It is late for Roses, and the weather has been against them lately. These were not so strongly represented as we had expected; but Messrs. William Paul and others came to the rescue with honorary exhibits, which were greatly admired and much appreciated. Hardy herbaceous flowers were well represented, Messrs. Barr and Sons, among others, putting up a superb honorary exhibit. Vegetables proved to be one of the strongest features of the show, the gold medal offered for the best exhibit in the show going to an excellent collection effectively arranged. The fruit classes were well filled with excellent specimens, one collection proving a strong second favourite for the gold medal.

It was remarked by many what a contrast the hall presented to the usual fortnightly meetings. Instead of the ordinary habitués attending these meetings we found a totally new class of exhibitors—mostly new faces, and evidently facing a new experience, many of them possibly for the first time—displaying much ardour in their work and a keen desire to make the most of their exhibits. Truly a pleasant and inspiring sight

to see, and, as the editor of THE GARDEN happily remarked, a notable GARDEN family party.

For the general improvement of the art of gardening, and more especially for the greater diffusion of the love of flowers among the masses of our country men and women, no influence has been more potent than that of flower shows. Why, then, should not this ideal show of THE GARDEN, appealing as it does to many thousands of readers, become in time a powerful factor in still further greatly stimulating the love of a garden, with all its attendant delights, pleasures and profit?

ONE OF THE JUDGES.

DAFFODIL NOTES.

THE NEW ROYAL HORTICULTURAL SOCIETY'S CLASSIFICATION.

THE new classification has not been actually published at the time of writing these notes, but its general principles have been made known, and two show committees (the Devon and the Midland) have adopted it as the basis of their 1909 schedules. As far as possible every known Daffodil has been labelled and given a place in one or other of the seven divisions into which the family is divided. It is pleasant to know that English names have been adopted in every case for this now peculiarly English flower, for such, at any rate, we can claim it to be as far as almost all the wonderful hybrids are concerned. It is to the advent of these that the modern Daffodil holds its present position in the world of flowers. The seven divisions are named as follows: (1) Long trumpets, (2) short trumpets, (3) large cups, (4) small cups, (5) flat cups, (6) double flowered and (7) bunch flowered. I will have some more remarks to offer when the list actually appears.

EARLY PLANTING.

I cannot insist too strongly or too often upon the desirability, if not the actual necessity, of early planting if the very best results are to be obtained. There is no doubt that better flowers are obtained from two year old clumps than from those planted late in the previous autumn, and which have not been a year in the ground. Anyone can easily prove this for himself, and it is well worth trying if there is the least doubt about its truth. For show purposes, if possible, plant in August. I always make a point of getting all my very best bulbs in the ground as soon as I can directly July has gone. This applies with double force to varieties with Poeticus blood in them. These never seem to have any resting season, for dig them up when you will it will nearly always be possible to find new roots as well as the old.

For ordinary garden purposes it is practically impossible to plant before September. The beds are full and there is still a wealth of flowers. Luckily for a very large number of garden lovers Daffodils are so accommodating that they do quite well enough for all ordinary purposes if we

can get them planted any time during this month. When, however, October comes in no time must be lost, or we shall see a decided falling off in size and quality of bloom in the spring.

WHAT TO BUY.

It is impossible to say much about the best sorts to get for showing. The best thing anyone can do who wants to begin a "show" collection is to get the schedules of those societies who publish a list of all the winning flowers, such as the Lincolnshire, the Midland, and the Kent, Surrey and Sussex. There the beginner will see the varieties that are included in the winning stands, and then, after providing himself with the bulb lists of four or five of the best firms, he can "cut his coat according to his cloth," and work out a selection of which the price comes within his means. Personally I would very much like to see all Daffodil societies include this most interesting and useful information when they issue their new schedules. It is of great value now, and it cannot fail in years to come to be of historical interest as well. I hope in future notes to deal with what to buy for the garden, for pots and for naturalising in grass.

JOSEPH JACOB.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

August 11.—Exmouth Horticultural Society's Show (two days).

National Carnation and Picotee Society—Northern Section.—The annual exhibition of the above society will be held in the White City, late Botanical Gardens, Old Trafford, Manchester, on Saturday, August 15, 1908. Full particulars can be obtained from the hon. secretary, Mr. T. W. Prescott, Murray Street, Great Ancoats.

Preparing for alterations.—No time should now be lost in planning any alterations or schemes of planting that may be in contemplation during the coming autumn and winter. Nothing saves time and trouble like having a well-thought-out plan, so that when the moment comes there is no doubt or hesitation about what is to be done. Moreover, if ground is to be moved or levelled, or even level ground trenched for planting, it should be done soon enough to allow the earth to settle. It is unfair to shrubs and trees to plant them in deep masses of newly thrown up earth. For some time it will be in movement, till it finally settles to its place. The shifting earth drags the roots and prevents them from taking good hold. Haste and scurry are fatal to all good work in this as in all things else. Often the garden designer or planter is urged by the owner of a place to begin, even after Christmas, and to get on as fast as possible, as he does not want to lose a season. There is no better way to lose a season than to plant too late, or, what is still oftener urged, to plant too large. A plantation of young trees 2 feet high put in at the right time (as early as possible after the leaves have fallen), will often overtake one that is planted late with larger trees. If some good and careful garden scheme is to be carried out there should be the best possible understanding between the owner of the place and the garden artist who is to take in hand its form and planting. If when the scheme is first put on paper there is any doubt whether it can be properly done, it is much better to make a fresh design of obviously less cost than to lop or skip or make compromises when the work is well on the way. It should also be remembered that it is extremely difficult, in many cases impossible, to give anything like an accurate estimate of cost. Local conditions vary so much that experience in one place or even a dozen may be but little guide in the thirteenth. An ample margin should, therefore, be allowed,

and this should be clearly understood. If these matters are thus adjusted the work will be a source of satisfaction to both employer and employed, and will in itself be all the better for the harmonious conditions in which it is done. Take carefully to heart these words (see Mackail's "Life of William Morris," vol II., page 22): "Be careful to eschew all vagueness. It is better to be caught out in going wrong when you have a definite purpose than to shuffle and slur so that people cannot blame you because they don't know what you are at. Hold fast to distinct forms in art. Don't think too much of style, but set yourself to get out of you what you think beautiful, and express it as cautiously as you please, but, I repeat, quite distinct and without vagueness. Always think your design out in your head before you begin to get it on paper. Don't begin by slobbering and messing about in the hope that something may come out of it. You must see it before you can draw it, whether the design is of your own invention or Nature's."

PRIZES FOR READERS. AUGUST.

THE BEST ROSES FOR AUTUMN FLOWERING.

- A First Prize of **FOUR GUINEAS**,
A Second Prize of **TWO GUINEAS**,
A Third Prize of **ONE GUINEA**,
And a Fourth Prize of **HALF-A-GUINEA**

are offered for the best essays on the above subject, with hints on the management of the hybrids and varieties mentioned. The object of this competition is to encourage the cultivation of the Rose for the enrichment of the garden in the late months of the year.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The essays must reach this office not later than Monday, August 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Flame Flower.—Visiting to-day (July 28) a cottage garden in a very secluded lane at Lingfield, Surrey, I was greatly interested to see the front window of the cottage, which looks north, entirely encased in luxuriant growth of *Tropeolum speciosum*. Not only was the entire base of the window and sides a mass of growth and flower, but the strong growths were being carried along over the window also. The soil is almost pure sand. How difficult some persons find establishing this beautiful climber, while others can do it apparently with the greatest ease. *Tropeolum tuberosum* was also growing freely in the same garden. I remember seeing the Flame Flower growing most freely on a southern aspect in the gardens of Frensham Hall, Haslemere, at that time the residence of

the late Hon. Charles Ellis, and a wondrously beautiful garden. There, on sand and in a warm position, it seemed to be almost a weed.—A. D.

Hollyhocks.—There can be no doubt as to the importance of the place that these grand plants have in our gardens. Their great stature, picturesque beauty and varied colouring of the flowers entitles them to the most careful consideration we can possibly give, and though they are already extremely popular plants and widely grown, we should like to see them even better treated. The scourge of the Hollyhock fungus which attacks so many plants of the Mallow family has of late years deterred many from growing them. No one can suffer more from this than the present writer, in whose garden, on dry, sandy soil, the pest is rampant, and Hollyhocks cannot be grown to anything like perfection. Still they can be grown to a certain degree by means of liberal feeding, and though when the spike is in flower the lower leaves are lost, there is still the grand bloom. In this case they are placed so that they rise among other plants and the defect at the base is not seen. We are informed by a nurseryman who grows these fine plants largely that growing them in a quite open place, where the early leaves get hardened by exposure to sun and air, is a safeguard against disease; still, in garden use, such a place cannot always be given. It is much to be wished that some nurseryman or patient amateur who lives upon the cool loamy soil where the pest does not thrive would take in hand the raising of these grand plants in the form that is the most beautiful for gardens. In answer to our request, one of the first Hollyhock growers lately sent us a series of blooms of their best varieties. They were superb in colour and culture, but from the garden point of view they were, with one notable exception, distinctly not so beautiful as they might have been. There can be no doubt whatever that the florist's Hollyhock, from the point of view of beauty, is much too round and tight and full of petals. In many cases also the spike is too much crowded with bloom. Of course, no one wants a thin or empty spike in a garden Hollyhock. There is just a point where the most supreme beauty of which the plant is capable culminates, both in the fulness of the spike and in the fulness of the individual bloom. In obedience to a false ideal, the florist's Hollyhock has been pushed beyond this point, and is no longer so good a thing in a garden as many a chance seedling that has no claim to good breeding. In the show flower the petals are too much crowded, and the whole flower too round and ball-like. Beauty in a garden flower is better than tightness or even than rotundity. This case of the Hollyhock is only one of many in which the influence of the show is unhelpful, even if not harmful to garden progress. But surely the Hollyhock is, above all things, a garden flower. We feel quite sure that growers will be only consulting their best business interests if they will give attention to producing the kind of flowers that are now wanted. Any grower who could be the first to establish a strain of plants answering to the present needs would be astonished at the healthy demand for the plants that would ensue. What is wanted is a wide flower with a large and distinct guard petal, and that the mass of petals in the middle of the flower should not be so closely packed as to prevent the play of light and shade, or hide its wonderful effect of the value of the colour. This play of colour in the shaded depths of the flower adds materially to its brilliancy; when it is shut out by the closely-folded packing of the inner petals one of the most charming of its beauties is entirely lost, and an important source of brightness when seen at a little distance is destroyed. The favourable exception mentioned above was in the case of a flower of deep and pure sulphur colour, whose looser centre and distinct guard petal made the bloom stand out among its fellows as a thing of rare and refined beauty.

Sweet Pea prospects and fertilisation of Sweet Peas.

—In an interesting note on the above subject by Mr. G. Clapham, published in THE GARDEN on July 25, he touches once more on the very debatable question of sporting and fertilisation, and seems to have settled it to his own satisfaction, but I am afraid he will have some difficulty in convincing others so easily. He says "the old theory of cross-fertilisation by insects must be dismissed, seeing how the flowers are fertilised," and he goes on to suggest that the blooms are so formed as to make it impossible for insects to get to the fertilising organs before the flower performs the operation for itself. Now, in the old-fashioned Eckfordian type this may be so, and everyone will admit that this so-called sporting was hardly ever heard of before the introduction of Countess Spencer, the first of its class. What must we deduce from this? Simply that there is a difference in the shape of bloom of the two types, the former having the wings and keel well overlapping and shutting up the organs inside, and in the latter both are comparatively open, and in a great many instances I have observed the style or stigma protruding from the keel long before the pollen on the anthers was ripe, thus making it not only possible but probable for it to be cross-fertilised, whether by insects, wind, or any other agency does not matter here. Mr. Clapham takes, for instance, his clump of Countess Spencer which has only six out of fifteen plants true, and he seems to take it for granted that everybody is in the same predicament. My packet of Countess Spencer, which I obtained from Mr. Bolton, did not contain one rogue. How do I explain this and square it with my other argument *re* shape of flowers. Well, my theory is that when Countess Spencer first appeared some of the blooms were more open than others, and, consequently, were cross-fertilised, while those more closed would be self-fertilised, and so on every succeeding season, the different results in Mr. Clapham's clump and mine being simply a process of roguing and selection on Mr. Bolton's part until now the keel is fairly close and so less liable to cross-fertilisation. This is only my idea, and I do not want to force it on anyone. Mr. Clapham's theory may be the right one; but, anyway, an exchange of ideas will do no harm. I fancy Mr. Cole and a few more raisers could clear up a lot of the mystery if they would.—J. F. BARWISE, *Lancaster*.

NEW MALMAISON CARNATION IRENE.

The accompanying illustration is of a charming new Malmaison Carnation called Irene. When first shown by Messrs. Hugh Low and Co. it was under the name of Gala, but subsequently this was changed. The colour is a most pleasing shade of soft pink, and the shape and habit of the plant leave nothing to be desired. The illustration shows what a shapely specimen this variety forms when given good treatment.

POPULAR CONFUSION IN NOMENCLATURE.

TIMES are propitious for remedial measures as regards incorrect terminology of plants. It is a generation in which practically all classes are making a general exodus into the country, when "Back to the Land" is the whimsical cry one hears on every side, in sense perverted from the original meaning. Back to the land, not to till and furrow, not to sheaf and plough, but to flee the city sights and sounds and smells and obligations, to luxuriate in quiet peace and leisure, to cultivate the charms of every flower and to form a lovely haven and retreat around us in which to spend our days reposefully. The rich flock to the

country, the poorer to the towns! Reversal of conditions of husbandry is to receive the desired and necessary encouragement for our country's welfare.

Still, there it is, the fever—a never-ending stream of town-bred families departing from the streets and traffic and the swirl of life, a competing crowd for ever hotly searching for "week-end" cottages, for desirable small estates within touch of the teeming cities. A constant rush outwards of one class which but desires beauty for its surroundings, the other class leaving pasture land and corn, orchard and the farm, filling up the gaps thus vacant in the lines and rows of bricks and mortar. One sure effect might be expected from this, that familiarity should induce a knowledge of our plants and lead to better naming of them. But how slow is the process! Ignorance is still as yet quite lamentable, haphazard, colloquial nomenclature, a mixed interchange of titles, a real not simulated indifference to the true significance of names, all most obvious and irrefutable.

We must hope that, however slow yet surely can we bring about a change for the better, conditions are so hopeful. The children live in the atmosphere of flowers, garden books are plentiful and cheap, plant portraits are traced for adults and for youngsters, on all sides do we see the signs of wider knowledge possible of attainment at very little cost of trouble and money. Horticultural colleges are open right and left, where our youth can train and our gardeners, too, can prove themselves more scientific, more interested than the old-time man of twenty years ago. This, then, is, I say, undoubtedly the time to stamp out and eradicate all possible errors that have crept so insidiously, so capriciously, into our garden nomenclature.

Till recently it has been regarded as somewhat in the light of affectation if one designated a well-known plant by its true term, which happened to be foreign, whereas its popular name might be absolutely erroneous. Latin and Greek names, &c., are invaluable, forming as they do a universally-understood medium, and I am convinced that the more we cultivate flowers and the more our knowledge and interest in them grows, the more will we make general use of such terms in preference to the local or common names, which leave such an enormous margin for error and which more frequently than not prove misleading rather than helpful. People use proper names more generally than they are aware, and without giving the matter a thought, names being not few in number which either have no English equivalent or pet name, or one that is very little known, as, take for instance, Lupine, Tamarisk, Berberis and Calceolaria.

A feature often noticed and much to be deplored is that some nurserymen endeavour to introduce into their catalogues fancy descriptive titles, and where none are already current invent a likely one to catch the public taste. Again that execrable habit, which of late has seemed to gain in popularity, of abridging a recognised word, for example, let us state at once almost the worst, where the beautiful and genuine name *Chrysanthemum* is reduced to a dreadful "mum," or take the docked and discordant vulgar "veg."

The journals should not for a moment countenance the entry of such retrogression into their pages. In certain minds there seems an inborn and involuntary tendency to begrudge the smallest expenditure of time and effort on pronunciation, and a disinclination to waste any by giving full value to a name, and this growing habit of "clipping," obnoxious in ordinary life, is unpardonable when introduced into the harmonious garden world. Before it becomes a settled custom let us try to stamp it out, disallow it on every occasion, refuse it in our books, in our journals, our societies, our shows and in our conversation. It is still a youngling, stunt it and let it languish of inanition. Right is right, and plants have their just claim to proper recognition, and now is the time to do our best to unravel all the tangles and set the matter straight for the future, so that the growing generation shall find a smoother way and lead their followers to a clearer view. Sometimes the ignorance shown is quite astounding, and



THE NEW MALMAISON CARNATION IRENE.

yet, if one considers the ripe old age some of the wrongful claimants have attained, perhaps it is not quite without excuse.

In a volume, the date of which goes back to nearly 230 years, I see some notable examples of a changeling name which still exists to-day. And to state only one instance of confusion, what vague and uncertain conjecture hangs around that dear and charming old-world name of "Gillyflower," to which how many of our sweetest flowers have not been put forward as owner! It must not be supposed that I am in favour of discarding the ancient sobriquets, old friends to which we have become attached. Indeed, far from it; for, apart from sentiment, there is often much practical meaning in the prebotanic names which one would be loth to lose. Still, a certain amount of chaos exists among them, and it is the elucidation of the puzzle that I urge on the present flower-loving generation, and particularly to be more careful when we use the foreign term that we do not misapply it.

E. CURGWEN.

TREES AND SHRUBS.

LOGWOOD (*HÆMATOXYLON CAMPECHIANUM*).

LOGWOOD, though introduced into this country as a Dyewood so long ago as Queen Elizabeth's time, and used as such more or less ever since, and though the plant itself was introduced in 1724, it is seldom seen, except in economic collections. A native of Central America, Colombia and the West Indies, it is naturally a stove plant. Its racemes of yellow flowers and abruptly pinnate leaves of a bright green colour tell at once that its natural order is Leguminosæ, the genus, *Hæmatoxylon*, being a monotypic one and the species *campechianum*, referring to Campeachy, which was formerly the principal mart for Logwood. The tree grows up to a height of 50 feet. The heartwood is very hard and dense, of a deep red colour when freshly cut, but turning to a dull black on exposure to air and light. As imported in logs, from which the sapwood has been roughly chopped off, and as seen stacked in piles in the West India Docks, it might readily be taken for firewood. In Jamaica, where it has recently been stated that the output of Logwood represents about one-fifth of the world's supply, the usual age for felling the tree is ten years. The roots of previously-felled trees also form an important article of export.

Formerly the principal use of Logwood was for dyeing raw wool and woollen goods, and it was also said to have been extensively used for dyeing the material for gentlemen's silk hats, as it gave to it a special lustre.

Aniline dyes, however, have largely replaced Logwood, though it seems there are still many uses for it, both in textile and leather dyeing, for which it seems peculiarly adapted. It is worthy of note that not long after its introduction Logwood fell into disrepute, owing to the want of knowledge of the dyers in fixing the colour, so that an Act of Parliament was passed, entitled an "Act for Abolishing Certain Deceitful Stuffs Employed in Dyeing Cloths," which law remained in force till its repeal in 1661. In medicine Logwood has a place as an astringent and tonic.

JOHN R. JACKSON.

MAGNOLIA HYPOLEUCA.

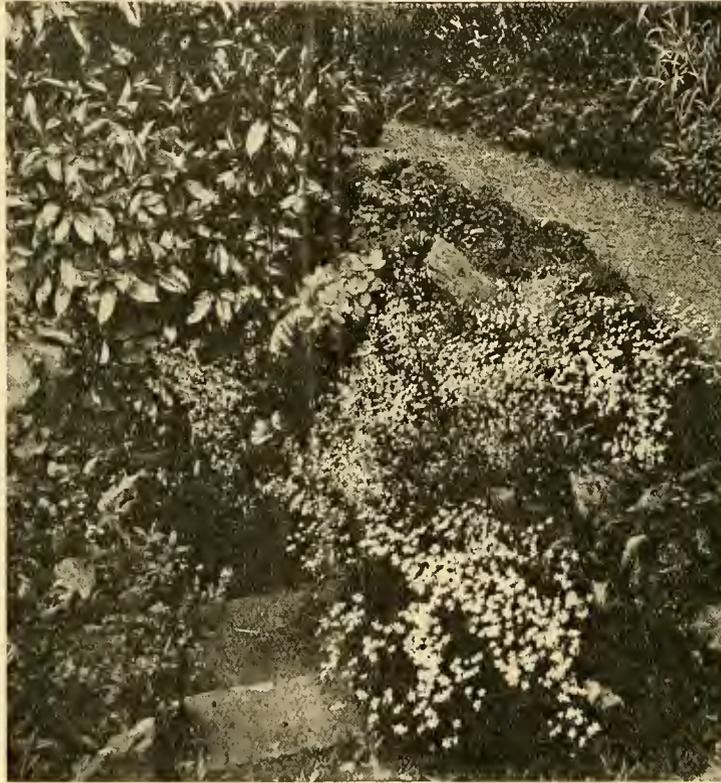
THIS is one of the large-leaved Magnolias, being in this respect somewhat in the way of the North American *M. tripetala*. The creamy white, fragrant blossoms, which are borne during the month of May, are said in Japan to be from 6 inches to 7 inches in diameter, but in this country they have not reached these dimensions. In this species the bright-coloured anthers also form a notable feature. This *Magnolia* is said by Professor Sargent, in "The Forest Flora of Japan," to reach a height of 100 feet, with a trunk 2 feet in diameter, that is, in the rich moist districts, while in others its extreme height is about 30 feet. In the above-quoted work it is referred to as "one of the largest and most beautiful of the deciduous-leaved *Magnolias*; and in the early autumn, when the

cones of fruit, which exceed those of any of our species in size, and are sometimes 8 inches long, and brilliant scarlet in colour, stand out on the branches, it is the most striking feature of the forests of Hokkaido, which in variety and interest are not surpassed by those of any other part of the world." Some years ago Mr. Goldring visited Japan, and he spoke of *M. hypoleuca* as unquestionably the finest tree he saw during the month of May. This will probably prove to be one of the most useful of the *Magnolias* for hybridising and also for garden decoration where choice plants are appreciated.

TWO BEAUTIFUL PYRUSES.

THE *Pyrus* family, although including many highly ornamental trees and shrubs, does not contain two more notable examples than the subjects of these notes.

Pyrus Scheideckeri, a hybrid between *P. floribunda* and *P. prunifolia*, has semi-double



AN OLD DIPPING WELL.

flowers of a deep blush colour, which are a rich crimson when in bud. It is very free flowered, the flowers being produced in clusters the whole length of the branches. It is stronger in growth than *P. floribunda* and makes long erect shoots. Flowering in May, it retains its beauty much longer than most of the *Pyruses*, the semi-double flowers being better able to withstand the weather. Beautiful when planted in clumps in a mixed shrubbery, or as an isolated specimen in the open, it is also amenable to culture as a wall shrub. It is not so frequently met with in gardens as it deserves to be.

P. niedzwetzkyana was introduced into this country in 1891 from Siberia. It is ornamental during the whole year, for its bark is dark purple in colour, the young leaves at first red becoming green with red veins as they get older, and in the autumn changing again to reddish purple, while its fruits when ripe are bright crimson. The flowers, which are produced in

clusters very freely during May, are deep rose, darker than those of any other of the *Crabs*. It forms a small tree when reaching maturity. Lovers of hardy flowering trees and shrubs when planting should certainly not overlook these two *Pyruses*, more especially as they are of easy culture, growing freely in almost any soil. Of the two mentioned, *P. niedzwetzkyana* is decidedly the best.

G. BATES.
Sotherton Hall Gardens, Aberford, Leeds.

DIPPING WELLS.

SURELY these may be called the friends of those who "follow the broad road," or bear the burden of the heat of the day. Here are no barriers to be laboriously overcome by the weary traveller, no water lying fathom deep, out of reach, but in these country dipping wells the fount lies cool and dark at our very feet, bubbling from rock or sandy bottom and set about with fair, green moss and dripping Fern, with, possibly, an arch of weather-beaten stone. Here the water-sprites and pixies give with both hands, inviting us to the cool retreat of mossy bank or time-worn slab, where we may listen to the almost inaudible voice of the well, murmuring long-forgotten legends and, possibly, catch a glimpse of the wild folk from the surrounding woods, or watch the villagers who come leisurely to fill their broad-mouthed pitchers, and who relate legends full of quaint humour and set with shrewd comments, and hold a fast belief in things uncanny. Often the wells have myths of their own, their special saints and magic powers. Unfortunately, some are "improved," Heaven save the mark! so that their charm and dignity is hopelessly lost. What sweet saint would remain the same stripped of her simple robe and dressed in the latest local fashion? Poor Saint Anne! Patient Saint Catherine! Even the children who sailed leaf-boats on your holy waters scramble for pennies among the strangers, who no longer come to pray but merely out of curiosity. Happily, however, there are still some quaint old wells left us, where the village girl drinks on Midsummer Eve, in all good faith that so will she keep her love true, and where the waters still retain their power of healing in the local

mind. Indeed, the subject of our illustration was accounted "properly marvellous" in the matter of rearing failing eyes. What charm there is about a dipping well! It has an individuality—it is friendly, smiling—the sun dances on its circling ripples, it is cool and still or mysterious, murmuring darkly to itself in its shadowed hiding, and this delightful friend one might meet more often if those blessed with running water in their grounds would make good use of their opportunities. It is not difficult to arrange a dipping well with all its charm, provided one allows Nature to direct and take "simplicity" for one's keynote. The smallest trickle of water will serve to furnish an old-world garden with its picturesque dipping well, and one may have still water, moss-grown rocks and worn stone steps to delight the eye and bring gladness to the hearts of the wild folk, those small people of the woods, ever ready to give thanks with song, or to show their charming ways to one who has given them refreshment.

MESSRS. LAXTON'S NURSERIES AT BEDFORD.

THE name of Laxton and Strawberries have been so closely connected of late years that in any notes on the above Strawberries will naturally find a leading place. Other leading features may be seen at their Goldington Nurseries, as here Roses, fruit trees and herbaceous plants, and numerous glass houses for forcing purposes occupy a large space and are well done as regards culture. Messrs. Laxton Brothers were the raisers of that popular and well-known Strawberry Royal Sovereign, and they have of late years persistently striven for better things, a process requiring much care and patience. In the soil here the Rose makes a splendid growth, and the plants are remarkably healthy. Considerable space is devoted to the bush and standard types, and all the best pillar and garden or decorative Roses are also grown in great quantities, the ramblers forming splendid objects. I noticed a large break of the charming Mme. Abel Chatenay, and the plants for their age were remarkable. Liberty was splendid, and is not nearly as much grown as it deserves. The lovely Mme. Jules Gravereaux and Mme. Vermorel, a very fine flower with beautifully shaded coppery yellow centre, produced on long strong stems, making it excellent for cutting, were others that I noticed. Bessie Brown made a shorter growth than some, but the rows of Mme. Jean Dupuy suggested that it would make a splendid bedder.

The herbaceous plants grown in an open position adjoining the Rose quarters were in robust condition, the Pyrethrums being very fine. Here was a new variety of great merit named Lord Rosebery, a very fine crimson and a great advance on the older varieties. Some very fine quarters of Delphiniums were seen, and the new seedlings adjoining showed some very charming colour and variety.

STRAWBERRIES.

These are naturally the leading feature at these nurseries. The new varieties of this year were first noted. Pineapple, as its name implies, has a brisk touch of Pineapple flavour. It is a rich fruit, luscious, and, though not large, is an excellent midseason variety, with good growth and a yellow orange flesh. Epicure was next on the list, and this tested with British Queen came out favourably. It is the result of crossing British Queen with Fillbasket, and has the rich Queen flavour with the free growth of the last-named. The fruits vary in shape, some being conical, others inclined to wedge shape, but it is a delicious fruit and should be a popular variety. Connoisseur, another of the new varieties, is a bright vermilion scarlet. It had Scarlet Queen as one of the parents, and the other was Fillbasket. It has bright pink flesh and a good flavour. Profit is the result of crossing Countess, an excellent old variety, with the well-known Sir J. Paxton, and the cross has given us a large midseason fruit, with a good deal of the Countess flavour and the firmness and cropping qualities of Sir J. Paxton, the plant being vigorous and the leaves thick and leathery, thus making it a good variety for poor soils.

Of other seedlings introduced earlier, The Cropper will, I think, prove of great value. The plants were remarkable for their crop and vigour, and in this respect it may be classed as an improved Fillbasket. It is one of the best for forcing to follow Royal Sovereign. In Reliance we have quite a different fruit, a main-crop, and one that anyone can grow to advantage. It is quite a new break. The old Vicomtesse Héricart de Thury was used as one parent, the perpetual St. Joseph being the other. It may be classed as a larger Vicomtesse, with its good flavour. In this cross I should have expected a later fruit. Progress, a seedling from British Queen and Latest of All, is an excellent late variety,

and should be most acceptable on account of its fine Queen flavour and free growth. Bedford Champion, a very large fruit, stands out well and is a great favourite this season, having borne wonderful crops. The large trusses well repay thinning.

Other varieties one cannot omit to mention are Reward and Laxton's Latest. The first named is, I consider, one of the best Strawberries raised, and is the result of crossing Royal Sovereign and British Queen. It has the vigour of the first named and the flavour is really fine, the fruits large and handsome, mostly wedge-shaped, and of a deep crimson colour. Laxton's Latest is valuable for its late crop and good quality. The fruits are rich and much better than other old late sorts. It is a free grower and a decided acquisition. Other varieties worth notice are The Bedford and The Laxton, but these are well known. The new Laxton Perpetual is also largely grown, and others of this type are being tested. Messrs. Laxton think that a valuable new type will be introduced from these.

OTHER FRUITS.

A new berry called the Laxton Berry, a cross between the Loganberry and Raspberry Superlative, promises well. The fruits were not ripe, but the plants were cropping enormously. Messrs. Laxton think highly of this. The fruit is not so acid as the Loganberry and leaves the stalk freely like the Raspberry. A new Red Currant called Laxton's Perfection is well worth notice. A quarter of this variety grown alongside of Fay's was most noticeable for its free growth and crop.

Special interest was centred on some fruit tree crosses—Pears, Apples and other fruits—and the large quantities of trained trees, such as Peaches, Nectarines and others were specially good. Cordon-trained trees occupied considerable space, and there appears to be a good demand for these trees now, Gooseberries and Currants also being grown in this style. Some fine breadths of the Black Currant Boskoop Giant were noticeable; this is the best black and almost free from the mite. Large quantities of Raspberry Superlative, one of the best reds, are grown, also the Loganberry is largely cultivated.

I have not space to go into the glass department in its various phases, but my note would not be complete without referring to the good work carried on by Mr. W. Laxton in raising and perfecting culinary Peas. The late Mr. Thomas Laxton many years ago did splendid work in this direction, and gave us some good things in

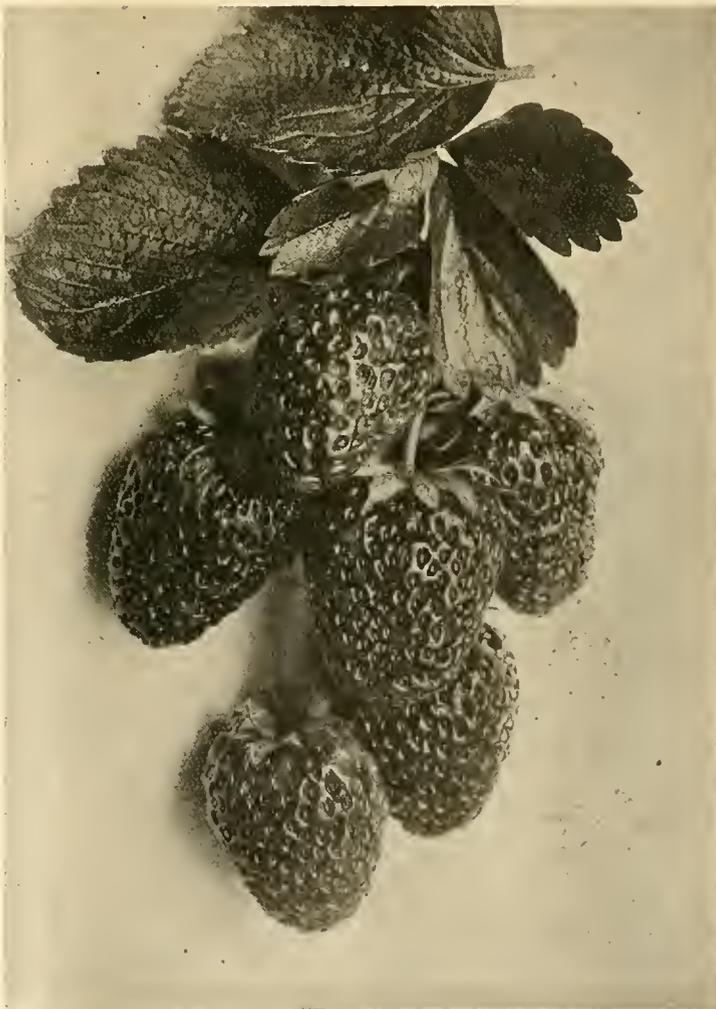
the early Marrowfats; the excellent Gradus, one of the firm's introductions years ago, still holds its own.
G. WYTHES.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

VIOLAS FROM CHINGFORD.

Mr. W. Beeching, Rosemead, Sewardstone, Chingford, sends some very fine named Violas, which are undoubtedly the result of careful and intelligent cultivation. He writes: "I enclose a few of my Violas for the Editor's table. Your excellent paper has had so many directions as to the cultivation of Violas that I need not add thereto. The very hot weather in June was not favourable to their growth, but the recent rains have brought them out again."



ROYAL SOVEREIGN, ONE OF THE MOST FAMOUS OF MESSRS. LAXTON'S STRAWBERRIES.

THE ROSE GARDEN.

A ROSE BANK AND ITS MAKING.

LANDSLIPS in a garden are not desirable things as a rule, but in one case at any rate an occurrence of this sort has been the cause of making a successful bank of Roses as shown in the photograph. The case in question is in a garden in Lincoln belonging to Mrs. H. W. Hutton, the garden being so near the town that Roses do not do at all well generally. On one side of this garden is, or rather was, a high stone wall, being part of the old close wall built in the time of Edward III. On the garden side of this wall the soil came up to within a few feet of the top, while on the other side was a deep drop, so that there was a considerable pressure on one side of the wall.

In the year 1904 the foundations of the wall having been loosened, the whole wall began to slip and to fall outwards till there was imminent danger of its falling down bodily. To relieve the pressure on the top of the wall, the earth was dug away all along the side to a depth of some 10 feet, leaving a large chasm right along the garden to be dealt with somehow. Later on the top half of the wall was pulled down and a long sloping bank made down to it in the garden, with a brick walk at the bottom. This bank faces south, but as there is a tall building close to the wall on the other side it gets a considerable amount of shade both from the sun and wind. The Rose Alberic Barbier was chosen to cover this bank, and was planted in the autumn of 1905, both at the top and bottom, those at the bottom having grown much the best.

The bank itself is 15 feet from top to bottom, and this year (1908) some of the plants from the bottom had not only grown up the bank but were going a good way up the posts of a pergola at the top. The plants were quite small when received from France, from the firm whose name they bear, so that they have grown very quickly. Their foliage is peculiar, being extremely smooth and shiny, looking almost like an imitation leaf, and is nearly evergreen. The flowers are at their best when just coming out, when they are a delicate yellow colour, and if picked then they

look very well as cut flowers; soon afterwards they open out into a rather loose white Rose.

From their rapid growth, the small amount of trouble and the immense quantity of flowers, they have been a most satisfactory covering for what looked like being an unsightly object.

F. H. HUTTON.

ROSE CHARLES LEFEBVRE.

(HYBRID PERPETUAL.)

WELL might the Rev. Foster Melliar, in his excellent book on Roses, call this variety the King of Crimson. How grand is the formation of the blossoms, every row of petals beautifully circular and as regular as a Ranunculus. Then what a colour it is! a splendid brilliant velvety crimson. It is a variety rather addicted to turning "bluish," a tint so much objected to, but this is only when the old flowers are suffered to remain instead of being cut off ere they reach this objectionable colour. Charles Lefebvre has produced one very fine sport in Sir Rowland Hill, a flower of a maroon and claret colour and very distinct and beautiful. This is one of the few good purplish coloured Roses we have. There used to be a beautiful variety grown years ago named Jean Cherpin. Its buds were of the colour of a Black Hamburg Grape. To see Charles Lefebvre in perfection it needs to be budded each year, or pruned back very hard and early, say by the end of February. Cut it well down to one or two eyes from the base. By so doing the strength of the roots are concentrated in about two eyes or buds, which are quite enough if quality is desired. Margaret Brassac and Paul Jamain are so very much like Charles Lefebvre that only an expert could see a difference. Charles Lefebvre was raised by Lacharine and sent out in 1861. Just about this time and during the following three or four years the collection of Hybrid Perpetuals had some grand additions, the like of which had never been seen before nor since. This fact is very puzzling to raisers. Why cannot they produce equally good Hybrid Perpetuals as in the past? Can anyone supply the answer? These very dark crimson Roses appear to be favourites with most people, especially those of a velvet-like texture and strong scent. A well-formed, deep crimson Rose is a flower that wants a lot of beating.

P.

THE FLOWER GARDEN.

HARDY WATER LILIES.

(NYMPHÆAS.)

NYMPHÆAS, or Water Lilies, have existed through many ages, and no other class of plants is more widely distributed at the present time. Species are indigenous in almost all parts of the world, and such diversity of flower-colour as white, blue, yellow, red and many intermediate shades is found in the genus.

Until the introduction of the coloured hardy hybrid Water Lilies, our water-gardens were little thought about, and contained merely a few of our native aquatics, including our own native Water Lily (*Nymphaea alba*). But with the advent of the coloured Water Lilies our garden waters began to improve, and have continued to do so up to the present day. Judging from the many beautiful and marvellous groups of aquatic and waterside plants which have been exhibited at our horticultural shows throughout the country during the past few years, perhaps in no other branch of horticulture have popularity and progress been more rapid than in the cultivation of aquatics. Another proof of this progress is found in the special lists and the many pages of catalogues now devoted to this class of plants by the different nurserymen who make a speciality of them.

Although we have a number of beautiful Nymphaeas from various growers and raisers, it is to M. Latour-Marliac we owe, perhaps, the heaviest debt of gratitude, for he was the first to give us hybrid hardy Water Lilies; and, while others have since been introduced, the Marliac hybrids hold their own, and for general utility are still unsurpassed. Now that our lakes and ponds may be studded over with these dainty Water Lilies, resembling, as it were, brilliantly-coloured stars, swaying to and fro in the breeze, and in brilliance of colour rivalling the Nymphaeas of the tropics, it may be said that no present-day garden is complete without some of these floral gems.

The cultivation of aquatics is of the very simplest: All they require is some good soil or the mud such as is found at the bottom of natural lakes. This is the natural food of Nymphaeas. Given this to grow in and plenty of water above them, they soon establish themselves and grow into handsome specimens, covering the surface of the water with a wealth of beautiful foliage intermixed with star-like flowers. But though the culture of Nymphaeas is so simple, it must not be thought that, once planted, there they are to remain for ever undisturbed or uncared for. No! Just as the perennial Asters and Sunflowers and other plants of our herbaceous borders require to be dug up and divided when they become too thick or get out of bounds, so with Nymphaeas. After growing for a few years, some, such as the Marliacea section, being very vigorous growers, become so crowded, and produce so much foliage, that the leaves grow right out of the water, and so completely hide what flowers are produced. It is only when all the leaves are floating that the true beauty of the plants can be appreciated.

Lakes or ponds exposed to the sun, but sheltered from rough and cold winds, provide the most suitable home for Water Lilies, although, failing possession of a natural piece of water, these charming plants may be grown in cement tanks, or even in tubs. A lake for the cultivation of choice aquatics should be free from all coarse weeds, and in all cases the natural mud will be the best soil in which to plant. Where it is impossible to lower the water for planting, this difficulty is soon got over. All that is necessary is to procure shallow baskets of various sizes, and place the plants in these with some soil; then put a few small stones on the surface



A BANK OF ALBERIC BARBIER ROSES.

“THE GARDEN” FLOWER SHOW.

THE long-looked-for exhibition of garden produce, for our readers only, was held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, on Wednesday, the 29th ult., and proved an unqualified and gratifying success. The large building was well filled, as no less than 650 exhibits were entered, only a few of which did not appear. Mr. E. Penfold, Kingston Road, Leatherhead, won the silver medal in the amateurs' section, and Mr. J. Tomlin, gardener to Mrs. Goldingham, Anningsley Park, Chertsey, in the open classes. The gold medal for the best competitive exhibit in the whole show went to R. H. Comyns, Esq. (gardener, Mr. Waterton), Heath Farm House, Watford, for a grand collection of vegetables staged in the open section.

SWEET PEAS.

By common consent the Sweet Peas were the most remarkable section of the show. Alike in the number of competitors and the quality of the blooms they were remarkable. In the amateurs' class for twelve varieties there were twenty entries; in that for six, thirty-two; in that for three, thirty-six; and in that for one, no less than forty-five! The open section was not quite so strong numerically, nevertheless there were twenty-two entries in three classes. Truly readers of THE GARDEN are pronounced lovers of Sweet Peas!

We will deal with the amateur section first. In Class 11, twelve bunches, distinct, E. T. Baker,

Esq., 63, Brigstock Road, Thornton Heath, was victorious with a magnificent collection made up of the following varieties: Frank Dolby, St. George (splendid), Mrs. Walter Wright, Helen Lewis, Evelyn Hemus (very fine), Elsie Herbert (very beautiful), Burpee's Primrose Spencer, White Spencer, Mrs. Harcastle Sykes, Bolton's Pink (excellent) and John Ingman. The second prize went to E. Burnett, Esq., 1, Sutherland Villas, Cedar Park Road, Enfield, who also had a charming lot of flowers, conspicuous among which were Lord Nelson (very rich colour), Mrs. H. Sykes, E. J. Castle, Frank Dolby, Duke of Westminster and Helen Lewis. The third prize was secured by G. Davidson, Esq., Elm Grove, Quadrant Road, Thornton Heath, who had a very good set.

The first prize for six was secured by Mrs. Paul, 11, High Street, Brentwood, who had Audrey Crier, George Herbert and Helen Lewis in very fine condition; and Mrs. H. Sykes, Helen Pierce and Dora Breadmore excellent. Mr. E. T. Baker followed up his victory in the large class with a highly creditable second. His best varieties were Evelyn Hemus, Elsie Herbert and Frank Dolby; but Countess Spencer, Helen Lewis and George Herbert were also very good. W. A. Voss, Esq., Eastwood Road, Rayleigh, Essex, was a capital third.

The Rev. J. B. Shackle, Dropmore Vicarage, Maidenhead, won with three, having a lovely trio composed of Constance Oliver, Mrs. Collier (in grand colour) and Evelyn Hemus. L. B. Ellis, Esq., Oakmead, Sharnbrook, Beds, was a very close second.

Victory in the class for one bunch fell to E. Penfold, Esq., Kingston Road, Leatherhead, who had an exquisite vase of Frank Dolby. Mrs. H. Agar, Orchard House, West Byfleet, was second with a capital lot of Henry Eckford, which is a difficult Pea to do well.

There were some huge flowers in the open classes. In the class for eighteen, victory fell to Mr. S. Glide, gardener to D. E. Higham, Esq., Coombelands, Addlestone, Surrey, who had immense blooms on very long stems, but not quite clean in one or two cases. His best varieties were Countess Spencer, John Ingman, Audrey Crier, Navy Blue, Mrs. Collier, Frank Dolby, St. George and Mrs. H. Sykes. Mr. A. T. Paskett, gardener to E. J. Johnston, Esq., Burr's Wood, Groombridge, was a good second, also with large blooms. His best varieties were Evelyn Hemus, Audrey Crier, Elsie Herbert, Mrs. H. Sykes and Black Knight. The third prize went to H. A. Sell, Esq., Kempston Villa, Cromwell Road, Laton, whose flowers were small but very bright.

The class for twelve brought out an excellent collection from Mr. J. Tomlin, gardener to Mrs. Goldingham, Anningsley Park, Chertsey, in which Frank Dolby, Nora Unwin, Countess Spencer, Helen Lewis, Sutton's Queen and Primrose Spencer were conspicuous. The second prize fell to E. Franklin, Esq., 4, Belmont Road, South Norwood, who was best represented by Helen Lewis, Mrs. W. Wright, Countess Spencer and Queen of Spain. Mr. Paskett was third.

With six bunches Mrs. T. H. Barnard, Kempston Hoo, Bedford, scored. She had John



GENERAL VIEW OF THE SHOW—JUDGING TIME, BEFORE OUR READERS WERE ADMITTED.

Ingman (under the name of George Herbert), Countess Spencer (named Enchantress) and Helen Lewis extremely good. Mr. Paskett was second with Elsie Herbert, Black Knight and Audrey Crier very fine.

ROSES.

AMATEURS' SECTION.

For eighteen Roses, distinct, the first prize was won by the Rev. J. H. Pemberton, Havering-atte-Bower, with a splendid even lot of blooms. His finest examples were Dean Hole, Florence Pemberton and William Shean. The second prize went to Vivian Rolt, Esq., Brook House, Storrington, Pulborough. Beautiful specimens of Mrs. E. Mawley and White Maman Cochet were shown in this lot. Third honour went to Gulliver Speight, Esq., The Square, Market Harborough.

In Class 2, for twelve Roses, distinct, the first prize again went to the Rev. J. H. Pemberton, Havering-atte-Bower, who had another beautiful lot, in which were grand flowers of White Maman Cochet, George Laing and Florence Pemberton. G. Speight, Esq., The Square, Market Harboro', was placed second, and the third prize went to Mr. A. Brice, 4, Providence Terrace, Highbury, Hitchin. C. A. L. Brown, Esq.'s exhibit from Hatfield Peverel was very

position. This was a very fine lot in which we noted lovely flowers of Frau Karl Druschki and George Laing Paul. Mr. H. L. Sell, of Luton, was awarded third prize.

In Class 4, Mr. W. E. Fielder, gardener to W. Hudson, Esq., The Lodge, Surbiton Hill, was the only exhibitor, but he staged a dozen good blooms and received the first prize.

In Class 7, for six Hybrid Perpetual Roses, distinct, H. Matthews, Esq., of Betchworth was first; Mr. E. Clements, The Gardens, Trusley Manor, Etwell, Derby, second; and Mr. H. L. Sell of Luton third.

For six Tea Roses, distinct, Mr. W. E. Fielder, gardener to W. Hudson, Esq., The Lodge, Surbiton Hill, well won the premier prize with good flowers. Mr. H. L. Sell, Luton, was second with some moderately good blooms.

GARDEN FLOWERS.

The class for twelve bunches of garden flowers (amateurs) brought nine competitors, and the quality and the arrangement of the exhibits were excellent. The first prize was awarded to George Cheney, Esq., Broadway, Kettering, who had excellent examples of Carnation Lord Roberts, Rose Anna Olivier, Phlox, Montbretia, Stocks and Gaillardias. The second prize was allocated to Lady Susan Trueman, Bayman

Mr. E. C. Curtis, The Old Rectory, North Petherton. Carnations, Sweet Peas and Gladioli were superb. A pretty series won second prize for the Rev. H. A. Soames, Lyncroft, Bromley, Kent, and the third prize was awarded to Mr. E. Clements, The Gardens, Trusley Manor, Etwell, Derby.

A special first prize was awarded to Mrs. T. H. Barnard, Kempton Hoo, Bedford.

CARNATIONS.

The class for six vases of border Carnations, three blooms in each (amateurs), brought together a dozen competitors, the first prize going to an admirable lot of blooms from R. Morton, Esq., Grange Dean, Woodside Park, N. Second honours fell to A. Childs, Esq., Brown Candover, near Alresford, Hants, whose flowers of the Maid (yellow) and Hildegard (white) were excellent. H. E. Greef, Esq., St. Andrews Terrace, Cambridge, was a good third.

For three vases of border Carnations, three blooms of each (amateurs), the Rev. J. B. Shackle, Dropmore Vicarage, Maidenhead, was placed first with good blooms of Sir Bevys, crimson; Miss Audrey Campbell, yellow; and Ketton Rose. The second prize went to Mr. C. Cox, Farnham Common, Slough; he exhibited very fine blooms of scarlet, pink and fancy sorts.



FIRST PRIZE COLLECTION OF FRUIT (OPEN SECTION). (Shown by Mr. M. Webster, gardener to E. J. Preston, Esq., Kelsey Park, Beckenham, Kent.)

highly commended. There were eleven exhibits in this class.

Class 3, for nine Tea Roses, distinct, G. Speight, Esq., was the champion with nice clean specimens, those of Souvenir de Pierre Notting and Mme. C. Soupert being particularly good. The second prize went to the Rev. J. B. Shackle, Dropmore Vicarage, Maidstone.

For six Tea Roses, distinct, the Rev. J. H. Pemberton, the Rev. J. B. Shackle and D. L. Freeland, Esq., Snodland, Kent, won in the order named. There were eight exhibits in this class, so the prize-winners may be congratulated on their success.

In Class 6, for six Hybrid Perpetual Roses, the first prize went to Mrs. E. Penfold, Kingston Road, Leatherhead, and the second to George Cheney, Esq., Kettering.

Class 7, for nine Hybrid Tea Roses, distinct, the Rev. J. B. Shackle was the champion. He had grand flowers of Princesse Metchersky, J. B. Clark and Dean Hole. G. Speight, Esq., was second, and D. L. Freeland, Esq., third.

Class 8, for six Hybrid Tea Roses, distinct, the Rev. J. B. Shackle was again first. Mrs. A. Brice, Highbury, Hitchin, was second. In this class two exhibits were disqualified as being not according to schedule.

OPEN SECTION.

Class 1, for twenty-four Roses, distinct, the Rev. J. H. Pemberton occupied the premier

Manor, Chesham, Bucks, whose chief exhibits were Ceanothuses, Alstromerias, Fuchsia globosa, Bocconia, Phlox and Hollyhoek. The third prize was taken by A. Childs, Esq., Alresford, Hants, whose chief exhibits were Scabious, Scarlet Phlox, Dorothy Perkins Rose, Bocconia cordata and Stenactis.

In a similar class, for six bunches (amateurs), the first prize was taken by the Rev. J. B. Shackle, Dropmore Vicarage, Maidenhead, whose vases of Sweet Peas, yellow Carnations, Alstromeria and Mme. Abel Chatenay Roses were very charming. The second prize went to E. Penfold, Esq., Leatherhead, who displayed Lavatera, Candytuft, Chrysanthemum coronarium and Sweet Peas in excellent form. Third honours fell to G. Cheney, Esq., Broadway, Kettering.

The four exhibits in the class for twelve bunches of garden flowers (open) made a brave show. A beautiful series won first prize for Mr. W. E. Fielder, gardener to W. Hudson, Esq., The Lodge, Surbiton. Phloxes, Carnations, Mme. Abel Chatenay Roses, Ceanothus, Godetias, Zinnias, Stocks and Sweet Peas were splendid. A good second was found in Mr. Sell, who had fine Achilleas, Roses, Lathyrus, Erigeron and Gaillardias. The third prize was well won by Mr. R. Brown, gardener to Lady Tress Barry, St. Leonards Hill, Windsor.

For six bunches of garden flowers (open) there was a spirited contest. The first prize went to

H. E. Greef, Esq., St. Andrew's Terrace, Cambridge, was again third.

The class for twelve vases of border Carnations, distinct, three blooms of each (open), brought three fine groups, the first prize being awarded to R. Morton, Esq., Grange Dean, Woodside Park, N., who staged a most beautiful lot of flowers in selfs and fancies, the entire lot denoting the best culture. The second prize went to F. Fairlie, Esq., Springfield Road, Acton, who had a choice lot of blooms. E. C. Curtis, Esq., The Old Rectory, North Petherton, secured the third prize.

For six vases of border Carnations, three blooms of each (open), there were seven competitors, the premier award once more going to R. Morton, Esq., Woodside Park. His scarlet and yellow selfs were superb flowers. J. Fairlie, Esq., Acton, was second and H. E. Greef, Esq., St. Andrew's Terrace, Cambridge, third.

VIOLAS, PANSIES AND ANNUALS.

For six Violas (Tufted Pansies), distinct (amateurs), E. Moseley, Esq., Brisbane Road, Ilford, was first with Goalkeeper, Immortalité, Mrs. J. W. R. Johnstone and others. The second prize went to W. Poulteney, Esq., New Barnet.

In the class for six fancy Pansies, three blooms of each (amateurs), the first prize was well won by T. Hamilton, Esq., Coatbridge, Lunark, whose



THE GOLD MEDAL EXHIBIT. (Staged by Mr. Waterton, Heath Farm)

flowers of Robert Melville, Tom McCullum and Alice Lister were very fine indeed. Second prize went to V. Rolt, Esq., Storrington, near Pulborough, Sussex, for capital blooms of David Wilson, W. H. Clark and R. C. Dickson.

For twelve *Violas*, three blooms of each (open), W. Compston, Esq., Higher Hurdfield, was first with large and good flowers, the second prize being awarded to Mr. H. L. Sell, Luton, Beds.

For nine kinds of annuals (amateurs), first prize was appropriated by H. Cox, Esq., Jersey Lodge, Maidenhead, for excellent vases of *Zinnias*, *Nigella*, *Marigolds*, *Stocks*, *Salpiglossis* and *Godetias*. Second honours fell to Lady Susan Trueman, Chesham, Bucks, whose best vases were *Chrysanthemum burbridgeanum*, *Shirley Poppies* and *Eschscholtzias*. G. Harrow, Esq., Ponder's End, Enfield, was placed third.

For twelve kinds of annuals (open), the first prize went to Mr. J. Tomlin, gardener to Mrs. Goldingham, Anningsley Park, Chertsey. He had good vases of *Godetias*, *Sweet Peas*, *Lavateras* and *Marigolds*. Lady Tress Barry, St. Leonard's Hill, Windsor (gardener, Mr. R. Brown), was a good second. Third prize was awarded to Mr. G. Harrow, Ponder's End, Enfield.

TABLE DECORATIONS, BASKETS AND BOUQUETS.

There was only one competitor in the open class for a table decoration of *Roses*, Dorothy Perkins being used in association with *Asparagus*. This was exhibited by Mrs. H. L. Sell, Luton.

In the open class for a table decoration of any flowers there was only one competitor, Mrs. Sell being once again awarded first prize. The display was very pretty indeed, pink and cream *Sweet Peas* and dainty foliage beautifully arranged well meriting the distinction.

For a table decoration of *Roses* (ladies only), Mrs. Sell was again the only competitor, securing first prize for a fine exhibit.

In the class for a table decoration, any flowers (ladies only), Mrs. H. L. Sell was the first of the three exhibitors with a really charming display. Cream and lavender *Sweet Peas* with pale green *Asparagus* fronds and pieces of tanned *Hornbeam* judiciously worked in made a striking exhibit that fully deserved leading honours. Second prize was secured by Mrs. Edwards, 2, Warwick Terrace, Sydenham, who had *Henry Eckford*, a cream *Sweet Pea*, deftly disposed with foliage. Third prize was placed to the credit of Mrs. H. J. Kybert, 74, Heigham Road, East Ham,

whose *Sweet Pea* flowers were very pretty, but rather formally arranged.

There were four charming table decorations of *Roses* in Class 20 (amateurs), a really charming table of *Irish Elegance*, single, winning leading honours for Mrs. A. E. Cullis, 52, Ellerby Street, Fulham, W. Dainty buds and lovely foliage made a most artistic decoration. The second prize was secured by Mr. W. H. Turner, 66, Victory Road, South Wimbledon, with pink and cream *Roses* deftly disposed. Third prize went to Mrs. E. Esdaile, St. Leonards, Crescent Road, New Barnet, clusters of *Dorothy Perkins* making a pretty decoration. The green centre cloth spoilt this display.

No less than nine exhibitors entered the class for a table decoration of any flowers (amateurs), nearly all of them using *Sweet Peas*. First prize was secured by Mrs. L. Jones, 100, Marsala Road, Lewisham, S.E. *Enchantress* or a similar *Sweet Pea* made a lovely exhibit, and this was improved by the addition of *Asparagus*, *Gypsophila* and *Grasses*. Second prize was well won by Mrs. H. L. Sell, Kempton Villa, Luton, Beds, the combination of colour and the subjects used being all that could be desired. Third prize went to Mr. C. C. Rowland, Muckleton Manor, Gloucester.

There were four baskets of flowers in Class 31 (ladies), pretty *Sweet Peas* and a few sprays of other subjects winning first prize for Mrs. A. Swann, Ramsden Heath, Billericay, Essex. Mrs. Sell, Luton, was a good second, the yellow colouring being rather overdone, otherwise the basket was very pleasing. Mrs. Alex. Stenning, Hoathley Hill, East Grinstead, was third with an interesting basket that must have been very pretty earlier in the day.

Of the two bouquets shown Mrs. Sell was an easy first prize-winner, having *Roses*, *Carnations* and *Sweet Peas* artistically disposed among *Asparagus* foliage. Second prize was awarded to Mrs. J. W. Lightfoot, 256, Friern Road, East Dulwich, for a bouquet of *Roses*.

Of the six entrants for a lady's spray *Sweet Peas* superbly arranged with pretty foliage won first prize for Mrs. Sell. Mrs. Edward was second with a spray of *Odontoglossum* and *Asparagus*, and third prize for *Raby Castle Carnation* went to Miss E. H. Ekins, Russhden, St. Albans.

There were seven competing in the class for a gentleman's buttonhole, Miss Ekins winning first prize with three pretty buds of a *Noisette Rose*; Mrs. Edwards was second with an *Odontoglossum* and a bud of *William Allan Richardson* won third for Mrs. A. Swann.

For the best greenhouse or window plant Mr. W. G. Child was first with *Manettia bicolor* and Mr. W. Bignell second with a small, well-grown *Palm*.



FIRST PRIZE EXHIBIT OF TWELVE BUNCHES OF SWEET PEAS (AMATEUR SECTION).

VEGETABLES.

The class for a collection of vegetables, not less than nine kinds (open), brought seven competitors, whose exhibits denoted the highest cultural skill; indeed, it is not too much to say of the leading groups that the collections would have occupied winning positions in any competition in the kingdom. The first prize in a close contest was awarded to R. H. Comyns, Esq., Heath Farm House, Watford (gardener, Mr. W. Waterton), who staged fourteen distinct sorts, including Prize-winner Pea, Canadian Wonder Dwarf Bean, Mammoth Longpod Broad Bean, Cauliflower Magnum Bonum, Vegetable Marrows, Perfection Tomato, Windsor Castle Potato, Ailsa Craig Onion, Carrots, Cabbage, Leeks, Celery and Cucumbers as his best. This exhibit from Messrs. Sutton's seeds also received the gold medal awarded "for the best competitive exhibit in the show." Little inferior was the collection staged by Mr. W. Gaiger, gardener at Kendall Hall, Elstree, Herts, which received second prize. In this group some fifteen kinds were staged, and great excellence marked the exhibits throughout. The third prize was awarded to Mr. Tomlin, gardener to Mrs. Goldingham, Anningsley Park, Chertsey. For six dishes of Peas, distinct (open), Mr. W. Waterton, gardener to R. H. Comyns, Esq.,

For two Cucumbers (open), T. Jackson, Esq., North Hill, Highgate, N., was first, Mr. W. Waterton, gardener to R. H. Comyns, Esq., Watford, coming second.

There were no less than seventeen collections of vegetables in the amateurs' class for not less than six kinds. First prize was secured by Dr. A. H. Boyes, The Grange, St. Albans, Herts, with a really creditable display. Cauliflowers, Longpod Beans, Carrots, Scarlet Runners, Beet, Peas, Marrows and Potatoes were all well done. Mr. C. C. Rowland won second prize with a very fine display, this following the leader closely. Onions, Cauliflowers and Celery were superbly shown in this exhibit. Third prize was won by Mr. F. J. Gentle, Bedmond, King's Langley, with a capital exhibit.

The seven exhibits of three dishes of Peas (amateurs) were a good feature of the show. First honours went to Mr. A. Childs, Brown Candover, near Alresford, Hants, for a splendid trio. Mr. F. J. Gentle was a close second, and Mr. C. C. Rowland third.

Seventeen dishes of Peas made a capital display in the amateurs' single dish class, Mr. H. Matthews, Brookham Green, Betchworth, Surrey, being first with Quite Content. Second prize was secured by Mr. R. H. Lessware, East Barnet Road, New Barnet. We were pleased to see so fine an exhibit of vegetables.

Childs was placed first with an example of New Scarlet Intermediate and Dr. A. H. Boyes second with a beautiful example of Carter's Summer Favourite.

No less than fifteen exhibits of three Beet-roots (Turnip-rooted) were shown in a class for amateurs. First prize was won by Mr. W. J. Child, Thornton Heath, with a clear trio, followed in the second place by Mr. H. Hayter, Fieldhurst, Addlestone.

FRUIT.

Competition in the open section was good in most classes, and the amateurs also staged some very fine dishes.

For a collection of fruit, consisting of Gooseberries, Currants and Raspberries, Mr. Mark Webster, gardener to E. J. Preston, Esq., Kelsey Park, Beckenham, Kent, showed five varieties of Gooseberries, two of Raspberries and Red, Black and White Currants, all in magnificent condition. Second prize was awarded to Mr. Clements for a really interesting exhibit.

For three dishes of Strawberries, Mr. E. Clements was the only exhibitor and was placed first. Laxton's Latest, The Bedford and Waterloo were the varieties shown.

Four entered for the collection of Gooseberries, Currants and Raspberries (amateurs), and made a highly creditable display. First prize was won by Mr. A. Child with the Currants (Black, White and Red) well represented and superb Raspberries. The Gooseberries were, nice and ripe. A close second was found in Mr. W. Bignell, 5, Castle Yard, Highgate, N., who had a capital series; and third prize was won by Mr. H. Bass, 22, High Street, Highgate, with a comprehensive display.

Four exhibitors showed in the amateurs' class for two dishes of Gooseberries, Mr. Penfold winning with splendid fruit. Mr. H. Bass was placed second with much smaller though ripe fruit, and Mr. Bignell was a good third.

Mr. E. Penfold was a capital first for two dishes of Red Currants in handsome form and condition, and Mr. Rowland was placed second.

The same order was observed in the class for two dishes of White Currants, the exhibits in both cases being meritorious.

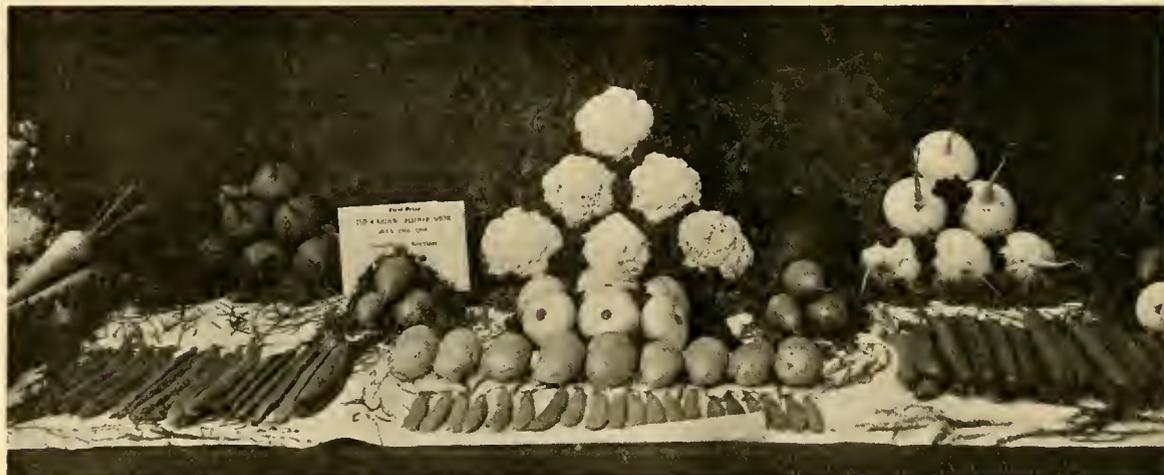
For two dishes of Black Currants, distinct, Mr. H. Bass was a good first with handsome fruits. Mr. C. C. Rowland had beautiful fruit for the second prize, and Mr. Bignell was close up for third honours.

Splendid fruit was shown in the amateur class for a dish of Raspberries, and seven entries were forthcoming. Mrs. A. M. Platt, Ken View, View Road, Highgate, N., was a good first with large bright berries; Mr. William Lamprey, King's Sutton, near Banbury, second; and Mr. H. Matthews third.

Three capital exhibits were shown in the class for three dishes of Currants—red, white and black. Mr. C. Cox was an excellent first, Mr. Penfold second with a good series and Mr. R. J. G. Read, Cadbyrie House, Ealing, W., third.

For a dish of fruit not mentioned in any other class Lady Susan Trueman, Bayman Manor, Chesham, Bucks, was placed first for a splendid Melon and Mr. Rowland second with large Bigarreau Cherries. There were ten entries.

Reference to Trade Exhibits will be found on page v.



FIRST PRIZE COLLECTION OF VEGETABLES (AMATEUR SECTION). (Shown by Dr. Boyes.)

Heath Farm House, Watford, was first. He had fine dishes of Masterpiece, Duke of Albany, Quite Content and Prize-winner. Second prize was won by Mr. E. Clements, gardener at Trusley Manor, Derby, and the third prize went to Mr. H. L. Sell, Luton, Beds.

A similar class for three dishes brought eight collections, the first prize going to Mr. W. Gaiger, gardener at Kendall Hall, Elstree, and second to Mr. W. Waterton, gardener to R. H. Comyns, Esq., Heath Farm House, Watford.

In the open class for three dishes of Potatoes seven competitors entered. Mr. R. Brown, gardener to Lady Tress Barry, St. Leonard's Hill, Windsor, was the champion. His dishes of Superlative, May Queen and Gladiator were superb examples. An equal second prize was awarded to A. H. Boyes, Esq., The Grange, St. Albans, Herts, and Mr. W. Waterton, gardener to R. H. Comyns, Esq., Heath House Farm, Watford. Snowdrop, Centenary, Duke of York and Superlative were specially noticeable in these exhibits.

The class for one dish of Tomatoes (open) brought eight competitors, Mr. J. Tomlin, gardener to Mrs. Goldingham, taking first prize with Sunrise. Second prize went to Mr. W. Gaiger, gardener, Kendall Hall, Elstree, Herts.

Nine exhibits of three dishes of Potatoes (amateurs) were a meritorious lot. Superbly fine tubers secured first prize for Dr. A. H. Boyes, The Grange, St. Albans. They were without a blemish, and were represented by Carter's Surprise, Duke of York and Snowdrop. We have never seen finer Potatoes so early in the season. Mr. A. Childs had an interesting series which secured second prize for him, and third prize went to Mr. C. C. Rowland with a nice lot.

There were sixteen entries in the amateur's class for a single dish of Potatoes, these making an excellent contest. Mr. F. J. Gentle, Bedmond, King's Langley, was placed first with Windsor Castle. Mr. E. Penfold, Kingston Road, Leatherhead, was second, and Mr. W. B. Child, Front Road, Thornton Heath, third.

For a bunch of autumn-sown Onions, there were seven competitors, Mr. E. Penfold being the champion with grand Ailsa Craig; Mr. Gentle was second.

Ten exhibits of Vegetable Marrows made a good show in the amateur class for a single Marrow. Mr. Gentle was first with a capital example of Sutton's Long White and Mr. C. Cox, Bucklands Cottage, Farnham Common, Slough, second with a pretty exhibit.

Carrots were well shown by amateurs, no less than eleven exhibits being in evidence. Mr. A.

or a few ties across the basket to keep the plant from floating out. Each plant can then be sunk where it is intended to grow, and before the basket has rotted away the plant will have rooted through and secured itself to the bottom. Large plants may also be planted by fixing a stone or other weight to the root and dropping the whole in where the plant is required to grow. In artificial ponds or tanks a copious inflow of water is not at all desirable; a trickle of water sufficient to keep things wholesome is all that is needed, and is, indeed, far better than a constant inrush. In small tanks a layer of soil to the depth of 10 inches or 12 inches might be spread over the bottom, and in larger structures little mounds or hillocks, made by placing a few turves together, should be formed.

When planting, secure the plant with a peg or weight to prevent it floating. The soil in which Nymphæas are to be planted should be prepared some months before it is required, and should consist of good turfy loam which has been cut and stacked for at least twelve months, plenty of half-decayed leaves and some sharp sand, and the compost should be kept dry until it is wanted for use. The use of manures in any form I do not advocate, as they only excite rank leaf-growth and predispose to disease.

THE BEST TIME FOR DIVIDING OR PLANTING NYMPHÆAS

is the spring, about the end of April or beginning of May, although they may be safely moved at a much later period. If planted at the time stated the plants make sufficient progress to give a supply of bloom before the summer is gone. The flowering season for established plants begins early in June, reaches its height in August, and in good years lasts well on into October.

The depth of water required for the culture of Nymphæas may vary from 18 inches to 4 feet or 5 feet; but, although I believe some of the stouter-growing ones would do in a much greater depth, it is not wise to plant them so deeply, for they could not be got at without a boat or raft, and when it became necessary to divide and transplant them the water would have to be lowered, and this is not always an easy matter. I should, therefore, never plant choice Nymphæas in a greater depth of water than I could get at with a pair of wading-boots, with the tops made long enough to come well up under the arms. Four feet of water above the crowns of any of the stronger-growing varieties is quite enough, and not less than a foot above the lesser-growing ones.

A crowded water-garden is often a matter of necessity; but where space is at command the plants are best in bold groups and far enough apart to keep them quite distinct, while allowing for effective contrast in colour. All the *Marliacea* section, being of strong growth, together with similar strong-growing kinds, should be placed in the deepest water, but should not be put so far out that their beauty cannot be seen from the margin of the pond or lake. Drawing nearer to the margin, where the water will naturally be a little more shallow, we may plant the *Laydekeri* section and some of the American hybrids, which will be admirably suited for this position; and for planting nearest to the margin we have the lovely *odorata* section and the *pygmæa* forms. To give

A LIST AND DESCRIPTION OF THE NYMPHÆAS in cultivation at the present day would occupy far too much time and space. They are accurately described by those who make a speciality of them. But a few might be mentioned which stand out above all others. The first is *N. gloriosa*, which is beyond doubt a grand variety, rich carmine-red in colour, with abundance of bright orange stamens, and the only Nymphæa with five sepals. *N. Marliacea chromatella* and *N. odorata sulphurea* are still the best yellow-flowered varieties we possess; *ellisiana*, *atropurpurea*, *sanguinea* and *William Falconer* are some of our best dark-flowered varieties; and for

rich rosy crimson we have *James Brydon*, quite one of the best American varieties; *lucida* and *Robinsonii* are also good in this shade of colour. Of white-flowered varieties there is none better than *gladstoniana* and *Marliacea albida*. The *odorata* section, of which *rosacea*, *rubra* and *exquisita* are some of the best known, are all sweetly scented. The last-named section will soon deteriorate if confined in small tanks, and I have sometimes heard of failures with it under such conditions, which can only be attributed to confinement. The *odorata* section is easily distinguished from all others, as the varieties have long, wiry-looking rhizomes, or root-stocks, sometimes measuring 4 feet or 5 feet in length. Where space can be found for them to grow freely on the bottom of large or medium-sized ponds, they are bound to succeed.

Although Nymphæas are naturally sun-loving plants, yet I have always noticed that the water-garden is seen at its loveliest on dull, showery days, when the water is clear and the leaves and flowers are thickly set with diamond drops that glisten and sparkle like rubies, topaz and garnets. The flowers vary as to opening and closing, and while on bright days, in the beginning of the season, they open in early morning and, unless the weather is dull, mostly close about three or four o'clock in the afternoon, as the season advances just the reverse takes place—they open later in the day, and sometimes keep open even into the early moonlight of a summer's night.

(To be continued.)

THE PLUME POPPY.

(*BOCCONIA CORDATA*.)

THIS is a handsome perennial introduced into this country from China in 1795. It is a noble, hardy plant, valuable both for its foliage and for its inflorescence. It throws up a mass of close-growing stems, often to a height of 9 feet or more, these being clothed with silvery grey, deeply-veined leaves, which are deeply lobed. The tall stems are terminated by panicles of creamy white flowers. Some of the terminal panicles are often almost 3 feet in length, and the flower-shoots also throw out lateral bloom-sprays. After the blossoms fade they turn to an amber-brown colour, which has a pleasing effect.

No garden should be without this excellent plant, which is at once bold, handsome and picturesque. It is especially suited for massing, when a noble picture is secured, or for planting in isolated positions on the lawn, in the front of



THE PLUME POPPY (*BOCCONIA CORDATA*) IN A DEVONSHIRE GARDEN.

shrubberies, or anywhere where abundant room may be given it for future development. Growing at the back of wide herbaceous borders, associated with such plants as *Arundo Donax* and the graceful *Spiræa lindleyana*, its effect is very distinct and ornamental, the towering stems with their great feathery plumes shaded from ivory white to reddish brown being unique in tint and form, while the green of the upper surface of the lobed leaves contrasts pleasingly with the silvery white of their woolly reverse.

The plant requires some time to become thoroughly established and to attain its rightful proportions, but when once thoroughly naturalised is indifferent to soil, throwing up stems exceeding 9 feet in height even on a bank of light stony staple, which is persistently robbed by the roots of neighbouring Fir trees. The *Bocconia* is worthy of a place in all gardens that can afford room for it. When once established it must, however, be kept within bounds, as it is a veritable land-grabber, and if unrestricted its suckers will encroach on the surrounding ground, greatly to the disadvantage of its neighbours. The nut brown stems of the withered blossoms should never be cut away, but allowed to remain, when they will provide an autumn picture as pleasing as the gradations of tones one gets earlier in the flowers. The *Bocconia* is a capital plant for the wild garden, as when once well established it will hold its own with the native vegetation. It may be easily raised by root-cuttings 2 inches in length placed in porous soil in pans and kept moderately moist under glass. It was at one time known as *Macleaya cordata*.

South Devon.

S. W. FITZHERBERT.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE FLOWER GARDEN.—The Erythronium (Dog's-tooth Violet) is a pretty subject to plant at the present time. Although not fastidious as to soil it does not succeed very well in heavy clay. I plant it in well-worked soil, 2 inches deep and 3 inches apart, in colonies for effect, choosing semi-shaded quarters. I am



1.—SHOOTS SUITABLE FOR MAKING INTO CUTTINGS OR PIPINGS.

busy layering Pinks and Carnations, which will be severed from the old plants when well rooted. Gladioli, the spikes of which are growing vigorously, may be improved by frequent applications of liquid manure, and Asters and Stocks also take kindly to this feeding. Geraniums, Calceolarias and similar bedding plants may now be propagated by cuttings for next season's supplies. The former may be propagated in a bed in the open, using light sandy soil, or they can be inserted in similar soil in boxes. Select firm growths and trim off the lower leaves.

The Window Garden.—The white and blue Campanulas should now be making a beautiful display in the window. See that the soil does not get dry or their period of blossoming will be shortened. Do not allow the plants in the window to remain in one position continuously; they should be turned round from time to time as they benefit considerably thereby. Those who wish to raise a fresh batch of Fuchsias, Geraniums and similar plants should insert healthy cuttings at the present time. A warm window and a bell-glass or a box covered with a sheet of glass will make an excellent propagator. Always remember to use fairly light sandy soil, and press the soil firmly at the base of each cutting. The showy Guernsey Lilies and Vallotas may now have copious applications of water.

The Vegetable Garden.—I am just about to earth up my earliest batch of Celery. This is done in a variety of ways. One method is to first place 3 inches of soil round the base of the plants, taking care to avoid pressing the soil too closely. Subsequently—say, in about a fortnight—repeat the operation, and from time to time add soil until completed. Another method is to tie pieces of brown paper, 6 inches wide, at intervals of a few weeks; in this way the bleaching is beautifully done without the unpleasantness that accompanies the moulding up with earth. Before either method of bleaching is begun, remove all offsets and damaged stems and leaves, and also

draw all the stems moderately close together with raffia. Recently-sown Turnips for autumn supplies must be thinned in good time; 8 inches apart is a good distance to allow. I am sowing Tripoli, Rocca and White Lisbon Onions at the present time. The last-mentioned is a capital variety for saladings during the late autumn and winter, and the two former sorts will make large bulbs for harvesting next July.

The Cold Frame.—This useful adjunct of the garden should now be in frequent and almost continuous use. Have ready in good time the quarters intended for Violet culture. Although the Violets are not lifted and planted until September, the soil must be settled and ready for their reception in good time. Place the frame on a bed of leaves 2 feet or 3 feet from the ground, and tread this all over firmly. Fill in, after placing the frame in position, 10 inches deep with a compost of three parts light loam and one part leaf-mould, and, after mixing, level and make firm. Growers in the neighbourhood of London should not attempt to grow Violets, as the impure air renders it almost impossible. Primulas in frames should be maintained in a moist, close condition, and this may be contributed to by lightly syringing the plants in the evening. Shade these plants from the sun during the day.

Hardy Fruit.—Strawberries for next summers' supplies should be planted without delay. Old and exhausted plants should be uprooted and the quarters planted with Cabbage. Raspberries need attention forthwith. Canes that have borne fruit during the present season should be cut out, and the weaklings of this year's growth must also be removed. Stools represented by about five strong canes are most desirable.

The Greenhouse and Conservatory.—The perpetual-flowering Carnations should have their final shift without delay. The plants must have outdoor treatment until the closing days of September. Stand them on a thick layer of sifted cinder ashes to prevent the ingress of worms. The beautiful variety Robert Craig is one of the exceptions to the general rule; this plant must be kept under glass both winter and summer. The present is a good opportunity for painting these structures. Repairs to the roof are also matters that should have speedy attention, as everything must be in good and sound condition before bad weather is experienced. D. B. C.

INCREASING GARDEN PINKS.

THE Pink is one of the old-fashioned garden flowers that never fails to interest and please lovers of the hardy flower garden, and, as it is a plant of comparatively simple culture, the wonder is that these fine old flowers are not more often met with than is now the case. Many flower-lovers prefer the garden Pink to the Carnation, chiefly on account of its propensity to flower freely, and also because of the fragrance of the dainty blossoms. They have this advantage, too, that they are extremely hardy and will live in the neighbourhood of large towns, where many other so-called hardy subjects fail to winter well. July and August, and even September in special situations, are the recognised months during which the Pink may be increased. They may be propagated by two or three different methods, viz., by simply pulling the old plants asunder and heeling in the pieces thus divided, or by the use of pipings (cuttings), by which means quite a large stock can be brought into effect, and by a system of layering as is successfully adopted in

the case of increasing Carnations. Each of these methods have a value peculiarly their own, and each one has many adherents.

We will first deal with lifting and dividing old plants. If they are torn asunder with what is known as a "heel" on them—that is, a portion of the old stem adhering thereto—they may be firmly dibbled or laid in along the edge of the border in light sandy soil, and in such a position will root with the greatest readiness. It is a good thing to choose showery weather for this purpose. It must be admitted that this is a very rough and haphazard way of increasing these plants, but it is followed with considerable success.

The second method requires rather more care. The Pinks may be raised, as we said before, in large numbers by the aid of cuttings or pipings, a term more popular with Pink growers. Doubtless, in many gardens there may be a few clumps available from which cuttings or pipings can be obtained, and these growths are represented in Fig. 1. The shoots are about 3 inches or rather more in length. Fig. 2 represents the same cuttings or pipings prepared in readiness for their insertion in specially-prepared soil in frames, pots, pans or boxes, using whatever means are most convenient in each individual case. It will be observed that the pipings are cut through immediately below a joint, from which the leaves have been removed. The lower leaves should be removed for an inch or so from their base. In some cases well-known growers make a practice of cutting off the tips of the leaves, but we have raised them very successfully without doing anything of the kind. The great thing to remember is to cut through the stem immediately below a joint, as it is at this portion of the stem that the roots are emitted. The shoot on the left of the illustration is slit up at the end; this is a practice that is sometimes adopted, but the cuttings will root very satisfactorily without this being done.

Leaf-mould, loam and sand in equal parts should be the ingredients of the compost, and in such material the cuttings will root readily. Insert the cuttings firmly 3 inches apart. The soil must be pressed firmly at their bases in order that it may adhere thereto, otherwise rooting will be somewhat delayed and they may even fail altogether. If a frame is not available a small bed or series of beds made up in any shaded position, and an ordinary hand-light or bell-glass placed over them will answer equally



2.—THE SAME SHOOTS PREPARED READY FOR INSERTION. NOTE THAT THE LOWER LEAVES HAVE BEEN REMOVED.

well, and in this way quite a number of useful plants may be raised with ease. Those who possess neither frame, bell-glass, nor hand-light need not despair, because if a bed of light sandy soil be made up in a shady spot in the garden the cuttings can be dibbled in here in like manner and should root within a month or so. It is important to remember that the cuttings should be shaded from the sun, so that tiffany or some other shading material must be used.

It is important to see that the soil does not get dry; it should always be kept in slightly moist condition. We have shown in Fig. 3 a few cuttings inserted in a 3-inch pot, because it is possible in some small gardens that growers may not have a piece of ground available. If cuttings are inserted in pots in the manner indicated here, and if a hand-light or bell-glass be placed over them the beginner may raise his plants quite satisfactorily.

The illustration in Fig. 4 is a typical plant after a year's growth. Readers will be careful to note the robust character of the clump from which numerous pieces of grass (shoots) have been developed.

In the illustration in Fig. 5 a growth of fairly good length has been selected for layering. Shoots are trimmed exactly in the same way as is customary in layering Carnations, and here it



3.—CUTTINGS INSERTED IN A 3-INCH POT; A METHOD SUITABLE FOR SMALL GROWERS.

own, and, as will be seen in Fig. 4, it forms a compact, dwarf mass such as is essential for edgings.

EARTHING UP CELERY.

THIS moisture-loving vegetable is a great favourite with most people, and rightly so, as a fine, solid, crisp head is something worthy to grace any table and provides a welcome change, both as a salad and a vegetable, during the late autumn and winter months. Many amateurs take an immense amount of trouble over rearing the plants, preparing the trenches, and subsequently tending the plants until earthing up time, when the tendency is to give them too much attention, and so to a great extent undo the good work of the previous months.

There is no doubt that eight out of every ten amateurs or beginners in gardening earth up Celery much too early—as soon, indeed, as the leaves are long enough to gather well together. The worst of this treatment is that the plants' subsequent behaviour is such as to lead the cultivator to imagine that his treatment is correct, as growth in an upward direction is soon most pronounced. It is, however, when the crop is lifted that disappointment usually ensues. Instead of the plump, thick, solid plant with a good white heart, the grower finds a long, attenuated specimen possessing the leaves that were present at the first earthing, and little else besides.

The reason for this state of affairs is easily explained. When the outer leaves are long enough to gather together very little heart has been formed, and when earthing up is performed at this period the inner leaves, which in the ordinary course eventually form the heart, have very little chance to develop. Instead of being in a hurry to earth up the plants, amateurs would do well to wait until a good number of the inner leaves have attained a considerable size; then plump hearts are practically ensured.

The actual earthing will vary according to fancy and circumstances. It should be borne in mind that the principal reason for doing the work is to blanch the leaf-stalks without injuring them, and any method that results in this cannot be far wrong. All offsets from the main plant should be removed, and if the soil in the trench is dry, as it almost certainly will be, it should be thoroughly soaked with water a few hours before earthing is performed, taking care to let the plants themselves get quite dry before the work is done. The simplest and most satisfactory way of placing the soil round the plants is to get a lad to gather all the leaves of one plant moderately close together, and hold them thus while the soil is banked around them,

taking care to break up all large lumps as the work proceeds. Failing this, the leaves may be tied rather loosely together near the tops, but it is advisable to remove the ties after the work is done.

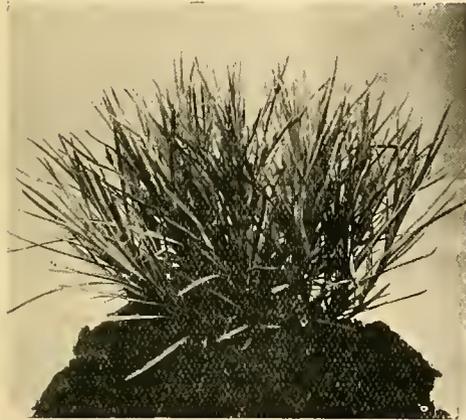
Two operations are quite sufficient for all ordinary crops, the second one usually following about three weeks after the first. At the second earthing care must be taken to make the ridge pointed and firm so as to ward off heavy rains, as wet does the plants far more harm than frost. Some people use brown paper or other substances for blanching the plants, these being tied round the leaf-stalks. Although this system answers very well under careful management, the plants lack that crispness so much appreciated in earthed-up specimens.

ANNUALS FOR SPRING FLOWERING.

SILENE, Poppies and similar plants which are being grown for flowering next spring should be very carefully looked after at the present time. Some persons hesitate to transplant seedling Poppies, fully believing that they would not succeed so treated; but they may be successfully transplanted, a moderately dry border being the most suitable for them, but it is necessary to give water in order to establish the young plants. Afterwards they will take care of themselves as it were.

Amateurs who do not like to transplant their seedling Poppies should sow the seeds in patches or in prepared beds where the resultant plants are to bloom. The necessary thinning out must not be neglected. Silene plants will thrive well if left in the same beds where the seeds were sown, but here again I strongly advise a novice to transplant a number of seedlings in a nursery bed where they will form beautiful strong tufts which in spring will form veritable cushions of lovely blossoms. If the soil in the garden is of a clayey nature, raise the beds in which the seedlings are to be wintered and mix a quantity of road grit, leaf-soil (half decayed) and coarse sand with it. The young plants have in such circumstances a much better chance of surviving severe weather than when they are planted in a cold medium. It is well worth taking the extra trouble.

AVON.



4.—A ONE YEAR OLD PLANT WITH NUMEROUS SHOOTS. IT MAY BE DIVIDED INTO PIECES, EACH OF WHICH WILL QUICKLY FORM A PLANT.

will be noted the lower leaves have been trimmed back and an incision made in the stem just at a joint. With one peg the stem from the main plant is held in position, and by placing a second peg, secured by raffia round the layer, the growth is held in a correct position. If soil be placed round this, and maintained in a moist condition, the rooting process should take place within three weeks, more or less, at which time they should be severed and planted in their flowering quarters. The following is a selection for the beginner, and may be relied upon as containing the very best: Ascot, pink, deep red centre; Beauty, large full flowers, well formed petals, rosy crimson centre; Constancy, very full flowers, heavily laced rose red; Ernest Ladhams, rosy blush, claret centre, large flowers; Fairy, vigorous plant, well formed flowers, deep crimson centre; Her Majesty, large pure white flowers; Homer, fringed rose, dark crimson centre; John Ball, a well formed, correctly laced variety; King, a charming laced pink, dark centre, evenly laced rose-red; Lufra, maroon centre, deep red lacing, flowers large and of fine quality; Mrs. Lakin, white, pink centre; Snowdrift, flowers large, fine form, rose flush in centre; and Mrs. Sinkins, large pure white early flower.

Pinks are splendid subjects for edging large beds or borders, as when the flowers are over the glaucous foliage has an attraction of its



5.—THE METHOD OF LAYERING PINKS, SIMILAR TO THAT ADOPTED FOR CARNATIONS.

THE TOWN GARDEN.

PROPAGATING ZONAL PELARGONIUMS.—Although the era of formal bedding has to some extent passed away, and it is scarcely likely that it will ever return to the same power that it has recently enjoyed, there are many thousands of Geraniums still grown, for the plants succeed splendidly in hot, dry seasons and make a really brilliant display. Those who desire to propagate their own stock for next year's bedding out should put the work in hand forthwith, as the earlier the cuttings are rooted the better. No doubt someone will object to such an early start on the score that the plants are still in flower and that interference will spoil their beauty. This, however, is not the case, for, if the cutting is done with care, it will not be easy after two or three days to see where the plants have been touched. Do not strip any plant, but draw the necessary growths from several, and the results are sure to be satisfactory in every respect. The lower leaves should be removed, the shoot cut squarely beneath a joint, and insertion may be in a sunny position in the open border, where rooting will be rapid, and as much trouble will not be involved as when the cuttings are put into pots or boxes. The soil should be light and firm and the base of each cutting must rest upon the base of the hole. As soon as they are well rooted they can be lifted and placed singly in 2½-inch pots, in which they may remain for the winter, a position on a light shelf being afforded. If the cuttings are put in small pots at the outset the compost should be light and sandy, and the soil never made too wet.

FREESIAs.—These fragrant flowers are favourites with everyone, and it is seldom possible to grow too many pots or to have blooms over too long a season. As soon as bulbs are procurable potting must commence, and to ensure a succession other batches should be put in at intervals of two or three weeks, according to requirements and conveniences. Six-inch or 8-inch pots are the most generally serviceable, and a soil mixture of three parts of sound, fibrous loam, one part of leaf-mould and about a tenth part of sharp sand will answer admirably. The pots should be well crocked and almost filled with the soil mixture, making it moderately firm; the bulbs can then be taken and pressed in until all except the extreme tip is beneath the surface. Although the compost must be pleasantly moist at the time of use, it is excellent practice to water immediately after potting. With the majority of bulbs generally grown by amateurs it is wise to plunge the pots in beds of Cocoanut fibre refuse or ashes, but this is neither necessary nor desirable with Freesias, which should be kept in the light and encouraged to make steady, healthy progress towards flowering. The most popular Freesia is still *refracta alba*, but the beautiful *Leichtlini* is well worthy of consideration as a companion.

ANNUALS FOR SPRING.—Annuals are so easily grown and so exceedingly accommodating in the matter of soil and situation that one cannot wonder at their wide popularity for culture in small gardens, and, fortunately, the majority of them thrive well in town enclosures, especially when the seeds are sown, as is usually the case, in spring. They, however, have another use to which sufficient importance is not attached by many amateurs, and this is for flowering in the spring. In the country it is easy to sow the seeds during the present and next months, and keep sturdy plants alive through the winter, but in the smaller town garden it is more difficult, as fresh air in good quantities is needed to ensure strong, stocky growth; but the experiment is well worth trying. I have found *Clarkias*, *Silenes*, *Saponaria calabrica*, *Eschscholtzias* and others stand well, provided that the seeds were sown in August and that thinning and transplantation were done as early as possible.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FRUITS UNDER GLASS.

GRAPES. — Muscats approaching maturity should be given more air, and if the roots were well fed at the last watering they will not need any more stimulating material. Keep a keen look out for spider, and if any make an appearance have the leaves sponged with insecticide at once, and the pipes (hot-water) may be dressed with sulphur and heated to nearly boiling point, when the fumes thrown off the pipes will arrest the attack. Late Muscats should have frequent waterings, and if the borders are old use plenty of stimulating manure. The same process must be observed with Alicante, Gros Colmar, Lady Downes, &c.; but be extremely careful to water Madresfield Court after the last swelling, or the berries will be liable to split.

Peaches and Nectarines should have plenty of air, as it is now a question of retarding more than forcing, and the more air the better will be the quality of flavour. Dymond is a very fine mid-season Peach, perhaps the best if only one is required, either out of doors or in.

PLANTS UNDER GLASS.

Carnations.—Pot the last batch of winter-flowering sorts, and take cuttings as soon as possible for next year's stock. Cuttings struck in the autumn are much better than weakly ones in the spring. Pot on Begonias of the winter-flowering section and keep them in a clean and growing atmosphere. Put in a batch of *Browallia elatior* major for winter flowering. Pot on more *Poinsettias*, *Enphorbias* and plants of this kind and adopt clean methods for all.

FLOWER GARDEN.

After the recent rain much picking off of dead flowers will be necessary. Clear at the same time all small weeds which soon become untidy if left. Cuttings must soon be taken from Zonal Pelargoniums. Make notes of any new plants that may be necessary, as some improvements can always be made. Collect seed of any pet subjects and dry before putting them away.

Violets.—See that these are kept free of runners and keep them well syringed during hot weather. All other plants that are planted out with a view to winter flowering should be grown well, which necessitates regular attention.

HERBACEOUS BORDERS.

Clean and cut away all dead and decaying foliage. Stake and tie any plants that may require it. Cut back shrubs that have exceeded their bounds. Clip hedges and put in cuttings of Roses. Most ramblers do much better on their own roots. Use half-ripened shoots and make them very firm in the ground. Remove all old seed-pods from Rose bushes, and thin the blooms that are showing. Keep away mildew by syringing with XL All mildew preparation.

KITCHEN GARDEN.

Continue to plant out Broccoli, Savoys and greenstuff generally, and hoe the ground between plants that are already becoming established. Sow Cabbages, Lettuces and Turnips. Carefully attend to the requirements of Tomatoes and Vegetable Marrows. Water Scarlet Runners if the weather proves hot or the bloom will drop. Gather the pods before they develop seed, and any surplus should be pickled in brine, as they make nice dishes in the winter. Water late Peas if necessary, as this will prolong their cropping.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

FERNs.—Among the many varieties of *Adiantum* I find *A. fragrantissimum* to be the most useful as a pot plant. Its light green, elegant fronds are most attractive when grown for house decoration. It is a vigorous plant, doing well in sandy loam with a little peat. It also does well against the wall if kept in position with wire netting with moss and peat to grow in. I find many of these free-growing Ferns grow amazingly if watered frequently with manure water when the pots are full of roots, but when thus treated they are of no use to pot on for specimen plants.

Solanum jasminoides.—Though hardy in a few of the more favoured districts, I always find that this *Solanum* does best in the greenhouse. One thing in its favour is that when grown as a roof plant the light is in no way obstructed, as the foliage is not dense; a very desirable feature in a climbing plant. Planted out in a bed of good rich loam and given plenty of head room, it may be had in flower for six consecutive months, and by pinching it can be had in bloom at Christmas, when its pure white flowers will be found valuable for cutting.

HARDY FRUITS.

Strawberries.—Where it is desirable to have good crops of the finest and earliest fruits next year, a sufficient quantity of plants should be put out on wall borders where the soil has been dug, manured and well prepared for their reception. Early planting has a great influence for good on these plants; indeed, it is the only way in which the maximum of success may be obtained. As the plants on these borders are, as a rule, only expected to give one crop, they may be put out thickly, and for some of the close-growing varieties 18 inches apart is quite sufficient. In planting take care that the ground is firm, either from being well trodden or from having been allowed time to settle naturally.

Figs.—Fig trees, though late in starting, grow rapidly, and the soft, pithy wood easily gets injured by high winds, so should be secured early to their supports. Surplus shoots may either be stopped or entirely removed, whichever seems to tend most to the benefit of the fruits, which need exposure to give them the needed colour. In the South of the country it is usual and wise to allow a considerable amount of latitude to the growth of outdoor Figs, and breast-wood may be allowed to grow freely; but in the more Northern latitudes they have to be rigorously repressed and the trees trained well if we are to expect any fruit from outdoor trees.

FRUIT HOUSES.

Winter Cucumbers.—Towards the end of this month a well-heated house should be set apart and prepared for growing these in. A lean-to house and one that is partly sunk in the ground is best, as such is more snug and less draughty than if built on the surface, while it also tends to economise fuel during cold weather. A good start with a clean house and good healthy plants will go a long way towards keeping matters right if cultural details are properly attended to. In the meantime sow seed and raise the requisite stock of plants, which should be grown well up to the light to prevent them becoming drawn.

FLOWER GARDEN.

Dahlias.—Just now these will claim more attention than any other plant, especially if the weather is dry. Dahlias cannot possibly make headway in a dry soil; they must have moisture and plenty of it, or there will be no blooms fit for the exhibition stand. Give them a good soaking of manure water two or three times a week in the evening. Examine the stakes and tie-bands, and disbud where too many buds make their appearance.

T. B. FIELD.

(Gardener to the Baroness Berners.)
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ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN

Violet-Pansy for inspection (*A. Newham*).—So far as can be seen from the material forwarded, your plant is possibly a Violet-Pansy hybrid as you describe; it is, however, impossible to give a definite opinion on the subject without more complete material. If you have not sufficient to send you might be able to obtain more definite information by inviting some local expert to see your plant.

Beetles in Water Lily tank (*Kent*).—By no means introduce beetles into your Water Lily tank. They will do nothing towards clearing the water, and may do considerable damage to your plants. If you can run the water off occasionally, do so and fill with clear water, and if possible keep the water continually running. It does not need to run fast, but a constant supply of fresh water will do good. Water that is left stagnant for a few days in a tank is very apt to become green, especially in warm weather.

Aster leaves curled (*Miss E. M.*).—The Aster leaves have apparently suffered a chill, and this has checked the development so that some parts of the leaves have grown more rapidly than others, with the result that the leaves have become curled. Earwigs are best dealt with by finding the nest and pouring boiling water upon it. Better still, carbon bisulphide may be poured into a hole made as near as possible to the nest; but great precautions must be taken with this, as the vapour is very inflammable, and must on no account be brought near a light, not even that of a cigar.

Sweet Pea for inspection (*H. T.*).—Your Sweet Pea is not a sport from Helen Lewis, but is a rogue in the clump. It is a variety known as America, and if you like it you can purchase seeds very cheaply. We do not know of any book devoted to the subject of hybridising or, rather, the crossing of Sweet Peas. As you are so interested in these beautiful flowers, why not join the National Sweet Pea Society? The annual subscription is 5s., and you would then be in touch with all the Sweet Pea world. The hon. secretary is Mr. C. H. Curtis, Adelaide Road, Brentford, Middlesex, from whom all particulars can be obtained.

Plants for border—colour scheme (*H. P. M.*).—You might get the desired tone of dark crimson in a Cactus or Pompon Dahlia, the latter, perhaps, being the best in the circumstances. For pink for early summer you cannot do better than employ the single Pyrethrum Hamlet or Monarch. These grow about 2½ feet high, so may not be quite tall enough for your purpose. The same group also provides good shades of crimson, such as James Kelway (single) and Captain Nares (double), and there are many others. Maroon-crimson is found in the annual Scabious, but usually of a dark shade, and possibly too dark for your requirements. A red-toned flower is Rudbeckia purpurea and that known as the Winchmore

Hill variety is of deeper hue. Dark crimson shades, too, may be found in the single and double Pæonies, *P. tenuifolia* and *P. officinalis* fl.-pl. If by wine-coloured flowers you mean port wine colour, we think you would get nearest to this in the *Celosia*. We think you might select the more definite shades you now require by a few visits at various seasons to some of the larger nurseries, where the established examples in flower would be seen to advantage.

Bedding arrangements (*G. L. H.*).—It will very much depend upon the size of your plants as to what good uses these things may be put. The following, however, are a few examples: 1. Standard red Fuchsia for centre and clumps of not less than five of the *Lobelia cardinalis* 4 feet away, scarlet *Celosia* in the same way alternating and nearer the margin and the ground covered with white Tufted Pansy. 2. Standard Heliotropes with Heliotrope pegged for a ground. 3. The Ivy-leaved Pelargonium five in a group to form a pyramid in the centre, around the whole having a groundwork of the same plant pegged down. 4. *Calceolaria amplexicaulis* for pyramids, and, as in the last, with occasional small groups of *Eulalia* and blue or mauve *Viola* groundwork. 5. *Salvia splendens* *Glorie de Zurich* bedded with white-leaved *Centaurea* and yellow *Coleus* pegged or yellow *Viola* as groundwork. 6. *Crimson Begonia*, with *Fuchsia gracilis* and white *Alyssum* as groundwork. 7. *Plumbago* in groups of five to form a pyramid and a *Viola* to match for groundwork.

TREES AND SHRUBS.

Box edging failing to grow (*William H. Thomas*).—We regret to report that we are unable to say what is the probable result of your Box edging failing to grow. The plant you send is quite dead, roots and branches. Try removing a space of soil, say, 1 foot in width, from your borders and replace it with soil from another part of the garden; fresh soil may have a beneficial effect. It is impossible to say whether the fumes from the chemicals you mention have killed the plants; if the same thing occurs in the majority of gardens in the district it may possibly be the cause, but this can only be decided by someone who is tolerably conversant with local conditions. Possibly you could get an expert opinion on the question if you apply to the Yorkshire College, Leeds.

Lime tree leaves with out-growths (*J. W.*).—The curious, reddish, nail-like growths on the leaf of the Lime are due to the attacks of a mite known as *Eriophyes tilia*. The attack of the mite upon the leaf causes an extra flow of sap to the irritated spot and the growth of a gall which is open towards the lower surface and hollow within, the mouth being closed by numerous hairs. Among the hairs and inside the gall the animals live. It is possible that the galls may recur another year, but sometimes a tree which has been badly attacked in one year is practically free the next. Of course, a certain amount of the food that the tree would make use of in the ordinary course of events for its own nourishment is diverted to the nourishment of the mites, and their presence reduces the amount of leaf exposed to the light of the sun, but otherwise they seem to do little harm. There is no practical means of dealing with them except by removing all the leaves, which would probably do more harm than the galls will.

Swellings on Genista roots (*A. Houghton*).—We are unable to detect any eelworm about the *Genista* roots you send; the swellings are similar to those found on the roots of all leguminous plants.

How to prune a Beech hedge (*G. G.*).—You may clip your Beech hedge at once in the same way that you would clip a hedge of *Whitethorn*. Do not let it grow too rapidly in height, or it will become thin at the bottom, and if it once becomes thin while it is young you will have a difficulty in getting it to furnish itself in after life.

Information about Ericas (*Rev. K. M. P.*).—The shape of your Heath bed is purely a matter of taste; we should think that a triangular bed would fit the position better than an oval one. Remove the soil to a depth of 1½ feet, and fill up to within 6 inches of the top with sandy soil free from lime. On this place 6 inches of peat and fork it into the sand. About October obtain ten plants each of *Erica mediterranea*, *E. m. hybrida* and *E. carnea*, five each of *E. m. alba* and *E. veltchii*, and three each of *E. lusitanica* (*codonodes*) and *E. australis*. These will well fill the bed. *E. lusitanica* may be put in the

centre; then the red and white *E. mediterranea* may be spread over the bed, reserving places in front for *E. carnea* and *E. mediterranea hybrida*. *E. australis* and *E. veltchii* may be used as dot plants. The work should be done as early in the month named as possible.

THE GREENHOUSE.

Repairing a greenhouse (*G. A. G.*).—In our opinion, your most economical plan will be to employ a glazier and joiner to carry out the work under your own supervision. Of course one cannot say much without an inspection of the entire structure, but it should be done at considerably less than the amount named by you. One point to be particularly observed is on no account to use top putty for keeping the glass in its place, for though often employed it is always a source of trouble. The glass must be well bedded in putty, which should be finished off smooth at exactly the same level as the glass. In this way painting is very easily and quickly done, as in the angle formed by the glass and roof bar the paint brush can be passed rapidly, and the vulnerable point, that is, just at the sides of the squares of glass, receive the greatest amount of paint. For holding the glass in its place small brass brads, such as shoemakers use, are the best, as iron ones quickly rust and the water in this way gains an entrance.

Hydrangeas with blue flowers (*Foreman, Salop*).—Mix some iron refuse from the blacksmith's shop with the soil in which the plants are potted, and when the pots are well furnished with roots water them occasionally with alum water. The alum must be crushed and dissolved in hot water to the extent of 1oz. to a gallon of water. It must be discontinued when the flowers show colour.

Plants for a cool greenhouse (*Smiler*).—As you give no particulars whatever concerning your greenhouse, it is impossible to advise with certainty as to the plants likely to succeed therein. If by cool greenhouse you mean a structure without fire-heat during the winter months, the plants therein must be quite hardy. As it faces the north-east it will, of course, get very little sun, in which case it is very probable that you would derive the greatest amount of pleasure from growing a collection of hardy Ferns, which would do well.

Treatment of an Aspidistra (*C. C.*).—These plants invariably thrive best in shade, as that is their natural condition. A room on which the sun little shines suits them admirably. The leaves should, if the plant is kept in a dwelling-house, be sponged clean every week, and if the plants be stood out of doors now and then and have a good overhead washing it does them good. Generally they need ample moisture, but must not be overwatered. When the plants become too large for their pots they should be shifted into larger ones.

ROSE GARDEN.

Roses attacked by weevils (*J. Street*).—Your Roses are injured by the weevil known as the clay-coloured weevil (*Otiorhynchus picipes*). These beetles generally feed only at night, hiding themselves very carefully during the day. Shaking the bushes over a white cloth or newly-painted or tarred board after dark will probably enable you to catch a number of them; but they fall at the slightest disturbance, so the cloth or board must be placed in position before the bush is touched or any light thrown on it. They may also be caught by providing them with hiding-places. Small balls of hay or dry moss tied to the stems or laid on the ground near the plants make good traps, and they should be examined every morning.—*G. S. S.*

Roses with curled foliage (*Miss K. D.*).—The leaves enclosed have been attacked by the leaf rolling sawfly. It has been very prevalent during the last two years. The leaf rolling is supposed to be caused by the female when laying its eggs. The green caterpillar you found is a larva of this special sawfly. The sawfly appears in May and June, its colour being black and shiny. The eggs are laid on the leaf. When the green larvæ are full grown they fall to the ground and enter the soil in August, and at once form a cocoon, in which they remain as larvæ until February or March, when they pupate and a fresh batch of sawflies emerge and attack the plants in early summer. The best plan to eradicate this pest is to hand pick the

rolled leaves as soon as seen and burn them. Probably this insect is introduced into the Rose beds on the roots of Briars in the cocoon form; it would, therefore, be advisable to wash all roots of Roses before planting them.

Crimson Rambler with blighted shoots (A. A.).—Your plants are badly affected with mildew. Those that are not bearing flower trusses we advise you to cut away past this blighted part, but those with flower sprays could be syringed or dipped in a solution of Mo-Efic, an excellent remedy for mildew. We do not think you need fear Dorothy Perkins taking the disease, for it is seldom affected in this way, but it is well to attempt to remedy it at once. Sometimes a hot, dry position will encourage mildew on Crimson Rambler.

Rose Souvenir de Malmalson with green centres (Miss Wakefield).—When this occurs early in the season it is almost invariably the result of cold weather and late frosts. To remedy this, prune your plants later, say, end of March, and cut them back rather hard to within 3 inches or 4 inches from their base. The green centres are very bad this year among such Roses as Mme. Isaac Pereire, and we have traced it, in our case, to the error of leaving some growths extra long. The growths started out early and the cruel frosts crippled them when in the embryo stage.

Rose blooms with green centres (M. P. Holt).—In the case of the buds sent, we consider the early frosts are responsible for the trouble. You probably left the growths a greater length than was advisable instead of pruning past the forward shoots, and these forward shoots had their flower-buds crippled by frost. In some instances these green-centred blooms are the result of overfeeding; the soil is too rich and the buds become malformed in consequence of deranged root action. Your best plan will be to remove the crippled buds and trust to getting better results from the next crop in the autumn. Do not be too drastic in removing all, for we have found sometimes the blooms of certain sorts, although showing these green centres, will outgrow it when they develop their blooms. Do not on any account take up the trees now.

Liquid manure for Roses (Roses).—It must be remembered that cultural notes given in THE GARDEN are written for the benefit of readers residing in widely different localities. For instance, in Scotland Roses are very backward, so that when our correspondents give certain advice as to liquid manure it is given on general grounds, and they would not advise affording it when the buds begin to show colour. We prefer to commence the application of liquid manure as soon as the buds are the size of small marbles, then it may very well be discontinued when they show colour. A watering or two again after the first flowering is also of great help to the next crop. If the mulching is applied as advocated by our correspondent, a gentle stimulant is afforded every shower we get, and this of course can do no harm; on the other hand, it is very helpful.

FRUIT GARDEN.

Grapes injured (T. Allen).—The leaf, as well as the Grapes, bears every indication of having suffered from what is commonly termed scalding. After heavy syringing at 5 p.m., with no air on the house until next morning, we fear the Vines could not be overdry by the time the sun shone on the house next morning. At the stage of growth the Vines are now at both the foliage and surface of the berries are most tender and easily injured. Did you mix any insecticide in the water? The berries affected will be disfigured and damaged for the season, but we hope not many are like those sent. The best treatment to adopt now will be to give air liberally during the day and a fair amount at night, both back and front, frequently syringing the borders and walls of the vinery on fine days in order to encourage them to make a free growth. Have a little heat in the hot-water pipes on dull, cold days and at night.

Gooseberries and caterpillars (Scotland).—The greatest damage to the Gooseberry is to be feared from the magpie moth. The habit of the caterpillars of wintering in leaves still hanging on the bushes, or sometimes lying among any shelter on the ground beneath, must be taken advantage of to get rid of the pest. At pruning time the bushes should be carefully gone over to make sure that there are no leaves which may hold a caterpillar, and the soil to the depth of 2 inches should be scraped and wheeled away from under the bushes and burnt, as many spun together will be found in this soil. A dressing of lime and flowers of sulphur in equal proportions is the most effective remedy we know of to fetch the grubs down from the trees or to prevent their attack if applied in good

time. It should be applied to the trees when moist. After coming in contact with Hellebore, we should advise that the Gooseberries be carefully washed to make sure that no traces of the Hellebore remain.

Name of caterpillar on Apple trees (H. J. Patrick).—Your Apple trees and hedges are attacked by the caterpillars of the small ermine moth (*Hyponomeuta padellus*), an insect which appears to be unusually common this year. Cut out the webs whenever possible, holding something underneath to catch any caterpillars that may fall out during the operation, or where this is not possible break up the webs by a strong jet of water and then spray with a solution of paraffin emulsion or arsenate of lead so as to poison the leaves on which the caterpillars are feeding. The caterpillars eventually become chrysalides, enclosed in little cocoons within the web or nest. When this happens it is too late to use any insecticide, and the cocoons should be pulled or cut out and crushed.—G. S. S.

Apple leaves diseased (M. Tgy).—The Apple leaves are badly attacked by the fungus named *Fusicladium dendriticum*. This fungus also attacks the fruit (causing the well-known Apple scab) and the young shoots. It is one of the three worst pests to which the Apple is subject in this country. It is present on the leaves all through the season, and through the winter on the fallen leaves and on the shoots. From these it passes to the fruits, infecting them by means of the spores, which are produced in profusion upon the olive green patches such as the leaves sent exhibit. In bad cases the fruits are caused to crack, and sometimes, as in the present instance, the leaves are killed by the fungus. Little, perhaps, can be done in the present season, though no doubt the spread of the fungus may be checked by spraying with a diluted solution of Bordeaux mixture, say, half the strength of that used for spraying Potatoes. In the winter the trees should be sprayed with an acid solution of iron sulphate, made in a wooden barrel by pouring 1 pint of sulphuric acid on 25 gallons of iron sulphate and diluting with 50 gallons of water. Just before the buds burst, and again after the petals have fallen and a third time about the second week in June spray with the Bordeaux Mixture mentioned above.

Growths on main stem of a Vine (Ieto).—The growths that you send are adventitious roots, and they do not have any pronounced bad effect on the Vine. They are generally produced on plants that are very robust and where the atmosphere of the house has been maintained in a damp condition for some time.

Mites on Plum tree (Mrs. H. S. S. T.).—The mites which you find on your Plum tree are not red spiders, but one of the beetle mites belonging to the family Oribatida. They live on the small lichens or other vegetable growths so common on bark, and will in no way injure your tree. Whatever may be the cause of the branches dying, cutting off and burning them is a good thing to do. Perhaps if you would send up some pieces of the diseased branches I could tell you what was the cause.—G. S. S.

Figs ripening (George Brood).—It is quite natural for the Fig to show a second crop before the first is ripe. To secure the proper ripening of the first crop see to it that the leaf and branch growth is not too thick and dense. If this is so, do not hesitate to cut out altogether some of the weaker shoots of this year's growth, in order to admit more light and a better circulation of air among the fruit and branches. Admit more air in the daytime on sunny days and leave a good proportion all night as well. Keep the atmosphere rather drier while the fruit is ripening and not too wet at the roots, but immediately the first crop has been gathered give a good soaking of manure water and keep the house closer and warmer and more moist, in order to encourage a free growth in the second crop.

Planting a twelve-acre orchard of Apples (H. W. S.).—Seeing that you confess to an entire absence of knowledge on the subject of planting an orchard, or on its management, we advise you to protect yourself in the first place against loss and disappointment in the future by taking counsel before starting on so important and technical a work, with a competent expert in orchard and planting management. The future success of the orchard depends on so many things which it would be impossible to learn from a book, however well written, such as position of land, quality of the soil and the cultivation which would best suit it preparatory to planting. A few hours' conversation on the subject, on the spot, with

such an expert would, we feel sure, prove invaluable before you started on your project. "The Book of the Apple," by H. H. Thomas, *Gardeners' Chronicle* Office, 141, Wellington Street, Strand, W.C., price 2s. 9d., is reliable and an up-to-date work.

KITCHEN GARDEN.

Weakened Asparagus beds (G. S. N.).—As you seem to have liberally manured your Asparagus beds and have kept them free from weeds, only two reasons seem left to explain their present weakness. One, and possibly the right one, is that they have been too hard and too late cut to supply heads for the table. Nothing weakens beds so greatly as over-cutting, as unless there is ample time left for growth to be made, and quite strong growth too, during the summer and autumn, the heads or shoots made the following spring will be proportionally weak. If beds show signs of giving out, the cuttings should be severely limited to enable strength to be regained. Then a second possible reason is the beds may be old, too old in fact, and new ones may be planted to grow into strong ones in a year or two. But all the same, if the old beds are to be saved, dress liberally with liquid and solid manure, and cut very sparingly for the next two years.

Plants for back wall of a Cucumber and Tomato house (A. H.).—We know of nothing in the way of useful flowers which you could successfully grow in association with Cucumbers excepting *Stephanotis floribunda*, a stove climbing plant bearing a profusion of pure white and fragrant flowers. The great heat required for Cucumbers would be fatal to the Roses. Gardenias would also succeed with Cucumbers, provided they could be fixed on a shelf or planted in a border not too far from the glass. Roses would stand a fair chance of succeeding if planted against the wall of the Tomato house, as this should be much cooler than that in which Cucumbers are grown. The following are good varieties: Climbing Niphotos, Climbing Perle des Jardins, Maréchal Niel, Climbing Papa Gontier, Climbing Devoniansis and Climbing Mme. Lambert. Plums and Cherries are the only fruits which do well on a north wall, but both would have to be netted. It is also an excellent position for a border of Raspberries. The *Wistaria chinensis* does remarkably well in such a position, as do also many of the more robust-growing Roses, as well as many varieties of Clematis, such as *montana*, *Flammula*, *Vitalba* and the hardest and best of the *Jackmanii* types. The best varieties of gold and silver variegated Ivies make a fine covering for such a wall. If an evergreen plant is preferred, *Crataegus Pyraeantha* would do very well. It berries freely when grown in such a position.

The Cucumber spot (*Spot in Leaves*).—It is the spot that your plants are suffering from, and there is no cure for it. You may keep your plants growing for some time by pulling off the worst of the leaves and destroying them; but if the plants are very badly affected it will be better to pull them up and burn them, while there is time to grow crops of Tomatoes or Melons in the house. It is not safe to plant Cucumbers again in the same house for some time, or otherwise the disease will be sure to reappear.

MISCELLANEOUS.

Names of plants.—J. W. Dixon.—1, *Cupressus lawsoniana*; 2, *Thuja plicata aurea*; 3, *Cupressus lawsoniana Alumi*; 4, *C. pisifera aurea*; 5, 6, 9 and 10, *C. lawsoniana* varieties; 7, *Juniperus communis hibernica*; 8, *Buxus sempervirens*; 11, *Cupressus lawsoniana gracilis aurea*; 12, *Thuja occidentalis*; 13, *Cupressus lawsoniana gracilis aurea* (probably); 14, *C. l. patula* (probably); 15 and 16, *Ilex aquifolium* varieties.—*Botanist*.—1, *Ballota nigra* (common Horehound); 2, *Cheopodium album* (Goosefoot); 3, Please send when in flower; 4, *Polygonum aviculare* (Knotgrass); 5, *Fumaria capreolata* (Fumitory); 6, Please send when in flower.—*Graiv.*—1, *Holcus mollis variegatus*; 2, *Spiraea discolor*.—*M. M. Miller*.—*Gloriosa superba*.—*Miss C.*—1, *Funkia ovata*; 2, *F. stiboldiana*.—*Erantres*.—*Ophiopogon spicatus aureo-variegatus*.—*A. West*.—1, *Botanique d'Or*; 2, Reynolds Hole; 3, Prince Arthur; 4, Marquise de Lyon; 5, Abel Carrière. The spotted petals are caused by the late rains.—*Ayayya*.—*Statice Suworowi*. More material is required of the *Spiraea* to enable us to name it correctly.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

BOTTLING FRUITS AND VEGETABLES.

(First Prize Essay.)

ALTHOUGH the art of preserving soft fruits in bottles has been known for many years, it is only since the introduction of the "clamp" bottles that it has become a general practice. This has made it a very simple proceeding, as under the pressure of boiling water they become air-tight, and so preserve the contents for almost any length of time. As a means of preventing waste and using up surplus produce it has much to commend it, but it must not on this account be thought that anything will do. The material ought always to be supplied from the main pickings, and preferably of medium size, clean and free from husks and stems, and in the case of fruits *under* rather than over ripe; in a word, the best to be had. If these details are attended to the fruit will keep intact and of a good colour and flavour.

FRUIT—ORDINARY WAY.

Under this heading comes green Gooseberries, Black Currants, Red Currants, Raspberries, Plums, Damsons and Cherries. In all cases it is best to pick into the bottles. This saves two or three times handling, and prevents the skins from becoming bruised. Fill the bottles up to the top; a little settling will be sure to ensue in transit from the garden to the house. On the top of the fruit put one tablespoonful of sugar and pour in boiling water until it runs over, then put on the clamps. A fish-kettle should be in readiness (I prefer a large turbot kettle). This should have a layer of straw or hay on the bottom and enough lukewarm water to cover the bottles up to the necks. Place the bottles in this, and pack straw or hay between them to prevent breakages. Bring the water slowly to the boil and let it boil gently for half-an-hour. When cold they are ready for storing. I have used fruit preserved by this method fully a year old, and in all cases it was everything that could be desired, both in quality and appearance.

FRUITS IN SYRUP.

Apricots, Greengages, Peaches and Figs are best preserved in syrup, this is made by boiling 1lb. of sugar with each pint of water required. To prepare Apricots cut the fruit in halves and stone them, place them in the bottles whole side uppermost so that they can be tightly packed, which prevents them from smashing, put in a few kernels to impart a brisk flavour, and pour in the hot syrup until it runs over; then put on the clamps and place in the kettle as recommended for the other fruits, and boil gently for half-an-hour. They are then ready for storing when cold.

Greengages should be put into the bottles, hot syrup poured over them, and then boiled until the skins are seen to begin to crack. Peaches

must not be soft, but ripe. Skin them by pouring boiling water over them (the skins will easily pull off), put them into the bottles, after they have been cut in halves and stoned, flat side downwards, pour syrup over them and boil the same as Apricots for half-an-hour. Figs should be of medium size or small and only just ripening, but they should be packed as close as possible in the bottles, the hot syrup poured over them and boiled for three-quarters of an hour. Citrus sinensis (Chinese Orange). This fruit is grown chiefly for ornament, but it makes a delicious dessert dish if preserved in the following way: Boil the fruit whole until tender, take out and drain, put them into a jar and pour over them a syrup made by boiling 1lb. of sugar with half a pint of water, pour this on hot and seal the jars at once.

Strawberries may also be preserved in syrup, but many people prefer them made into jam. It is always better to use the best sugar when preserving fruit, but if cheap sugar is used all scum should be taken off as the syrup boils before it is put on the fruit, as this spoils the colour.

BOTTLING VEGETABLES—PEAS, FRENCH BEANS AND TOMATOES.

After all, these are the only three vegetables which may be said to be within the meaning of this paper, *i.e.*, for bottling at home. Others, of course, may be preserved by pickling, and Asparagus and Mushrooms may be bought in bottles, but the home supply of these two latter vegetables is never sufficiently plentiful for this, as they are more appreciated in the fresh state.

Peas.—First get them as much the same size as possible, then throw them into boiling water in which is the salt and soda and a little sugar, the same as cooking them for the table, but only cook them 5min.; strain and put them into the bottles, put on top one teaspoonful of sugar and the same of salt, pour boiling water on them, close up the bottles, put them into the kettle, as recommended for the fruit, and boil slowly for half-an-hour.

French Beans.—Top and tail them and string the sides, but not cut them; cook them the same as the Peas, but these will have to be placed in the bottles lengthways; put one teaspoonful of sugar and salt on them and finish the same as for Peas. Sulphate of copper is often used to keep them green, but I do not think that is necessary if one pays attention to the water they are first boiled in; have the water boiling rapidly, throw in the salt and sugar and a little common washing soda, wait until the scum rises from this, take it off, throw in your Peas or Beans, wait beside them and take off any scum that rises at once, for it is this that makes vegetables a bad colour if allowed to boil into them.

Tomatoes.—Let 3lb. of Tomatoes and 3lb. of sugar stand together overnight, peeling the Tomatoes first. Drain off the syrup and boil it, skim well, put in the Tomatoes and boil gently for twenty minutes. Take out the Tomatoes, put them into jars, boil the syrup until it thickens, add the juice of one Lemon just before you take it off the fire, then pour over the Tomatoes and seal them up when cold.

Peas and Beans should be picked in the same stage as for cooking, not too young, and the Tomatoes should be just ripe. Fruit may be bottled without water by putting a layer of fruit and a layer of sugar in the bottles and boiling until you see the skins crack, but I prefer the use of hot water as it is more economical. There are different kinds of bottles. I have used the clamp that you press into the bottle—when you turn it and it fits into a groove on the outside of the bottle: the one that has a glass stopper to put on the top of the fruit with a zinc screw, which screws outside the bottle, and the ordinary bottle with the corks. If the latter are used they should have a piece of bladder tied over the top of the cork round the neck of the bottle and be placed in the kettle cork downwards. After they are finished the bladder should be taken off, and if any of the cork is sticking out of the bottle cut it off and seal over with sealing-wax.

(Mrs.) EMILY ARNOLD.

The Gardens, Sauchieburn, by Stirling, N.B.

COLOURED PLATE.

PLATE 1854.

NEW DAFFODILS.

THE following notes refer to the varieties illustrated in this week's coloured plate, which was prepared from flowers sent by Messrs. Barr and Sons of Covent Garden.

Czarina is the largest and finest of the giant Leedsii varieties and is a flower of immense size, measuring 5 inches across, with broad white perianth elegantly twisted at the apex and a very large, delicate, citron crown or trumpet, with bold, open mouth. This variety was raised by Mrs. Backhouse of Sutton Court, near Hereford, but was acquired by Messrs. Barr and Sons.

Queen of the North.—This is a grand new seedling, with a large flower having a very broad white perianth and a prettily fluted lemon cup. It is one of those varieties remarkable for the purity of its colour, and is altogether a very chaste flower.

Seraphin.—This grand trumpet Daffodil was raised lately in Messrs. Barr and Sons' Ditton Hill Nurseries, and is a flower of great size and beauty. The perianth is creamy white, broad and with an elegant twist at the apex; the trumpet, which is very large and broad, is a soft delicate lemon, with a broadly-cremped, open mouth.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

August 18.—Royal Horticultural Society's Meeting.

August 19.—Shrewsbury Show (two days).

Messrs. James Veitch's pot fruit tree exhibit.—The splendid exhibit of fruit trees grown in pots at the Royal Horticultural Society's meeting on the 4th inst., sent by Messrs. Veitch and Sons, Limited, from their Langley Nurseries, Slough, calls for special notice. The trees were in perfect condition, the Fig trees alone being worth the award given; they were the best we have seen for some time both with regard to variety and quality, especially Negro Largo, Brown Turkey, White Iechia (a mass of fruit), Early Violet and Osborn's Prolific. There were also very fine trees of Peaches—all the best varieties being represented—Nectarines, Pears, Apples and Plums. The trees were remarkable for their heavy crops. The pots were small and the trees clean and healthy, certainly an object-lesson, as here one could see what can be done in growing fruit trees in this form. Amateurs should grow pot fruit trees more largely; the

culture is easy and several crops of fruit can be grown in the same house by having sets of trees. For instance, Plums of the best quality may be had from May to September and varieties of the Peach or Nectarine superior in flavour to those grown outdoors.

Beautiful Violas or Tufted Pansies.—The sight of Mr. Howard Crane's charming stand of Violas at THE GARDEN Show in the Horticultural Hall reminded me of a magnificent display of those flowers in Messrs. Dobbies' nurseries at Mark's Tey, which I saw on the occasion of the National Sweet Pea Society's outing. The beds were made up of a considerable number of sorts, and some of these struck me as being exceptionally good. Taking the rayless whites (a most delightful class) first, Purity, Snowflake, White Empress and White Beauty were all worthy of mention. The former pair were of the average height, say, 9 inches to the top of the flowers, and the latter pair were dwarf. A beautiful half-dozen of this class could be made up, if the number were not too great, by adding Mrs. A. D. Parker, dwarf, and Virgin White, rather tall. Of the rayed whites, Alexandra and Duchess of York, the former normal height, the latter dwarf, were as pleasing as any. The comparatively small class of whites with large yellow eye enjoys favour with some, and for their benefit I may mention Pencaitland and Christiana. The former, which is dwarf and exceptionally fragrant, is a valuable bedder. There were three excellent creams, one of which, Sylvia, is an old favourite. Her companions were Cream King and Devonshire Cream. The yellows might be divided into four sections, namely, primrose, light yellow, rayless yellow and rayed yellow. Of the first class, Primrose Dame and Sulphurea (dwarf) were two of the best; of the second, Ardwell Gem and Grievii (dwarf) may be mentioned; of the third, I like Redbraes, yellow (dwarf), King Cup and Royal Sovereign; and of the fourth, Walter Welsh, Bullion and Klondyke were noteworthy. In connexion with the yellows it is interesting to note that Ardwell Gem and Bullion seem to be still capable of holding their own in the best company, after many years of service, and in spite of the introduction of newer sorts. I will divide the blueshades into four sections. A very pretty pair of lavenders were Kitty Bell and Florizel, the latter dwarf. Maggie Matt (a rather tall grower), Mauve Queen and Blue Duchess were three striking light blues. Of dark blues, Charles Jordan, Royal Scot and the old dwarf bedder True Blue were excellent. In the purple and violet section Councillor Waters (dwarf), Jubilee and Archie Grant (tall, a splendid old sort) were pre-eminent. Crimson Bedder (purplish crimson) and William Keil (pale rose) were the only noteworthy representatives of their respective classes. I was interested to see the old variety Lilacina, which I thought was one of the most effective of all; but, as Mr. William Cuthbertson pointed out, it should really be classed as a bedding Pansy, because it has three distinct blotches on the deep lilac ground. Several of the fancies arrested my pencil, and I reproduce the names of the following: Glencoe, bronze; Countess of Kintore, the old white and blue; Blue Cloud, white, edged blue; White Duchess, white, edged heliotrope; Ada Anderson, white and rose; Mrs. Chichester, white, heavily edged with violet; and Iris, cream and rose. The plants were put in during October, 1907, probably, therefore, they began blooming in May; and here, well on in July, they were a dense carpet of flowers, in spite of the long spell of hot, dry weather. It would be difficult to imagine any lowly floral picture more cheerful or more winning. So far as culture was concerned, there were few special points. The beds had been mulched with peat moss manure in May, watered occasionally when very dry. Beyond this there had been nothing except the removal of dead flowers to prevent seed-setting; but that, of course, is a host in itself.—W. P. W.

PRIZES FOR READERS.

AWARDS IN THE JULY COMPETITION.
In this competition readers were asked to describe the best methods of bottling fruits and vegetables. The prizes are awarded as follows:

The first prize of four guineas to Emily Arnold, The Gardens, Sauchieburn, by Stirling, N.B.

The second prize of two guineas to Mildred I. Clayton, Eversfield House, St. Leonards-on-Sea.

The third prize of one guinea to S. Jackson, Clinton House, Kingsland, Shrewsbury.

The fourth prize of half-a-guinea to C. Elliot, 87, Etnam Street, Leominster, Herefordshire.

Highly commended, Emma Lithgow, Knoll Villa, Linthorpe, Middlesbrough, Yorkshire.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Longevity in seeds.—The enclosed Sweet Pea is from some two or three seeds which were given me, having come out of a mummy coffin some thousands of years old. I thought it might interest you to see it. I have grown them in my small garden. The green is very fleshy and grew very fast, with these pretty blooms about 5 feet high.—(Miss) MAY C. DEARE. [Our correspondent's letter brings the old question again to the front: Will seeds, said to be taken from the old Egyptian tombs, germinate if sown? The reply to this question is Yes, they certainly will. But before this reply can be taken as an answer to the question as to whether seeds will germinate after being buried for some 3,000 years, another question must be asked: Were the seeds which germinated actually buried at the same time as the corpse? To which the reply is that they were certainly not, but that they must have found their way accidentally into the tomb through some aperture in the ground or have been carried in by some animal, or, what is more likely, been placed there by some unscrupulous person with the view of selling them afterwards to some credulous traveller. It is well known that the statements of most vendors of "curios" in Eastern countries are not to be relied upon, and that their guarantee as to the genuineness of their wares is absolutely valueless; and most probably the seeds had never been near a tomb. In no single instance have seeds which have been buried at the same time as the mummy been known to germinate. Grains of Wheat which have been taken from mummies by persons whose veracity is undoubted have, when sown, never shown any signs of life, and when examined under a microscope the embryo has always been found to be decayed and sections of it to crumble to pieces. The starch grains do not, however, seem to perish, as when treated with iodine they become stained a violet colour, just as recent starch grains do. A few years ago some very interesting experiments were made by M. Becquerel with the object of determining for how many years seeds can retain their vitality; these were really a continuation of some experiments made by A. de Candolle for the same purpose many years ago. M. Becquerel experimented with the seeds of nearly 550 species belonging to the most important families both of monocotyledons and dicotyledons, which had been gathered from 25 to 135 years previously. Ten seeds of each species were used, and no trouble was spared in trying to make them germinate; but of the seeds which were eighty or more years old only those of three species showed that they had not lost their germinating power. If these experiments were properly carried out—and there is no reason to suppose that they were not—it is perfectly clear that no seeds buried in the old Egyptian tombs at the time at which they were made can possibly germinate.—G. S. S.]

Fruit trees at the Franco-British Exhibition.—Everyone who takes an interest in the growing of fruit trees must have been struck with the really wonderful exhibition of these by a French firm at the Franco-British Exhibition, shown, of course, outside. Anyone who knows anything at all about this kind of thing must have wondered at the amount of time and patience that has been spent in bringing these young trees to such perfect and, in many cases, quaint and pretty shapes. After all, one would like to know, does it pay for all this extraordinary trouble? Do the young trees bear a larger crop? If not, is it done merely for the sake of exhibition and to show what can be done? We all must admit this side of the Channel that the French are cleverer than we are in getting more out of the soil in a limited space for profit. A great deal is talked just now about how the French make wonderful profits by growing vegetables under hand-glasses. French people are proverbially practical in horticulture. Is this tree-training another example of practical and remunerative horticulture, we would like to know?—A. E. S.

Rose blooms with green centres:
A note from America.—Referring to the article entitled "Rose Blooms with Green Centres" in THE GARDEN of the 4th ult. (page 327), it seems to be something of a coincidence that this trouble should have appeared for the first time this year in my garden, or, at least, for the first time to be of enough importance for me to have noticed it; hence this note. The varieties most affected were Florence Pemberton, Mme. Philippe Rivoire and Queen of Spain. As this was in the earlier part of the season I attributed it to a late frost, although having no recollection of there being one; but later, about the second week in July, after the first flowering period was over, I found a bloom of Mme. Ravary with a green centre. This was somewhat of a surprise to me, as I had never heard of a thin Rose like the variety mentioned being troubled in this way, and also because the shoot from which the bloom was cut was of a too recent growth to have been affected by any frost; neither had I done any disbudding in this case, though in regard to the Roses first mentioned disbudding may have had something to do with it.—ALFRED L. SQUIRE, *White Plains, New York, U.S.A.*

Yuccas in a Kentish garden.—I enclose a photograph taken last August of a group of *Yucca gloriosa* in flower in a Kentish garden, in case you care to insert it in your paper.—E. W. HUSSEY, *Scotney Castle, Lamberhurst.*

Popular confusion in nomenclature.—"E. F. C.'s" account of the "Popular Confusion in Nomenclature" I have read with unusual interest. It is one of those confusions which seems to me to die very hard. If you should at any time point out in a nice and gentle way that a mistake has been made the reply is, "Oh no, it is in so and so's catalogue." If seedsmen will continue to give plants wrong names, how are you going to convince the public interested in these things? Take the case of *Centranthus* and *Valerian*. How often do you hear the former given its proper name? It is generally called *Valerian*. I have been looking through the catalogue of a well-known firm which makes a speciality of herbaceous plants, and on looking up *Centranthus* it says "see *Valerian*." Well, on finding *Valerian*, the description was "beautiful herbaceous plants, colour rose and

white, height 2 feet." Now such a description would confuse any intending buyers; in fact, they would not know if it refers to *Valerian* or *Centranthus*. I will admit these plants belong to the same natural order, but there is a difference in height, shape of leaf, also colour of flower, which, on being placed side by side, is very obvious. In *Centranthus* the corolla tube is spurred at the base and has only one stamen, while in *Valerian* it is not spurred and possesses three stamens. Another confusion is in the case of *Spiraea japonica*, which is not a *Spiraea* proper, but a species of *Astilbe*, belonging to a totally different order of plants. These are only a few of the glaring confusions in our nomenclature, but they could be added to, thus making a very long list.—P. CLAPHAM.

Autumn-sown annuals.—"Sown in autumn will be a glowing sheet of colour in the early summer." Thus the seed catalogues; but in my experience reality seldom corresponds. Will successful sowers tell me what and when they sow.—H. M. C.

Sweet Pea prospects and Countess Spencer.—I cannot allow Mr. G. Clapham's remarks to pass without protest. His tirade against Countess Spencer is most unjustified. I can only say his experiences are singularly unfortunate. I have grown Countess Spencer (true) now for several years from Messrs. Eckford's strain, and am happy to say that I have never had a single one that was not absolutely true. It is, to my mind, the Queen of Sweet Peas.—E. F. OAKELEY (Captin).

Hardy flower book.—"A. E. S." may not have come across "A Concise Handbook of Garden Flowers," by Mrs. Stephen Batson (Methuen, 3s. 6d.), in which is stated, with much practical cultural information, the season of flowering of all the herbaceous and perennial plants treated therein. In the same series are similar handbooks on shrubs and creepers, in which also these necessary details are given. The first-named book is probably such an one as "A. E. S." requires.—B. M. H.

THE FRUIT GARDEN.

MILDEW ON VINES.

JUDGING by the many complaints and enquiries we have received with reference to mildew on Vines, we conclude that its ravages are more general this year than usual. The extraordinary fluctuations in the weather, alternating from hot to cold and cold to hot within very short intervals of time, must in a great measure, we think, be responsible for it. The foliage and fruit of the Vine are tender and sensitive at this stage of their growth, and a sudden rise or drop in temperature of 20° Fahr., such as we had in July, checks and chills the Vine, thereby predisposing it to attacks of mildew and other diseases.

The conditions which bring about an attack of mildew are frequently caused by errors of judgment in ventilation, on the one hand causing a chill by the too sudden and too wide opening of the ventilators when the wind is cold, on the other hand by inadequate ventilation; a sluggish, cold and damp atmosphere is the result, and forms an ideal medium for the breeding of this fungoid growth.

The way to avoid an attack in future is to be careful to admit air gradually as the heat of the day increases, leaving a small chink for the passage of air in the front and back ventilators all night unless the weather happens to be very wet and cold, coupling with this a modicum of heat in the hot-water pipes on cold days, and always at night, at least until the berries have attained their full size (before colouring), when the growth will have become harder and more capable of resisting the disease. The slight heat in the hot-water pipes causes a free circulation and gives greater buoyancy to the air.

The way to kill the mildew when Vines are badly affected is to heat the hot-water pipes to boiling point and then dress them with sulphur and water made like thick paint. This should be done on the afternoon of a still day, and of course all ventilators and apertures in the vinery



YUCCA GLORIOSA IN FLOWER IN A KENTISH GARDEN.

likely to allow the escape of the fumes from the sulphur must be closed. One application is not always fatal, but a second on the following afternoon generally is, provided the pipes are hot enough when the sulphur is put on.

OWEN THOMAS.

A GOOD LATE STRAWBERRY.

ANYONE in search of a good late Strawberry could not do better than try Givon's Late Prolific. The fruit deserves the name late, is of good size, rather pointed shape, fine colour and of splendid flavour. Although of large size, it ripens at the point as quickly as it does at the base, and so is free from a fault very prevalent in late Strawberries. The soil here is rather heavy, with a great quantity of stones. We commenced gathering this variety on July 2, and there is a good prospect of the supply holding out until the end of the month. Some fruits gathered the first week weighed fourteen to the pound. This is not unusual, but speaks well for the variety, as we can only give them very ordinary cultivation.

Layers are obtained as early as possible, potted into 3-inch pots and planted out in the autumn on well-manured soil. The plants are not allowed to bear the first year, and the result is the production of a strong plant and an excellent crop the next season. A new plantation is made each year, and the plants are destroyed when they have fruited two or three times. A good mulching of half-decayed manure is given before the hard weather comes in the winter, and manure water is supplied once or twice before the plants come into bloom. In gardens much troubled with slugs it is a good plan to give a rather heavy dressing of soot, well dusted into the plants, a few weeks before they come into bloom. This helps the plants as a fertiliser, in addition to keeping down the slugs. The placing of clean straw beneath the fruit, to protect it from damp and dirt, is an economic necessity.

Preserving the fruit from the birds is another important item. Here we simply drive stakes into the ground round the beds, about 6 feet apart and about 2½ feet high, over which nets are stretched. It is an easy matter to throw back the netting from one side of the bed when gathering fruit. The method is improved by having boards cut into 2-inch or 3-inch widths and placed on the top of the stakes, with a nail projecting here and there to catch the netting.

It is a bad plan to dig among the plants at any time. By so doing many of their most useful roots are destroyed. A good occasional stirring with the hoe will keep the soil in healthy condition and also destroy the weeds.

T. H. WORLD.

The Gables Gardens, Boxmoor.

THE SUMMER CARE OF SMALL FRUITS.

IT is a fact, often forgotten in the busy days of summer, that next year's crop of small fruits depends very largely upon the treatment received by bushes and plants this year. The fruit being gathered, Strawberry beds are often left to take care of themselves until autumn. All runners should be removed as soon as sufficient have been secured for the formation of new beds. Keep the surface soil well stirred with the hoe, and should very dry weather set in one good watering may save the plants from drooping and also from being a failure next year. Hard, plump buds in the centre of the crowns formed this season are as necessary to next year's success as the fruit-buds of Apple and Pear trees.

The old Raspberry canes should be removed as soon as they have done fruiting to give the young canes all the light and air possible. When the young canes are crowded and in excess of what may be ultimately needed cut away all the weaker ones. The short grass from the lawns can be advantageously used as a mulch

among them, unless the soil is very wet and retentive.

Gooseberries and Currants should be kept free from caterpillars and other insects. If they are greatly crowded with new growth (a probable fact this season), it will be well to remove some of the new growths to within 2 inches or 3 inches of their bases. Other growths should be left entire until winter and then pruned in the ordinary manner. Black Currants, a shy crop in many places, can be greatly improved by having some of the older branches cut clean away. This is all the pruning they need, and it can be done very well after the bushes have fruited. It will increase the chances of success next year.

THOMAS H. WORLD.

The Gables Gardens, Boxmoor.

THE ROSE GARDEN.

A DWARF ROSE FOR POTS.

MME. NORBERT LEVAVASSEUR.

WHAT a pretty little Rose this is when grown in small pots under glass! The flowers are quite a bright pink, just the colour so much in demand for interior decorative schemes. I have no experience with it as a Rose for forcing, perhaps the colour of the flowers would not be so good; but when grown cool it forms a most charming plant, and one that can be brought into use for many decorative purposes. This is surely a Rose for those who have not the accommodation for varieties of strong, rampant growth, as plants in 4½-inch pots can be grown from 10 inches to 12 inches in height, carrying six or more trusses of their pretty little pink flowers. This Rose was introduced in 1902, and is often known as the Baby Rambler, owing to its resemblance (when grown outdoors) to the well-known Crimson Rambler, the difference being in its dwarf habit and perpetual flowering.

Munden Gardens, Watford.

C. RUSE.

A GOOD ROSE SPORT.

IT sometimes happens that a Rose sport is more beautiful than the parent variety, and I think this is so in the case of the variety named Rosslyn. It is a sport of Suzanne Marie Rodocanachi, which, as everyone knows, is a beautiful glowing rosy cerise, but the sport is a charming rich salmon pink. It is a particularly brilliant colour that appeals to everyone by reason of its clearness. Both of these Roses should be grown, as, although scentless, they are very free flowering, and possess the even, regular growth of the Victor Verdier race. The form of the flower has not been changed in the sport. It is just the same charming globular shape that has helped the exhibitor to win many prizes. There are two other sports from the old Rose named above. These are Muriel and Marie Corelli, but I think Rosslyn is the best of the three. Suzanne M. Rodocanachi makes a fine pot Rose, yielding grand flowers of massive size and fairly long stems if pruned back hard. There is a climbing sport of this old variety which would make a useful pillar Rose. Most of the climbing sports of Hybrid Perpetual Roses are useful when grown in this form, for they are not really climbing, the difference merely being a somewhat extra vigour of the shoots. They invariably make splendid standard plants. P.

ROSE MME. CHARLES DE LUZE.

I WOULD like to speak a good word for a Rose which I first saw and admired at the Regent's Park show last summer, but which does not appear in any of the catalogues of British or Irish growers that I have received, and for which I had to send to France; that is Mme. Charles de Luze. With me this Rose has proved a great

success so far as my trials have gone. Though planted only last autumn, I was able to cut a number of beautiful blooms during the earlier part of the season; and even now, when we have been having exceptionally hot and dry weather—the thermometer being in the nineties nearly every day for a month—I have been able to cut some very good blooms. Sent out by Pernet-Ducher in 1904, Mme. Charles de Luze does not seem to have attained the popularity it deserves. With me the colour is something similar to Mme. Ravary, or perhaps more like Franz Deegan, but of beautiful form and large size, while the blooms are held upright on long footstalks. The foliage is good, and, as I said before, it has stood the hot weather admirably, though, like all yellow Roses, it loses its colour somewhat in the sun; but even then it does not have a mused appearance, as do some other varieties, but remains clean. Another excellent quality is its delicious fragrance. Of course, it is possible that a longer acquaintance may modify my enthusiasm; but, should it do as well in England as it has done with me thus far, I feel sure it will well reward anyone who may give it a trial.

ALFRED L. SQUIRE.

White Plains, New York, U.S.A.

HYBRID TEA ROSE LAURENT CARLE.

THIS is a grand addition to the red Hybrid Teas. There is a clearness about its colour that one cannot but admire, although it is not so brilliant as Roses of the Liberty type. The colour is a velvety carmine, something like what we get in Countess of Oxford, but the flower is not so coarse. By disbudding I should say this Rose will attain exhibition size, and should make a very useful variety for the middle row. It is sweetly fragrant, and it is also a good grower, producing its flowers on upright stems. This variety and Mme. M. de Luze are quite new departures in colour from what their raiser, M. Pernet Ducher, has been giving us lately, and one may hope he has more in store and equally as good. P.

NEW PLANTS.

SOPHRO-CATTLEYA WURNHAMENSIS J. M. BLACK (Sophronitis grandiflora × Cattleya amethystoglossa).—This is a very beautiful bigeneric hybrid of a distinct and novel shade of colour. The sepals and petals are ruby red, the drooping tip of the acutely-pointed lip shaded crimson and carmine, the throat and base being of a deep yellow shade. Exhibited by R. G. Thwaites, Esq., Streatham. First-class certificate.

Vanda amena var. Sanderi (V. Roxburghii × V. cœrulea, natural hybrid).—A distinct and striking form, in which the influence of V. cœrulea is strongly in evidence. The colour is quite novel and approaches to bluish violet, the lip being a deep violet-blue. From Messrs. Sander and Sons, St. Albans. Award of merit.

Rose Paula (Tea).—A delightfully fragrant Rose of dwarf habit and great freedom of flowering. It is also said to be very hardy. The colour and not a little of the form somewhat approach that of a pale Mme. Hoste. The flowers, too, are large and full, while their pronounced fragrance should render it extremely popular. From Messrs. Paul and Son, The Old Nurseries, Cheshunt. Award of merit.

Carnation Countess of Pembroke.—A border Carnation of excellent size and form and of a bluish tone, the flowers being supported on strong stems. A chief recommendation, however, is the exceptional Clove-like fragrance, and for this alone it will doubtless be in great demand. From Mr. T. C. Challis, The Gardens, Wilton House, near Salisbury. Award of merit.

All the above were shown before the Royal Horticultural Society on the 4th inst., when the awards were made.

THE FLOWER GARDEN

HINTS ON GROWING CARNATIONS.

PERHAPS next to the Queen of Flowers—the Rose—the Carnation is the most valued of our garden flowers. Fortunately, the garden or border varieties are not difficult to cultivate, and seldom fail to give a plentiful supply of flowers if the routine treatment is carefully carried out.

Failures may often be traced to badly-drained soil, to the attacks of wireworm or the Carnation maggot, larva of the fly called *Hylemyia nigrescens*. It is fortunate that the latter pest gives but little trouble in many gardens, because there is no known precaution which will prevent its attacks, and unless a very close watch is kept on the plants they are attacked and destroyed before one is aware of the presence of the foe. The fly deposits its eggs on the young leaves of the plants. The maggot when hatched works its way down under the outer skin of the leaf until it reaches the shoot, then slowly proceeds to eat its way down the centre of this, and so on until it reaches the centre of the stem, into which it bores and eats out the very heart of the plant, which, of course, quickly fails and eventually dies. If a brown mark is noticed down the leaf, this denotes the track the maggot has taken. Although the shoot is apparently healthy, this must be cut off at the first joint, and if the stem is hollow the maggot has passed on, and it may be necessary to cut a slit into the stem of the plant before the enemy can be secured. This may cripple the plant, but it is the only way in which it can be saved, and with choice varieties the loss of a plant should, if possible, be avoided. If a close watch is kept, the maggot may be caught in the leaf and taken out with the point of a pin. This is by far the best way, as when once it reaches the main stem the chances of the plant surviving are poor, and when the foe is thus caught and despatched one has the satisfaction of being well repaid for his vigilance.

In wet soils drainage must be provided; the Carnation is never satisfactory in heavy, sour soil. Although it is always best to secure thorough drainage throughout the garden, this, for various reasons, cannot always be carried out, but for small or medium-sized

BEDS OF CARNATIONS

the following plan has proved successful. Throw out the soil to a depth of 2½ feet, and place 9 inches of broken bricks or limestone in the bottom for drainage. If turf can be procured, place a layer over the stones, grass side downwards. As the soil is being returned, mix with the same some old mortar or plaster rubbish; failing this, wood ashes or crushed charcoal. Half a barrowload each of old mortar and wood ashes may be added to about eight barrowloads of the soil. Horse manure and a small quantity of soot should also be added. On wet soils

PREPARE THE BEDS

during the autumn or winter months and plant out in the spring. When dealing with naturally-drained light soils, deep trenching and incorporating of manure are matters which need attention.

AUTUMN PLANTING

is recommended by some growers, and in some districts has proved successful; but as a rule the amateur will do better by planting in the spring, especially the choice varieties, which should, if possible, be potted up in the autumn and wintered in cold frames. The most important work in connexion with Carnations at the present time is

LAYERING,

which is the best mode adopted for the propagation of varieties of established plants. Remove a few of the bottom leaves from each individual

shoot which has not produced flowers, using a sharp knife for this purpose. Then place a little prepared light sandy soil around the plant, cut each shoot halfway through from a low joint in an upward direction for about 1 inch, then bend the stem and carefully insert the tongue formed by this upward cut into the prepared soil, and secure the shoot in position by means of a neat wire peg. Finish off by placing a little of the prepared soil on the stems above the tongue, and give a gentle watering through a fine-rosed watering-pot. Care should be taken when layering not to cut the stems too far through nor to break them in the act of bending them down to the soil.

Munden Gardens, Watford.

C. RUSE.

CANTERBURY BELLS IN TRURO CHURCHYARD.

THE planting of flowers in the cemeteries of towns has long been practised, but it is only during recent years that such decoration has been carried out to any extent in the country churchyards. There is no gainsaying the fact that many a "hallowed acre" might be rendered far more restful and beautiful by the judicious use of flowers. Our illustration is from a photograph



CANTERBURY BELLS IN ST. PAUL'S CHURCHYARD, TRURO.

kindly sent to us by the vicar of St. Paul's, Truro, and depicts a flowering mass of Canterbury Bells growing beside the church there.

ALSTROEMERIAS AND THEIR CULTURE.

OF the many beautiful exotic flowering plants which render the flower garden bright and attractive at this season of the year, few fail to call forth more admiration than the *Alstroemerias*. In order to appreciate their full beauty it is necessary to devote a whole bed to them, or they may be effectively massed in the mixed border or on the margins of the shrubbery. Providing they are planted in a sunny position, and the soil is not of a too retentive nature, they will continue to increase and thrive for an indefinite period. The delicate markings and delightful shades of colour afforded in the flowers of this unique race of South American plants render to them a charm of their own.

One of the most beautiful species is undoubtedly *A. aurantiaca*. The slender stems of this plant attain to the height of 3 feet and are clothed with glaucous foliage. The flowers vary in colour from a clear yellow to a warm orange red, with dark markings on the petals. *A. pelegrina* is a dwarf plant about 1 foot high, bearing large pink flowers spotted and striped. *A. pulchella*, *A. hæmantha*, *A. psittacina* and the many beautiful hybrid

varieties which may be obtained at the present day, are all worthy of a place in every collection of hardy plants.

F. G. TUTCHER.

7, St. Eligius Street, Cambridge.

HARDY WATER LILIES.

(Continued from page 387.)

THE varieties also differ as to earliness and length of season. *Alba rosea* is always one of the first to flower, but soon goes to rest; this is followed by the *Laydekeri* section, all of which are good, for not only do they begin early, but keep on flowering all the summer, and as late as any in autumn. *Laydekeri rosea prolifera*, lately introduced by Mr. Perry, is one of the best of this section, and quite bears out its name. *Colossea*, quite the giant of all *Marliac's* hybrids, together with *gladstoniana*, *Robinsonii*, *gloriosa* and the many other hybrids, are some of the best for effect through a long season. The common white *Water Lily* (*Nymphaea alba*) is two or three weeks behind the earliest hybrids, showing a gain in length of season, which is even more remarkable in autumn. It is the end of June or beginning of July before the forms of the *odorata* section are much seen, and *odorata sulphurea* often waits until August; but when once started this class

flowers well into the autumn, with such others as *pygmaea Helvola* and *Laydekeri rosea*. *Nymphaea odorata sulphurea* I have always noted to be the last in flower, and quite a bold one it is, with large yellow Vanilla-scented Cactus-like flowers rising well out of the water. In colour some of the *Nymphaeas* vary from day to day. *Aurora* and the *Laydekeri* section open pale in colour and darken each day with age, so that sometimes three distinct colours are seen upon the same plant; on the other hand, the *Marliacea* section grow paler from day to day.

Not only are these hardy Water Lilies valued on account of their beautiful flowers, but for their handsome foliage as well; for in such varieties as "*Are-en-ciel*," *Andreana*, *lucida*, *Robinsonii*, *chromatella* and *odorata sulphurea* the leaves are beautifully marbled and spotted.

Though some of the finer hybrids make a few side crowns, and thus increase very slowly, others grow very rapidly and may be freely divided, the offsets being cut away with a piece of the old rhizome or root-stock attached. Those of the *Laydekeri* section are extremely difficult to propagate, as they make but few offsets; but some produce seed freely, and are easily increased in that way, the seed being sown as soon as it is ripe. Many are sterile, and can only be increased by division of the roots, which work is best accomplished in the spring, and when new growth is assured.

IF A POND OR WATER GARDEN IS IMPOSSIBLE many of these charming plants may still be grown in tubs. For this purpose the Laydekeri section and pygmæa form will be most suitable, as they are of compact growth. Tub or half-casks for Water Lilies should be as wide as possible and about 2 feet deep, allowing for soil, with not less than 1 foot of water over the crowns. A very pretty effect can be obtained, if a grass plot is available, by sinking the tubs into the ground, forming a background with Bamboos, Arundos and Eulalias and other foliage plants, with a few tubs of other aquatics, such as the single and double-flowered arrow-head, the flowering Rush, *Typha minima*, &c. If it is possible to do so, and for convenience in keeping the tubs filled, a trickle of water might be made to pass from one to another, and so both time and labour might be saved. By sinking the tubs frost is easily kept out by a covering of boards overlaid with straw, reeds or mats whenever necessary. With regard to the hardiness of all these beautiful hybrid Water Lilies, there can be no doubt. I know of places where they are cultivated in tubs not sunk in the ground and without any protection in winter. They have been frozen in solid blocks of ice, yet the plants have not been injured in any way. It would be better, however, not to run this risk with any valuable varieties.

ENEMIES OF THE WATER LILY.

Though free from many enemies of the garden, Water Lilies have foes of their own which must be held in check. All waters in which they grow must be kept free from weeds, as they not

common brown rat will sometimes attack and eat both rhizomes and flower-buds; therefore a sharp look-out must be kept for these pests or they may do considerable damage before one is aware of their presence. From some unknown cause the root-stock or rhizome of *Nymphæas* will sometimes develop into a flat fasciated-like form, and when growth begins a dense cluster of small leaves, without the sign of a flower, will be the result. So far I have been unable to find any means to prevent it, but when such growth is noticed it is best to lift the plant and cut the rhizome into very small pieces, leaving two or three leaves attached, plant thickly in shallow baskets, and in a few years the majority of them will make flowering plants.

Though we have already such a large number of beautiful hybrid Water Lilies, of all sizes and nearly all colours, white, yellow, rose, salmon, peach, flesh, rose purple and red in all shades to deepest crimson, there is no doubt that we have by no means come to the end of their development, and before long we shall be hearing of a hardy blue-flowering *Nymphæa*, which at present we are without. The difficulty of obtaining the blue colouring in the hardy plant is that the blue kinds are natives of the tropics; but there seems good reason to suppose that this difficulty will be got over, for there are also blue *Nymphæas* from the Cape and Australia which will no doubt play their part in the production of new garden varieties.

THE VIOLET CRESS.

THE Portuguese annual (*Ionopsidium acaule*), popularly known as the Violet Cress, is a delightful

about a quarter of a mile distant, where it had never been sown. Probably a few seeds were adhering to some plant or bulb that was brought to that garden from the one in which it was established, but its appearance was welcomed, and it has now spread widely over its new home.

It is an excellent plant for surfacing bulbs, and many beautiful colour-schemes are possible where the two are associated. Here in one place it veils the ground beneath a colony of the gorgeous *Tulipa Greigii*, and the effect of the carpet of soft lavender, about 2 inches in height, spreading beneath a couple of dozen great scarlet blossoms of the *Tulips* is extremely lovely. In another spot it carpets a large group of *Chionodoxa sardensis*, whose deep blue flower-scapes gain an added charm from their lavender setting. In a third instance it has taken possession of a bed of early bulbous *Irises* about 10 feet in length and 3 feet in breadth, and last winter covered the surface of the ground so thickly that not a particle of earth was visible. The *Irises* and the *Ionopsidium* bloomed simultaneously, but the latter remained in full beauty long after the *Irises* had ceased to flower. This is the colony shown in the accompanying illustration.

Here, as it is allowed to reproduce itself at will, seeds fall to the earth at all seasons of the year, and in almost every month certain plants may be found in bloom. The *Ionopsidium* will not, however, succeed in all soils, for in some, even though it be raised from seed, it will not reproduce itself. A light, dry soil is the best for it, and in staple of a clayey nature it often fails. It sometimes dies out suddenly without apparent cause. In Mr. Archer-Hind's garden, where I first saw it, sheets were to be seen in bloom through the winter and early spring; but about six years ago, in a mild winter, it almost completely disappeared, only a few stray plants being in evidence out of the thousands that usually spread a veil of soft colour over the borders.

South Devon.

S. W. FITZHERBERT.

THOUGHTS ON TULIP SPECIES.

PEOPLE who take up *Tulips* as their particular speciality will find, as I am doing, so much that is interesting in connexion with their past that before long they will become aware that the pleasure which they afford as growing plants is equalled, if not excelled, by the fascination of trying to learn their history and of solving the many difficult problems which that history unfolds. Take just one or two which appropriately fall under the present heading. How came *Tulipa gesneriana* to be what it is to-day? Is there any wild species known to botanists that can with certainty be claimed as its forefather? Is it not far more likely to be a garden hybrid?

Another matter of interest is to endeavour to trace the path or paths by which such species as *T. sylvestris* or *T. clusiana* came from their Eastern homes. Another, again, is how to account for the sudden appearance of new varieties in quite recent times in habitats which have been well known to botanists for many years, and where their presence could not possibly have been overlooked. How came *T. Didieri* or *T. mauriana* to be growing in the neighbourhood of St. Jean de Maurienne in Savoy, or *Strangulata* near Bologna, or *Maleolens* near Florence? Then, to branch off in quite another direction, there is the opening up of Central Asia by the Russians about thirty years ago and the explorations of Dr. Regel, and, later still, of the botanical expeditions organised by Mr. C. G. van Tubergen of Haarlem. *Greigii* and *kaufmanniana* are direct results of the former, and *tubergeniana* and *fosteriana* of the latter.

But *Tulip* species are not all new comers. We have only to turn to the *Tulip* articles and illustrations in our immortal *Parkinson* or *Gerard* and learn from them how *T. sylvestris* was known and *T. clusiana* and *T. oculis-solis* cultivated in English gardens 300 years ago. If after the first introduction of *Tulips* to Western Europe there



THE VIOLET CRESS (*IONOPSIDIMUM ACAULE*).

only choke the Lilies, but keep the water cold and too stagnant for the promotion of good growth. Aphides, green and black, will sometimes be found troublesome, and must be washed off with hose or syringe or the leaves dusted with Tobacco powder to rid them of these pests. As a rule plants generally outgrow these troubles, and have more to fear from rats and water-fowl at all times. It is impossible to grow *Nymphæas* in any water to which swans, ducks or other water-fowl have access. The water or moorhen is also very destructive, both to foliage and flowers, pecking them to pieces and even carrying them off to build their nests. The water-rat and

plant in the garden. When once sown it needs no renewal, for it reproduces itself from self-sown seed year after year. When sown in the late spring it flowers in the summer, and the scattered seed from these plants produces other colonies that come into flower in December and remain in bloom until mid-April. Here it was sown six years ago and has quite taken possession of the garden, springing up in borders, paths, and even on the tops of walls. Being surface-rooting it is harmless to its neighbours and is never disturbed, wherever it may come up, except to make room for new introductions. A few years ago it appeared in another garden

was a long interregnum, if during this epoch fanciers thought of nothing but how to still further refine refined gold, there were nevertheless all the time in unknown lands gems of the purest water waiting to be found—waiting to be called from their Eastern haunts to come and beautify our Western homes; and how well they do it, what colour they give us! Take *ostrowskiana* with its peculiar intense yellow-scarlet colouring. I saw a picture of it among Mr. Frank Galsworthy's beautiful flower paintings in Vincent Square last November, but it did not do it justice, and no one knew

better than the artist himself. "I am not going to be beaten," he said; "I will tackle it again next year, even if I have to make a colour." That is what it will come to, I think, for many of these magnificent scarlet-coated gentlemen have got garments of quite new hues; nothing is exactly like them. Sealing-wax red does not adequately describe the charming little *linifolia*; nor does "an uncommon light vermilion-scarlet" quite fit in with the glorious *præstans*. There is a depth and intensity about them all that is wanting in paint. Get them and grow them if you must know what they are like; this is what I am endeavouring to do. Each year I try a few new ones, for I cannot be content to look on them from afar—to see them only at shows, or in the Alpine House at Kew, or in some nursery or private garden. I like them so much; I want them as personal friends who will come and live in my garden—at least, all that are not too homesick in their strange, new surroundings of soil and climate.

The Savoy or *Næo-Tulips*, as they are frequently called, must be there too. They have not the same gorgeous colouring, but they have compensations. They are easy to grow, and generally soon settle down to their new life. They are by no means without beauty.

J.

DAFFODIL NOTES.

THE public have at last appreciated the fact that, given suitable varieties, Daffodils are splendid subjects for pot culture. Two notable facts seem to bear this out. First our neighbours in Holland are finding the sale of Hyacinth bulbs steadily decreasing, and it is in order, if possible, to check this that the bulb growers of Haarlem are offering the valuable prizes, both for amateurs and the trade, that are to be competed for next spring at Vincent Square. Somehow I feel that will only be a case of the Danish King and the sea repeated; the effort will be powerless to stop the ebbing trade of Dutch Hyacinths, for the very obvious reason that neither as subjects for single pots nor for

growing in masses are they to be compared to Daffodils. The second fact is that the Royal Horticultural Society are going to have a field day on March 9 next, for forced bulbs and more especially for Daffodils. Now that everyone includes a few pots among forced bulbs, it is becoming increasingly important to find out which of the newer kinds lend themselves best to this purpose. As Mr. Engleheart remarked at the Daffodil committee meeting when the recommendation for such a show was passed, it by no means follows that the ones we think the

same time. It is a small edition of Henry Irving, and can be used effectively in small-sized pots.

Golden Spur is the best of all yellow trumpets for forcing, and follows closely upon Henry Irving and Tenby. It is a magnificent deep yellow self, very free and easily grown. For a later variety still nothing surpasses the well-known Emperor. It is as good indoors as out of doors, and no praise can be higher than this.

Turning to bicolors, pride of place must be undoubtedly given to Victoria. It is very free, and has a strong stem and large flower, with

exceptionally handsome foliage. The perianth, too, under glass comes a pure dead white. *Empress* and *Horsfieldii* are also good; but as a contrast is generally desirable, for a second variety I would grow Mrs. Walter Ware. It is equally free, but it is not such a large flower, and the trumpet is a deeper shade of yellow. J. B. M. Camm is a pale bicolor. It is a most lovely thing under glass, not very large or tall, but most delicate and refined in shape and colouring. It should be grown in medium-sized pots. Now that it can be had at about half-a-crown a dozen everyone should give it a trial. It should not be forced hard. I must not omit *Princeps* or its variety *Cervantes*, with their yellow trumpets and deep primrose twisted perianths. They are very graceful and light-looking flowers and very cheap. The late bicolor for pots is undoubtedly Grandee. A good batch of this might be grown wherever possible to carry on with till the outside flowers begin.

Among the white trumpets nothing equals *Mme. de Graaff*. Unfortunately, it is expensive to use for forcing, so if a cheaper white is desired I would go for either *albicans* or Mrs.

Thompson. Both are good old-fashioned flowers, and in medium-sized pots look very pretty. W. P. Milner is a dwarf variety that I am exceptionally fond of when forced. It is a diminutive magni, quite white under glass and just the thing for small pots. Five bulbs in a 5-inch pot make a very charming display. I strongly advise a trial. The cup sections, including the posts and the doubles and bunch-flowered varieties, I hope to deal with next week.

JOSEPH JACOB.

SINNINGIA HYBRIDA DR. MAXWELL MASTERS.

THIS plant is a reputed bi-generic hybrid between a *Gloxinia* and a *Gesnera*, and certainly it promises to be a most useful greenhouse subject. The flowers are of a delicate rose colour, and several are borne on a branching stem some inches from the ground. It was exhibited by M. Ernest Benary, Erfurt, Germany, before the Royal Horticultural Society on the 21st ult., when it received an award of merit.



A NEW HYBRID PLANT: SINNINGIA HYBRIDA DR. M. MASTERS. (About two-thirds natural size.)

best from their behaviour outside will be found most suitable. Hence I look forward to this show with the most intense interest, and I would advise everyone who, like myself, likes to have some pots in the greenhouse, to pay it a visit.

VARIETIES TO GROW IN POTS.

Speaking broadly, I think the large trumpets are, on the whole, more effective than the smaller "cups"; so when I come to consider the other sections it will be found that I do not include as many as might be imagined from their large numbers. There is no difficulty in having a pot of Daffodils in full flower on New Year's Day, if only they are potted in August or early in September and the right kinds chosen. Henry Irving is the variety I rely upon, and I always try to get bulbs that have been ripened early. This makes a very considerable difference. I often think dealers do not attach as much importance as they might to this fact in offering varieties for specially early work. It is a medium-sized yellow self with stiff, well shaped perianth. The Tenby Daffodil is also good, and can be had in flower almost at the

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

R OSES.—I am continuing to bud Roses, although I must admit the sooner this work is completed the better. Briars that were budded in early July are now having the ligatures loosened. Rigorously remove suckers from Rose trees, and see that this is done before they attain any size. To promote the



1.—YOUNG FLOWERLESS SHOOTS OF THE ANTIRRHINUM SUITABLE FOR CUTTINGS.

ripening of shoots of Roses under glass abundant ventilation should be given to the structure.

Chrysanthemums.—For the next few weeks these plants will need more attention than at any period of the year. In all cases where large blooms are desired buds should be retained from this time forth. Retain what are known as "crown" buds by removing the tender points that surround them at the apex of the shoots. Terminal buds, which mark the termination of the plant's growth, will begin to develop within a week or two, and until the end of September it is safe to anticipate a continuation of their development. For the most interesting results just slightly thin out the more crowded clusters of buds. As soon as the buds are retained and they appear to be well set apply weak soot water regularly each day, and twice a week dissolve half an ounce of Peruvian guano in a gallon of water and water with this preparation. Soot water is made by placing a peck of soot in a bag and immersing this in a vessel containing twenty gallons of water. Should any plant get dust dry first apply clear water and then soot water.

The Window Garden.—Our plants of Campanula isophylla in both blue and white forms are a picture just now. They are easily managed and make ideal plants, either in hanging baskets or in pots in the window garden. They must be kept moist at the roots. Plants in window boxes need constant attention. The hot and trying weather of our late summer causes the soil to dry quickly, and on this account the plants need to be watered freely and often. In anticipation of the dull winter days I am about to pot up a few bulbs for early displays. The beautiful white single Roman Hyacinth is easily grown and may be purchased at the present time. Three bulbs in a pot 5 inches in diameter answers very well; some of the smaller bulbs may be placed five in a pot. Use clean, well-drained pots and a compost of loam, leaf-mould and sand.

The Fruit Garden.—Wasps and flies are already beginning to give trouble. Plums appear

to be their chief attraction at this period. An excellent method of reducing their depredations is to make up a mixture of beer and treacle or sugar, and to partly fill wide-necked bottles with the solution. The bottles should be secured to a Plum tree, in which case the mixture will prove a greater attraction than the fruit. Tomatoes growing on walls and fences should have the points of the leading shoots pinched out. This will have the effect of diverting the flow of sap to the fruits that formerly promoted growth. Ground that it is intended to plant with fruit trees in the ensuing autumn should be got ready in good time. Too often this preparatory work is put off until it is next to impossible to do it properly. The quarters allocated for this purpose should be dug two spits deep, and the bottom of the trench should also be forked over. Glass houses in which Grapes are ripening need careful management at this period. The atmosphere should be maintained in a dry condition, and this may be effected by careful ventilation. If plants of other subjects in pots are growing under the Vines, I should be disposed to move them or else water them with great care, so that the drainings from the pots may not create a very moist condition of the atmosphere.

The Flower Garden.—Plants in beds and borders are improved by a frequent use of the hoe or any other implement that will stir the soil between them. Weeds are kept under by the same means, and this is no small advantage. I usually prepare special nursery beds at this period in which to transplant hardy plants raised from seed a short time since. Such subjects as Sweet Williams, Foxgloves, Forget-me-nots, Sweet Rockets, Pansies, Daisies, Primroses, Polyanthus and other plants of a similar character are transplanted a few inches apart in these beds, where they quickly become established. These same plants may be planted in their permanent quarters in the early autumn or spring, and in either case will do well. Statelike plants, such as the Lilies, Gladioli and Kniphofia (Red-hot Poker Plant), in exposed situations will need the support of stakes, to which they should be securely looped.

The Vegetable Garden.—For late autumn and early winter use I am making a small sowing of Cabbage Lettuce. The Black-seeded Cos Lettuce may be sown at the same time, as in a favourable season this will also do well. All the Year Round is a very good Cabbage Lettuce for this purpose. The seed must, however, be sown in a warm, sheltered border to do well. Lift Tripoli Onions without delay in dry weather, leaving them in the open to dry off. For next summer's supply make a sowing of Giant Rocca and any of the giant white Italian forms. Select well-matured and deeply-dug quarters. D. B. C.

PROPAGATING ANTIRRHINUMS AND PENTSTEMONS BY CUTTINGS.

The above-mentioned subjects are well-known and popular garden plants, and are easily grown. Antirrhinum majus, the species from which all the charming varieties of our gardens have sprung, is raised from seed year by year, and many beautiful results are thus obtained; but there are numerous instances where certain well-known forms are so excellent in every particular that it may be desired to perpetuate them. While we may raise the Snapdragons (Antirrhinums) in batches of different colours, there is almost certain to be many variations from the original when we trust to seeds.

When to Insert the Cuttings of Snapdragons.—Opinions differ as to when the cuttings should be detached and inserted in suitable soil. We have found after considerable experience that during the late summer and early autumn is a good time to do the work. At this period shoots of the right kind may be obtained from many flowerless plants. It is after the flower season is practically over that numerous fresh young shoots are developed on the old plants.

Soil for Propagation Purposes.—Like many other subjects, these plants may be rooted quite readily in sandy soil. We prefer a compost made up of loam, leaf-mould and sand in equal parts, and if these ingredients are riddled through a sieve with a half-inch mesh and the heap well mixed before using, it will answer well.

Where to Root the Cuttings.—There are several ways in which the cuttings may be rooted, and for a beginner we wish to make the matter quite simple. If a large number of plants are required, it would be well to use a cold frame. Here, assuming the soil has been dug over, a layer of the light sandy soil above mentioned should be spread over the surface to the depth of 3 inches to 4 inches. This should be carefully levelled and made fairly firm, and watered by the aid of a fine-rosed can. Leave it for some hours before proceeding to insert the cuttings.

Cuttings and How to Make Them.—Fig. 1 shows two growths that have been detached from an old plant. This is the kind of growth to procure, hard shoots near the apex of the plants being of comparatively little value. To prepare these it is necessary to trim off the lower leaves and cut through the stem just below a joint. A joint is that portion of the stem where the leaf-stalks adhere to the stem itself. Fig. 2 shows the same two shoots as in Fig. 1 properly prepared for insertion.

Other Methods of Rooting Cuttings.—In addition to rooting the cuttings in cold frames where they should be arranged in rows 3 inches apart and 2 inches asunder in the rows, they may be



2.—THE SAME SHOOTS AS REPRESENTED IN FIG. 1 PREPARED READY FOR INSERTION.

inserted in pots 2 inches to 3 inches deep or in seed-pans or boxes. In the latter instances the limited demands of small growers are perhaps better served. Use soil of a similar character for filling the pots and boxes, taking care, however, to crock these receptacles with the greatest care. When inserting the cuttings first make a hole of sufficient depth to embed the cutting about 1½ inches and always take care to press the soil firmly at the base of each one; this is an essential factor in successful propagation.



3.—YOUNG SHOOTS OF THE PENTSTEMON SUITABLE FOR CUTTINGS.

When propagating in boxes, &c., the cuttings may be inserted close together; $1\frac{1}{2}$ inches apart and the rows 2 inches asunder will answer very well. Gently water in the cuttings with water from a fine-rosed can. Place the boxes in a cold frame or else under a handlight or bell-glass. Maintain fairly close conditions while the rooting process is going on, and in a few weeks when new growth is apparent give air to the structure, increasing this from time to time. Here they may remain until planting-out time in the spring, affording covering and protection in the cold and trying weather however.

Treatment of the Pentstemons.—These beautiful plants may be treated in similar fashion to the Antirrhinums, the mistaken notion of propagating them in heat accounting for many failures. They must be matted up in cold weather as a protection against severe frosts. The cuttings are made from growths that develop quite freely on the plants, and Fig. 3 is a good illustration of typical shoots to use for this purpose. The prepared cuttings in Fig. 4 show the shoots that are represented in Fig. 3 with the leaves trimmed off and otherwise prepared in readiness to be dibbled in the light sandy soil. Pentstemons succeed remarkably well where the ground has been deeply dug and well manured, yielding wonderful spikes of blossoms under such conditions. They are of simple culture and may be raised from seeds, cuttings or divisions. We prefer to increase the plants by cuttings during the period above mentioned.

PLANTING SPRING CABBAGES.

Young Cabbage plants are always plentiful in the autumn. In some gardens they are too plentiful, in the sense that, being overcrowded in the seed-beds, they become weakly and drawn and do not withstand the winter weather very well. The young plants should either be freely thinned out while in their seed quarters, or, better still, be transplanted in nursery beds before being finally put out. The plants cannot be too sturdy. Persons who purchase the plants should insist upon being supplied with good ones. Spring-raised plants are far superior to weakly autumn-raised specimens, as the former grow more freely and form better hearts.

The Preparation of the Soil.—By this I do not mean deep digging or trenching and heavy manuring. It would be a mistake to do all this in the autumn, as the result would be gross growth, injury by frosts and loosely-formed hearts in spring. No elaborate and expensive preparation of the ground is necessary. Simply select a plot on which Potatoes, Peas or Beans have grown during the summer months. Manure has been put in for the benefit of all these crops and so the soil will be quite rich enough for the spring Cabbages, as you should remember that these plants may be lightly fed in spring, when they will reap all the benefit of the feeding given. Having chosen the best quarter for the

plants, remove all old haulm or other matter from it and level the surface soil. Then scatter sufficient soot on the ground to just darken the soil and forthwith point it in 3 inches deep. If the soil be light and in a dry condition, tread it down firmly before planting is done.

The Planting.—This work should be done with a hand trowel so that the roots of the plants may be well spread out and neatly covered with soil. Make the soil firm around the roots. Small compact growing varieties should be planted 16 inches apart in rows 18 inches asunder. The larger growing sorts require 2 inches more space each way. Earliest of All, a good variety of fine quality; Early Offenham, a good all-round sort, reliable; Ellam's Early Dwarf, one of the very best; Nonpareil, dwarf, early and compact growing; Wheeler's Imperial and Enfield Market, both good and reliable; Mein's No. 1 and Heartwell Early Marrow are varieties which, if properly treated, will never disappoint the grower. The novice should grow a few rows of each variety rather than confine himself to one or two sorts, then a prolonged supply will be assured in spring.

TREATMENT OF TOMATOES IN THE AUTUMN.

A SPELL of dry, hot weather in June and July is very favourable to a good set of fruits on the plants. The month of June was an ideal one: July was not so favourable, but during two weeks we had a fair amount of sunshine.

Outdoor Plants.—Any fruits which set after August 10 on plants growing in the open air are practically worthless, as they do not ripen, so it is a wise plan to cut off the top of each plant then. The fruits already formed will receive all the nourishment and, in due course, mature. If the plants are not cut back they will continue to grow and produce flowers and young fruits, but the latter will not ripen and they will rob the earlier-formed fruits of much nourishment.

Indoor Plants.—There is a risk of the Tomato disease attacking the plants grown under glass in the autumn, but this may be avoided if some of the main leaves are removed and also all young side shoots before the latter attain to a length of 2 inches. Then a good circulation of fresh air will pass through the house and benefit the plants. In cases where the houses are fitted with hot-water pipes the latter should be warmed every evening, and all necessary watering done early in the morning and not at night. As days and weeks pass less water will be needed.

THE EDITOR'S TABLE.

SWEET PEAS FROM HAMPSTEAD.

Miss Glanville, Lyndhurst Road, Hampstead, sends good flowers of various Sweet Peas. These are some of the best we have seen grown so near London. The following note accompanied them: "I am sending you a few of my Sweet Peas as I should like to have your opinion of them. They have been grown in a small suburban (Hampstead) garden. In sending them I should like to mention what treatment they have undergone. I sowed the seeds first in pots at the end of February, in most cases putting seven seeds in a $4\frac{1}{2}$ -inch pot, and kept them in a cool greenhouse. As soon as the seedlings appeared above the soil I placed the pots on a shelf near the glass to prevent the plants becoming drawn. At the end of March the pots were put in a frame, the light being gradually left off during the day but kept on at night. By the middle of April I planted the Peas in their flowering quarters, and at this time they were about 6 inches high and branching well. The soil where they were planted was dug and well manured last autumn. I planted them mostly in clumps, five plants in each clump, at a

distance of 5 inches apart. Soon after they were in the ground I trembled for them, as we had such severe weather at Easter, but the snow seemed to rather benefit them than otherwise. I have kept the plants well staked, and picked the first flowers about the third week in June; since that time they have flowered in profusion. Occasionally I give them a little soot water and keep the ground well hoed round them, and never let any dead flowers remain. The Peas I am sending are Dorothy Eckford, King Edward and Bolton's Pink. The seeds were from Eckfords. I used to commit the mistake of most amateur gardeners, that of sowing the seed too thickly, but, by experience, I have seen the mistake of doing so."

DOUBLE CLARKIAS FROM BICKLEY.

Mr. G. Ansten, The Gardens, Nunholme, Bickley, sends excellent spikes of double Clarkias. He writes: "I am sending you a few spikes of the double-flowering Clarkia. The seed I saved myself from one or two plants I had last year of the pink variety. This I sowed in early March and duly pricked off and grew on in a cold frame, and as soon as they had made nice sturdy plants I planted them in the borders. They have now made fine plants, and have been in bloom for some time. Some of the plants are over 3 feet high and 2 feet through, and form perfect pink pyramids. Like all annuals, they are easily grown, but pay for a little extra attention. I have also enclosed a spike of a good double white one which came up among the pink ones."

PERPETUAL-FLOWERING CARNATIONS FROM DEVON.

Mr. E. Cummins, Ringmore Road, Shaldon, Devon, sends flowers of two good perpetual-flowering Carnations. He writes: "I herewith send blooms of two of my new perpetual-flowering Carnations. They are seedlings from the American tree variety Lady Bountiful, and were produced by crossing that variety with Nelson Fisher. Although this is what I term a violent cross, the result has been most satisfactory. During twelve years' experience with the culture



4.—THE SAME SHOOTS AS IN FIG. 3 PREPARED READY FOR PLANTING.

of Carnations I have made hybridising a special feature, and I have always noticed that the most pleasing results are produced from this kind of cross, there always being a greater variation of colour and a better chance of producing something distinct and really worth growing. These blooms were cut from plants growing entirely in the open ground, where they have stood the severity of two successive winters without protection of any kind. (I may say that the blooms are shaded from the hot rays of the sun.) Next season I shall work them for blooming during the winter inside, for which purpose I think they are worthy. You will note that the variety Mrs. E. H. Wolfe has not been disubded, hence the reason the flowers are not so large as those of the variety Devonia."

THE TOWN GARDEN.

PLANTING DAFFODILS.—It is not the general practice for town gardeners to lift and store their Daffodils after flowering in the spring, but those who make it a rule to do so are recommended to plant them during this month if possible and if not then early in September. There is no doubt that bulbs planted early thrive better and consequently produce superior flowers to those which are kept out of the soil until the middle or end of November, and every opportunity of planting should be taken. In beds it is, of course, impossible, as the summer occupants are still in splendid form, but it is often easy to find empty spaces in borders, and these should be promptly occupied with the home-stored Daffodils. If the stock comprises a mixture of small and large bulbs, I would urge grading, placing the finest bulbs in the most conspicuous positions, as they will produce the best flowers, and the remainder in less prominent places.

FEEDING CHRYSANTHEMUMS.—Practically every amateur gardener in town and country must have a few Chrysanthemums in pots, for their blooms are more than welcome during the dull months of November and December. In towns the plants flourish grandly and superb blooms are produced in circumstances which are the reverse of favourable, but this is only where the grower makes a special study of his subject and devotes a large proportion of his spare time to the plants. In any case it will now be essential to attend regularly to watering and feeding. At least twice, and preferably thrice, a day each pot should be tested to see that the soil is pleasantly moist, and about twice a week the watering should be followed by an application of weak liquid manure. This can be made up of any material that may be convenient, but it must not be of too stimulative a nature, or the plant's will grow too grossly to be satisfactory. Soot water of the colour of weak tea, liquid from any natural manure, or that from one of the excellent concentrated foods advertised in THE GARDEN, used strictly according to the directions supplied by the vendors, will answer admirably, but care must be taken to check the propensities of the majority of amateurs to give such things too frequently and too strong.

PROPAGATING ZONAL PELARGONIUMS.—Growers who take their own cuttings of Zonals should put the work in hand forthwith, as if it is done carefully the appearance of the beds will not be prejudiced in the least, and it will be easy to strike the cuttings in a sunny position in the border and thus reduce the necessity for much attention in watering. Sturdy, short-jointed shoots should be chosen, and after having had two or three of the lower leaves removed must be cut squarely beneath a joint; this done, they should be firmly inserted in the position chosen, care being taken that the base of the cutting rests on the bottom of the hole. If growths are taken judiciously from the plants it will not be possible to see any difference in the effect of the beds, but if one plant here and another there are stripped of all their shoots the display will be at once destroyed. If it is preferred, the cuttings can, of course, be placed singly in small pots or several in those of larger sizes.

PAPER WHITE NARCISSUS.—Although Roman Hyacinths are by far the most popular of all the earliest bulbs, this Narcissus is invaluable, and should always be used in conjunction with the Hyacinths. It will now be possible to procure bulbs, and as soon afterwards as can be managed the first batch should be potted, and in this respect, as well as in management, they should be treated in precisely the same manner as the Romans. Purchasers are strongly advised to procure their supplies as soon as they can, and to go to a source that is absolutely reliable rather than search assiduously for the lowest prices. HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

HARDY FRUIT TREES.

CURRENTS have been good and plentiful, and the bulk of them will have been gathered. If, however, any are required late, these must be netted, or the birds will very quickly devour them; even wasps and bees attack them in this warm locality. In the latter case wasp-proof netting must be placed over the trees. The bushes may be pruned into shape, thinning out unnecessary growths. This will help those that are left.

Gooseberries must be covered with tiffany or wasp-proof netting in order to preserve the fruits.

Cherries must have protection also; even the Morellos are eaten ravenously by birds. The growths should be nailed or tied in, or they may get broken by gales.

Peach and Nectarine Trees in full bearing should receive copious supplies of water and the shoots be tied in neatly, exposing the fruits as much as possible. Many sorts of Peaches ripen in August, and I will mention a few for the guidance of would-be planters: Early Alfred, beginning of August; Dymond, mid-August; Early Grosse Migronne, third week of August; Early Silver (a beautiful fruit and of the best flavour), end of August; Goshawk, first week of September; Noblesse, Stirling Castle and Violette Hâtive, mid-September; Sea Eagle and Princess of Wales, the latest. It is necessary to well syringe the trees twice daily, especially on light soils. Water with farmyard manure occasionally and about twice with Wood's Le Fruitier, but when the latter is used it is advisable to dispense with nitrate of soda. Nectarines that do best outside are Cardinal, end of July and beginning of August; Lord Napier, August; Rivers's Orange, Violette Hâtive and Pineapple, September; and Victoria as the latest.

Early Apples will want looking over. See that these are sufficiently thinned. Irish Peach and Mr. Gladstone will soon be ripening, and, if at all dry at the roots, a watering will help them materially in the last swelling. Beauty of Bath, Quarrenden and Lady Sudeley will also require watching, as the birds attack them very readily, especially in dry weather. It is an excellent plan to water and mulch all fruit trees carrying good crops, especially those on walls, fences and in confined areas. Those in more airy and exposed positions will not require so much attention.

Pears, such as Citron des Carnes, Jargonelle, &c., will also require similar attention to the above.

PLANTS AND FRAMES.

Chrysanthemums will now require a lot of attention, and must be looked over several times daily. Attend to taking away the side shoots or disbudding, also to tying up to the stakes. Syringe the plants each night after a hot parching day, and once a fortnight syringe with insecticides to keep down aphides, mildew and rust. Those planted out should have copious supplies of water when dry, as if they are allowed to flag the flowers will be of poor quality. This is a good time to get plant frames and houses cleaned and painted if necessary. Anyhow, a good scrubbing with soap and water will benefit the plants, and the walls should have a cleaning and a good coat of limewash to prevent and destroy insects.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslée, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

ZONAL PELARGONIUMS.—Time must not be lost in getting in a good batch of cuttings of the best-named varieties for next season's display. These may be inserted either singly in 2-inch or 2½-inch pots, or five or six cuttings in a 4-inch pot. I frequently place the strongest and best cuttings in the former, and the smaller and weaker ones in the latter. Light loamy soil, with a little leaf-mould and some sharp sand added, suits them well. Cuttings of the Ivy-leaved sorts may be treated in the same manner. Cuttings of the large-flowering Pelargoniums that were inserted early and are now rooted and growing again should be potted off singly, using pots proportionate to the size and strength of each. Pot firmly, and keep them rather close in a cool frame or pit for a week or two till established.

HARDY FRUIT.

Raspberries.—The old fruiting canes should not be allowed to remain after the fruits are cleared, as those with the fruit crop will have impoverished the plants. Raspberries being surface rooters will now pay for food in the form of a mulch, and the more decayed the manure the better.

Fruit Nets which were placed over bushes should be removed as soon as the fruit has been gathered, and dried and stored away for future use. This is not only necessary for the preservation of the nets, but their removal from the bushes will enable the leading growths to again assert themselves and a free circulation of fresh air to pass through and around the foliage.

KITCHEN GARDEN.

Open-air Tomatoes.—The earliest lot of these will need attention in the way of securing the leads either to wires, where the walls are furnished with such, or to stout stakes fixed firmly in the ground. Remove all laterals as they appear, and in the case of those plants that are plunged in the pots and are showing surface roots, top dress moderately, but postpone liberal feeding until the first lot of fruit is set. Avoid cutting away the foliage wholesale in order to hasten maturity, as this is a positive loss and tends to weaken the plant and lessen the aggregate weight of the crop.

Late Dwarf Beans.—A small sowing of any early variety, such as Ne Plus Ultra or Syon House, will give late dishes when other varieties are over. These will necessarily need protection. The best plan is to sow according to the means at hand to protect them. In sowing it is advisable to select a warm border facing south or south-west, and sow thinly or thin well when up.

FLOWER GARDEN.

Lilium chalcedonicum.—Few subjects are finer in the garden about the middle of July than the rich flowers of the scarlet Turk's-cap Lily. Sound, healthy bulbs should be obtained, and, if possible, plant them quite by the end of August or transplant them about this time in a position free, or nearly so, from the midday sun. A rather stiff, holding loam suits this Lily well, and is much better than a light, sandy soil so freely recommended for growing bulbs in.

Intermediate Stocks.—Now is a good time to make a sowing of these in a cold frame for planting out in the early spring. These will flower before the Ten-week sorts.

Roses.—The present is a good time to prune many varieties of climbing Roses, such as the Crimson Rambler. Of course, it must not be understood that I mean final pruning, as this cannot be done until the early days of next year. Much good may be done, however, by a pruning now. Directly the last blooms have faded is the time to remove all old growths and any that are weakly and in any way likely to overcrowd the young rods, which must be retained full length.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Wallflowers (F. Hurvell).—The seed was sown too late in the year to admit of making plants of sufficient size for flowering in the spring of 1908, and at this season will not flower. But as you have now some extra large plants a good flowering should result in 1909 by allowing the plants to remain where they are. Seeds of the Wallflower should be sown in the springtime about April, so as to obtain nice bushy plants by the end of September for planting out for flowering. In certain instances the seeds may be sown later than the above-named date, and where it is necessary to protect the young plants in frames during the winter season a somewhat later sowing would answer quite well. On the principle that a good-sized plant produces the best results at flowering time, the early sowing of seeds has much in its favour and also provides a hardy type of plant.

Asters diseased (E. M.).—The Asters are attacked by a species of *Fusarium*, a fungus allied to that which causes the "sleepy disease" of the Tomato and to others which produce similar symptoms in various other plants. The attack begins just at the collar or just below the level of the soil, and the tissues of the plant higher up are killed as well as the root, though the top of the plant appears quite green and healthy. Now the fungus has reached its fruiting stage and is producing small masses of pinkish colour consisting of myriads of thin curved spores. These spores are set free and in all probability remain in the soil through the winter ready to infect another batch of plants in the succeeding season. The only thing that can be done is to carefully remove the affected plants from the bed as soon as possible and burn them immediately. If possible, avoid planting Asters next year near where these are growing and take particular care that the soil in which the seed is sown is not such as has been open to infection by the fungus.

Sowing seeds of *Cypripedium spectabile* (F. L.).—Seeds of this should be sown as soon as they are ripe. Use a compost of peat, leaf-soil and sand. Make the surface of the soil very fine and sow the seed thinly all over it. Do not cover with soil, but place a sheet of glass over the pan or pot, and place it in a shady, moist position. When it needs water, do not water overhead, but dip the pot in a pail of water, but not deep enough to cover the surface of the soil or the seeds will float away. The plant you send is *Cornus capitata*.

Astilbes and Spiræas (Hector).—The genus *Astilbe* is only separated from *Spiræa* by slight botanical differences, and the members of both genera need exactly the same treatment, the whole of them being moisture lovers. Of the plants enumerated by you the only *Astilbe* is *japonica*, all the others being true *Spiræas*. A great many *Spiræas* are of a shrubby character, indeed, the members of this section are among the most beautiful of our flowering shrubs. The true *Spiræa japonica* is a shrubby species, forming a rather upright bush, which is, from the early part of July onwards, studded with clusters of bright rosy red blossoms. It is often met with in cultivation under the specific name of *callosa*, and as a late summer-flowering shrub is particularly valuable. We have little doubt it was the nitrate of soda which injured your plant; the fact that some others were not affected may be, in the first place, owing to the circumstance that it possibly received a little more than the others, and,

secondly, the soil was perhaps too dry when the stimulant was given, for these strong manures should never be applied when the roots are dry. You may safely give a solution of Peruvian guano, and thus encourage it to make good free growth, as in this way the flowers, which will develop next year, are built up.

Climbing plants for east and north walls (Ignoramus).—The following climbing Roses will succeed very well: *Aimée Vibert* (white cluster), *Ard's Pillar* (rich crimson), *Blush Rambler* (a grand new climbing Rose), *Turner's Crimson Rambler*, *Climbing Mrs. W. J. Grant*, *Dorothy Perkins*, *Electra*, *Gloire de Dijon*, *Mme Alfred Carrière* (white) and *William Allen Richardson*. Also the following Clematises: *C. Jackmanii*, *Marcel Moser*, *Mrs. Hope*, *President*, *Princess of Wales*, *montana*, *Vitalba* (*Traveller's Joy*), and the *Wistaria*, the grandest of all climbing plants, will succeed in such a position.

Delphiniums and Roses (H. F. P.).—The Delphinium sent is what is known as Cambridge Blue. It certainly is far from being True Blue. Probably it is a seedling. As to budding Roses to produce maiden plants, you can only procure these by planting out in February some stocks such as seedling Briars, Briar cuttings or *Manettis* and budding them the following August. The non-flowering of the Carnations may be due to the plants being wrongly named. Probably you have been supplied with seedling plants under the names you give. The *Gentiana acaulis* flowers best on a rockery in rather poor soil. It seems to need elevation, although it may frequently be found flowering freely by the side of a garden walk where the soil has been well worked. The Rose Mrs. David McKee is, as you say, a first-rate sort. It grows well and is most showy and beautiful, and a more useful Rose than Kaiserin Augusta Victoria for outdoor growth.

Increasing Pansies (Ignoramus).—Pansies are propagated from cuttings planted at the end of August in a warm, shaded border in sandy soil. The cuttings should be taken from the centre of the plant and be about 3 inches long. Cut off all the leaves close to the stem, excepting three or four at the top, and insert firmly in the soil. They will be ready for planting in the border by October. They require no protection. They like a rich soil and a cool aspect and should be planted 12 inches apart. Intermediate stocks may be sown in the open ground now and potted into 5-inch pots when large enough to handle. These must be wintered in a cold frame and protected in very cold weather by mats or some other covering. They should be planted in the borders at the end of March. They may also be raised in spring by sowing the seed in heat early in March and growing in frames (in pots) until large enough to plant in the borders.

Weedy lawn (S. R.).—We fear your informant as to the source of the weed which now so largely infests your lawn is right. It is known as the Hawkbit, and its botanical name is *Apargia autumnalis*. It is presumably an autumn bloomer, but in poor soils is much earlier. Like all the Thistle family, these seeds freely, and the seeds being light are easily carried on the wind good distances. If your lawn was in the direct path of the wind when these Hawkbits were seeding, a big share of them would fall upon it. Previously you had no spare soil on which the seeds could germinate, but after using the lawn sand to destroy broad-leaved weeds, there was ample soil space, and the lawn sand is really a manure. We fear that, so long as the poor grass land is near, do what you will, you may be troubled with weeds. Your only course is to have the lawn well forked over in the winter, all weeds and grass forked out and removed, a dressing of fully decayed manure forked in, then the whole allowed to lie until the end of March. Then sow fairly thick with good lawn grass seed and well roll. If the grass gets to cover the soil densely, there will be little chance for weed seeds to find soil on which to germinate.

TREES AND SHRUBS.

Jessamines flowering irregularly (H. M. C.).—It is impossible to account for one of your Jessamines flowering and the other not, as they are growing under the same conditions. If your white Jessamine is a young plant that may account for it, especially as you say that it grows vigorously. Try root-pruning next autumn. Remove some of the soil from around the roots and cut through a few of the larger ones. This will tend to weaken growth a little and may induce it to flower. The aspect is favourable for it.

Destroying stumps of Elders (Alford).—The Elders can be destroyed by boring large holes in the trunks near the ground line and filling them with common salt. After the salt has been inserted the openings should be corked up.

Dead Ampelopsis (R. R. G.).—The sudden dying of Virginian creepers, and especially old ones, is one of those things which seem to baffle explanation. The white mould within the dead bark of the stem of your twenty year old and now dead climber evidences the existence of fungoid growth, but that after all may be but a consequence of the decay and not the cause of death. We have seen many such deaths, and especially of *Ampelopsis Veitchii*, the close-growing one. Possibly the stem near the ground may get some injury, or some emanation of gas or other poisonous matter may kill the roots, or the soil may be quite exhausted. It is even

possible that severe frost may do the plant harm. There is no end of conjecture, but very little of reliable evidence. Possibly seedling-raised plants are more enduring than are those propagated by cuttings or layers. Still, a fungoid attack may be the real cause after all.

Information about tender plants (J. Metcalf).—If, in your part of Ireland, such plants as *Cordylone* (*Dracena australis*), *Tricuspidaria pendens*, *Myrtles*, &c., thrive in the open ground, it is quite probable that *Araucaria excelsa* and the *Camphor Tree* will do so. About the *Shasta Daisy* there is little doubt, as that thrives in many parts. The *Watsonia* will most likely grow well if given a sunny position at the foot of a wall in a well-drained border of sandy soil, but it is doubtful whether the *Pepper Tree*, *Papyrus* or *Wigandia* will thrive very satisfactorily. If you have plenty of plants it will, however, be worth trying them, for occasionally certain plants succeed in places where no one expects them to do so.

Information about *Pinus insignis* (A. Mackenzie).—Though *Pinus insignis* is a very beautiful species, and hardier than many suppose, it is not a success in many parts of these islands. In their "Manual of Conifers," Messrs. Veitch say that its value as a subject for British arboriculture is restricted to the area which may be roughly defined to be that part of England south of the Thames and west of the Severn, Ireland generally, and the south-western counties of Scotland. Such is also our experience, and we find that this species thrives particularly well within the influence of the sea breezes. Of *Abies webbiana* there are many fine specimens scattered throughout the country, but it is a well-known fact that in many places its culture is not attended with success. The main trouble seems to be owing to the fact that this beautiful Silver Fir begins to grow so early in the year that the new growth is often killed by spring frosts, which quickly injure the tree beyond repair. In its Himalayan home the snow lies on it for months together, but when it melts and growth takes place there is no return of frost that season. *Abies grandis* is by many experienced arboriculturists regarded as one of the most promising of the North American Silver Firs, and many large specimens are to be found in various parts of these isles. Its price, however, as noted by you, is by no means cheap. The Japanese Larch (*Larix leptolepis*) is looked upon as one of the most promising trees of recent introduction, being by many considered disease proof, while its comparatively quick growth is commented on by all. We shall be pleased to learn later on whether your diseased tree of the common Larch has in any way affected its Japanese relative.

Shrubs and climbers for plan (F. S.).—The following shrubs are all likely to suit your purpose: *Berberis steenophylla*, yellow, May; *Carpenteria californica*, white, May; *Choisya ternata*, white, May; *Chimonanthus fragrans*, white and brownish, January; and *Cydonia* (*Pyrus*) *japonica* in variety. Of the last-named we should recommend half-a-dozen varieties, as their beautiful flowers are all produced in early spring, and in colour they vary from white to deep crimson. In addition there are *Veitchianus rigidus*, lavender blue, April and May; *C. veitchianus*, blue, May; *Clematis montana*, white, May; *C. m. rubens*, rosy red, May; *Deutzia Lemoinei*, white, May; *D. discolor purpurascens*, pink, May; *Exochorda grandiflora*, white, May; *Forsythia suspensa*, yellow, February and March; *Hamamelis japonica*, old gold, January and February; *H. j. zaccariniana*, citreous yellow, January and February; *Jasminum nudiflorum*, yellow, winter; *J. primum*, yellow, spring; *Hydrangea volubilis* (climbing *Hydrangea*), white, May; *Magnolia stellata*, white, April; *Prunus triloba*, rose, April; *P. sinensis alba plena*, white, April and May; *P. s. roseo-plena*, pink, April and May; *Rubus deliciosus*, white, May; and *Viburnum plicatum* (*Japanese Snowball Tree*), white, May. For the stretch of wall on the left, which does not get much sun after midday, the most suitable plants get the *Cydonias*, *Forsythia suspensa*, *Jasminum nudiflorum*, *Hydrangea volubilis* and *Viburnum plicatum*. The only preparation needed will be to thoroughly dig the border before planting. As the soil is a fairly good loam, it is not likely to need any addition, for, owing to the limited height of the wall, you do not want the plants to grow too vigorously.

THE GREENHOUSE.

How to treat Ivy-leaved Pelargoniums (Mrs. Gurney).—If you merely wish to have pyramids of these in the open, as in the bedding arrangements seen in the public parks and gardens, the simplest way would be to arrange a pyramid of stout stakes or Bamboos and plant five, seven, or even more plants around and train them thereto. To do this successfully the cuttings rooted in the autumn of 1907 and grown on make good tall plants for the purpose, or cut-back plants would do equally well. Similar pyramids could be grown in large pots or tubs for terrace decoration by planting several around the inside edge of the receptacles named and training them into shape. This method of forming pyramids of such things as *Heliotropes* and the *Ivy-leaved Pelargoniums* has much to recommend it, and the plants when shortened back are readily wintered in a

temperature of 45° if kept rather dry at the roots. The dark-flowered *Heliotrope* President Garfield is a good one. Pots of 10 inches and 12 inches across would be large enough to grow handsome examples, and such as these with careful treatment and judicious supplies of liquid manure would remain good for two years at least.

Malmison Carnation buds destroyed (*M. Fell*).—There is no doubt that the Carnation blooms are eaten by caterpillars of some kind. You do not speak of finding any, but the mischief may have been done some little time ago, and when you noticed the damage these pests may have entered upon the chrysalis stage. Again, the authors of the mischief may be the larvæ of one of those small yet very destructive moths whose caterpillars feed only during the night and remain in hiding throughout the day. You will probably be too late to find any caterpillars, unless a second brood takes possession of the plants. The buds of double-flowered Geraniums are often scooped out by caterpillars in the same way as your Carnation buds are.

Calceolaria for inspection (*Miss C.*).—There are now so many garden varieties of *Calceolaria* in cultivation that we cannot possibly say whether yours is quite distinct from others. At all events, it is a very beautiful variety, apparently a cross between the ordinary herbaceous *Calceolaria* and one of the smaller-flowered forms. It may be said to stand in the same relation to the herbaceous *Calceolaria* that the stellata section of *Cineraria* does to the ordinary florist's varieties, that is to say, it forms a taller and more graceful specimen combined with a great profusion of bloom. The flowers sent were of a rich golden yellow heavily spotted with crimson, and as a succession is kept up for so long, it should prove of great value for the embellishment of the greenhouse or conservatory. It appears to us so good that we should certainly advise you to bring it under the notice of some specialist.

Applying chemical manures (*W. M.*).—We fear it is of little use to apply any general mixture of chemical manures to your garden now, unless you use them as liquid manures. To so apply them get a large tub holding from 20 gallons to 30 gallons of water, fill it, then put in a coarse bag a mixture of 3lb. of superphosphate, and 2lb. each of kainit and nitrate of soda or sulphate of ammonia. Let them lie and soak for twenty-four hours, then use the liquid to freely water crops, and refill the tub. Use the water again the next day, and when refilled add a fresh lot of the manure. It would in that way necessitate your getting in perhaps 1cwt. already mixed in the proportions we have named. Soot in a bag, a peck to a tubful of water, makes good liquid manure, but the chemicals are best. A good dressing of, say, 6lb. of superphosphate and 4lb. of kainit per rod should be dug in during midwinter, and nitrate of soda applied in the spring.

Information about Fuchsias and Campanulas (*G. A. L.*).—Some of the seedling Fuchsias will in all probability flower towards the end of the summer or early in the autumn if they are kept in the cool greenhouse. At the same time, seedlings seldom show their true character the first season, so that however unpromising some of them may appear it will be wise to keep them till next year before you make up your mind to discard them. The Campanulas will not flower this year, and your better way will be to lift them early in September, pot them up and winter them in a cold frame, protecting from frost during the winter. The month of October or the first half of November is the best time to make a new Raspberry plantation. Your enquiry re *Cyclamen* corms refers, we presume, to *Cyclamen persicum*. If so July is better than August to obtain dormant corms for pottling, but a more satisfactory plan is to obtain growing plants, which can be procured from a nursery anywhere during the autumn and winter. You omitted to send your name and address.

Information about double tuberous Begonias (*A. R. B.*).—In reply to your first question it will be quite impossible to increase your double Begonias by cuttings at the present season, for should a few of them strike root they will not have time to form a tuber before winter and will consequently then perish. The time to take cuttings is in the spring, when the young shoots are from 2 inches to 3 inches long. They must then be dibbled into clean, well-drained pots of sandy soil and placed in a propagating case in a warm greenhouse temperature, care being taken not to overwater them, as from their succulent nature they are very apt to decay if kept too wet. Division of the tubers can be carried out when two or more shoots are produced from one tuber. This should be done in the spring, when the young shoots are 1 inch or a little more in length, the tuber being divided in such a manner that each shoot has an equal amount of tuber attached thereto. These divided portions must then be potted and treated the same as the uncut tubers. You may, if you wish, save seed from your double Begonias, though in this way you cannot depend upon perpetuating the characteristics of any individual. The double flowers are the male ones and the single the female. All that is necessary is to

take some pollen on a small brush and apply it to the stigma of the female flowers. True double blooms seldom produce pollen, but it may often be found on semi-double flowers. At all events the more double the flower from which the pollen is obtained the greater percentage of true double flowers is likely to occur among the progeny.

Information about a Salvia and Abelia (*R. H.*).—The *Salvia* is in all probability the Pine-apple Sage (*Salvia rutilans*), whose leaves have a warm aromatic fragrance. You may cut your plant down immediately to within 9 inches of the pot. So treated fresh shoots will be pushed out before winter, at which season it must be kept in the house. It may be placed out of doors till the end of August. The *Abelia*, probably *A. chinensis*, or *rupestris* as it is often called, is quite hardy if planted out in the open border. A sunny yet sheltered spot and a well-drained soil are the best conditions for it. The *Dentzia* is quite hardy, and may be planted out under the same conditions as the *Abelia*.

ROSE GARDEN.

Mildew on Roses (*G. F. T.*).—We advise you to cut off the most affected parts of your plants and then syringe them with a solution of carbolic soap. This is made with half a bar of Lifebuoy soap to three gallons of soft water. When thoroughly dissolved syringe with a very fine sprayer on the under and upper sides of the foliage. Repeat every few days until the mildew disappears. Ants may be trapped by sinking some glazed jars into the ground near their nests and putting some syrup into the jars. They should be rather less than half full. The ants will fall into them and fail to get out again, when they can be emptied out and the trap reset until the nest is destroyed. If you can trace the nest, pour some paraffin into it; but you must take care that it is not near the roots of any plant.

Rose Conrad F. Meyer not flowering satisfactorily (*C. L. A.*).—This Rose is apt to grow so vigorously that unless grown as a pillar plant or pegged down it will not flower very freely. You might remove a few inches from the flowerless shoots at once, but we do not think you will get many blooms from them this year; it will help to ripen them, however, and they should bloom next year. In pruning next year leave the growths made this year from 3 feet to 4 feet in length, and if necessary loop them up to sticks. Some of the growths bend over arch-like and others horizontally. Keep them about 2 feet from the ground. A good plan to check the exuberant growth is to lift the plants with a spade and place them again into the same position, making the soil firm about their roots. This should be done in October. This Rose flowers very freely on standards, and we have had it bloom grandly this year upon plants put out two years ago. In pruning we retain the wood almost the entire length that it made last year. Some of the plants might be trained in a fan shape upon a trellis formed with Bamboo canes. The check to the flow of the sap would induce it to flower.

Roses for a new Rose garden (*M. M. M.*).—As you say Roses do very well with you, we take it that you are able to give them a fair depth of soil, although there is rock beneath. It is always well to provide Rose plants a depth of some 2 feet of soil, and more if possible. Where 2 feet cannot be provided, you could raise the beds 8 inches to 10 inches, and turf over the sides of the raised portion. Your idea of planting three of a sort is a very good one, and, of course, you will want a large number of sorts to fill such a piece of land, but you will, no doubt, lay out the land into beds of various designs. You could have some arches and pillars of Roses, also a bed of standards, to break up the flatness. As regards continuing the hedge of China Roses, we think this could be done without spoiling the effect. We append the names of some very free-flowering sorts, which will enable you to have plenty for cutting purposes. White and pale flesh colours: Admiral Dewey, Anna Olivier, Antoine Rivoire, Augustine Guinoisseau, Clara Watson, Frau Karl Druschki, Florence Pemberton, G. Nabonnand, Hoh. Edith Gifford, La Tosca, Peace, Parisair, Prince de Bulgarie and Viscountess Peckstone. Pink of various shades: Celia, Captain Christy, Caroline Testout, Earl of Warwick, Grace Darling, Gustave Grunerwald, Killarney, La France, Mme. Edmée Metz, Mme. Leon Pain, Mrs. John Laing and Mrs. R. G. Sharman Crawford. Yellow and apricot: Dr. Grill, Francisca Kruger, Gustave Regis, Joseph Hill, Lady Roberts, Le Progrès, Mme. Charles, Mme. Hoste, Mme. Pernet-Ducher, Mme. Ravary, Marie van Houtte, Paul Lide and Sulphurea. Rose colour and

salmon: Camoens, Countess Cairns, Lady Battersea, Mme. Abel Chatenay, Mme. Jules Grolez, Mme. Lamhard and Mrs. W. J. Grant. Red and crimson: Captain Hayward, Corallina, Liberty, Marquise Litta, Papa Gontier, Richmond and Ulrich Brunner. Dark red: Charles Lefehvre, Commandant Felix Faure, Duke of Connaught, Duke of Wellington, Earl of Pembroke, Ella Gordon, Fisher Holmes, Jubilee, Victor Hugo and Warrior. The following Polyantha and China Roses would yield some lovely sprays of bloom. Polyantha: Aenechenn Müller Aschenbrödel, Engenie Lamesch, Katharine Zeimet, Mme. N. Levavasseur, Mrs. W. H. Cutbush and Perle d'Or. China or Monthly: Aurore, Comtesse du Cayla, Baronne P. de St. Cyr, Charlotte Klemm, Mme. E. Resal and Queen Mab.

Rose Jean Liabaud failing to open (*Anatole, Alexandra Park*).—This is always a very difficult Rose to grow, and it is rarely satisfactory. The petals are so very numerous that unless we have a hot season they will not unfold, and then, unless shaded, they are burnt by the sun. You will find that the autumn blooms are much the best, although not very numerous. Probably if you planted the tree in a rather warm position you would be more successful with it. If you have a liking for very dark Roses, try Jubilee, Abel Carriere or Baron de Bonstetten. These are all good, so also is Dandy. If the old growths are thinned out in autumn and the strength of the plants confined to the young wood, you should be able to grow these dark Roses very well, providing you prune carefully in the spring, cutting back to plump eyes.

Pruning Roses in summer (*E. S. M. and others*).—As the writer of the reply to "E. H. A.," page 343 of THE GARDEN, re "Cutting Rose Blooms Off Young Bushes," I maintain that it is contrary to Nature to cut away a quantity of growth when the plant requires the foliage for its sustenance. I cannot agree with "J. D.," page 326, that it is advisable to cut Roses copiously with long stems during the summer, in order to ensure a fine autumn crop. This might succeed one year, but it would soon tell its tale in decrepit plants in the near future. You cannot make a shy-blooming Hybrid Perpetual bloom freely in autumn by hard pruning. The reverse is the case. It will merely make strong flowerless wood that will be unripe and totally unfit for flowering well another year. If Tea and Hybrid Tea Roses are in a good rooting medium they will continue to send up plenty of young wood without any pruning whatever, and this can be considerably aided by partly bending over or pegging down the growths, rather than cutting them away. In the reply to "E. H. A.," young plants are referred to. Plants established some years can have more growths removed in summer than newly-planted ones, but any good gardener knows full well the risk that is run in severely pruning Roses during the growing period. If a good autumnal display is desired from newly-planted bushes, I should advise pinching off all the bloom buds until the end of June. Many first-class gardeners ensure a good autumnal crop from their Teas and Hybrid Teas by cutting off all blossom from their plants immediately their employers have gone away, but they never think of removing a lot of unnecessary growths and foliage.—P.

FRUIT GARDEN.

Berries of Foster's Seedling Grapes diseased (*Thomas Ross*).—Foster's Seedling Grape is one of the easiest Grapes to grow of any we have. Under ordinary conditions of treatment nothing comes amiss to it. We think you have overdone the Vines with artificial manures, causing a certain cessation of healthy root action. Withhold any further supply for the present and ventilate more freely day and night, so as to give the Vines more rest for a time, when we hope the mischief will be abated.

Gooseberry bushes attacked by insects (*H. A. Martin*).—The Gooseberry leaves have been attacked by red spider, which often does much damage to Gooseberries. A thorough syringing with water will do much to check the increase of these pests upon the bushes, especially if the work is done early when the trouble first appears. Even better would be syringing with potassium sulphide solution made by dissolving 1oz. of potassium sulphide in 2 gallons or 2½ gallons of water. The syringing should be repeated at intervals of a few days, as the solution will not kill the eggs of the pest. The black chrysalis with gold rings is the chrysalis of the magpie moth which feeds upon Currants and Gooseberries. The rolling of the leaves of the Rose is due to the presence of the larva of one of the sawflies (*Blennocampa pusilla*), and each of the tunnels formed by the rolled leaves shows traces of the presence of that insect though only one of the larvæ was present. Standard Gooseberries may be obtained from most nurserymen.



NEW DAFFODILS.

WHITE, "QUEEN OF THE NORTH."

PALE YELLOW TRUMPET, "CZARINA."

YELLOW TRUMPET, "SERAPHIN."

(BARR & SONS.)

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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AMONG THE ROSES.

BEFORE the introductions of the last two decades we had few Roses of merit during August and September. Thanks to the vast improvements in Teas and Hybrid Teas we now have varieties that flower more or less continuously throughout July, August, September and October, and a good many of these are never seen to better advantage than when the majority of Hybrid Perpetuals and climbers are over. Very beautiful and dazzlingly bright is

Ecarlate at present, and it will continue so until well into October unless we have an unfavourable autumn. *Ecarlate* makes a capital bedding Rose, favouring Marquis of Salisbury and Camoens in growth and habit—it is a seedling from the latter—and has been a mass of deep scarlet from the end of June. It does not throw up strong and uneven growths, but keeps almost as uniform as the Zonal Pelargoniums. Both this season and last it has taken the eye of all who have seen it.

Mme. Antoine Mari is another that continues to flower from mid-June until stopped by frost. A very pretty coat flower this, opening into a good decorative Rose that lasts for several days. Ideal in habit as a bush, and about our best for beds where a very soft rose colour, tinted with carmine on the edges, is wanted, and one that is sure to please.

Mme. Jean Dupuy is stronger in growth but compact, and during the bright days of autumn has the deep carmine edges found in *Marie van Houtte* and *Homer*, only more intensified. The chief colour is a deep and warm rosy yellow. This variety is as hardy and certain as *Homer*.

Mme. Jeanne Phillippe is another good nankeen yellow, reflexed with carmine, carried boldly erect and in immense trusses; quite distinct and will be welcomed everywhere for decoration.

Mme. Philippe Rivoire is comparatively new, and supplies a grand deep apricot yellow on a clear nankeen ground, beautifully tinted with carmine on the edges. It is also very fragrant, a good bedder, and gives capital coat flowers throughout the season, while the fully-blown bloom is fit for the exhibition box.

Mrs. David McKee, a very free-flowering creamy yellow, much clearer than most of the cream-coloured Roses, is a grand one for the exhibition box as well as the garden. It has a bold habit, lasts well and is very sweet.

Mrs. Myles Kennedy reminds me of *Souvenir d'Elise* when at its best in form and size. It is a lemon yellow, shaded with buff, and almost as distinctly edged with carmine as *Mme. de Watteville*,

Instituteur Sirdey has been very good this season, throwing up some grand trusses of deep golden yellow with a touch of brick red in the centre.

Le Progrès is another that has surpassed itself this month. Large, full, a very deep golden yellow and exceptionally sweet-scented. I wish this Rose would look stiffer and bolder. For some years it has been a surprise to me that

La Tosca is not more generally grown. Resembling *Viscountess Folkestone* in shadings, it is carried perfectly upright, produces large trusses, and is not over directly the bloom has burst. It is also one of what I call all-season Roses, and has never once disappointed us. Hon. Edith Gifford, Mme. Abel Chatenay, Lady Ash-town, Pharisaer, Mme. Ravary and

Mrs. Theodore Rooserelt have come in capital form. The last-named is about the best in its colour. Creamy white, reflex of petala clear pale rose; a flower that always looks clean, stands up boldly, is perfect in form, of good size and with the fragrance of *La France*, a Rose it seems to have an affinity with.

Dean Hole has also been exceptionally good, giving us a touch of *Maman Cochet*, Mrs. Edward Mawley and Earl of Warwick in a bolder form, and yet quite distinct from either. The season at present has suited

White Maman Cochet, and I have seldom seen it better. It is hard to beat this Rose when grown upon short standards, a form which many varieties need to see them at their best, especially those with a tendency to droop through slightness of stem compared with the weight of bloom.

Etoile de France is coming better again now. This Rose rather disappointed me at first. I expected more from Fisher Holmes and Mme. Abel Chatenay, especially where the pedigree was so marked; still it is among our best dark sorts for late cutting and stands remarkably well. I notice we have several plants of *Dorothy Perkins* throwing a white sport much after the

White Dorothy now coming into commerce. A good number of quite new varieties are under close observation, and some of them promise well; but more of these later on.

Rhea Reid is doing well with me out of doors. Although recommended as an improved Richmond under glass, the blooms we have are not so at present; but outside it is far superior. It is too early to decide, as it was only procurable this season. Another new Rose, *Molly Sharman Crawford*, promises to be a really grand white. *Evangeline* and *Hiawatha* are two

Newer *wichuraianas* that are quite distinct, but several queries have reached me as to "which was which?" By some means *Evangeline* has

been distributed as Hiawatha. I do not think this was done intentionally; but both coming from the same raiser and sent out about the same time, with great similarity of growth when in their younger stages, may account for it. Hiawatha can always be distinguished from Evangeline, whether in flower or not. The first-named has perfectly straight prickles, and the last are hooked as much as Fortune's Yellow and Maréchal Niel. Evangeline is a beautiful single Rose, clear, shiny flesh pink, with large stamens, and is difficult to beat when growing on tall standards or drooping from walls and rockeries. It does not continue in bloom so long as Hiawatha, but has given a six weeks' show this season. Stella is a much deeper and brighter form of Leuchstern, flowering the full length of its growths and lasting against all weathers for many weeks. It takes the eye at once and comes in very early. So far we have not been troubled with

ROSE PESTS

to any great extent here. Early in the season there was rather more Rose maggot than usual, but hand-picking soon put a check to this. Mildew is making its appearance, no doubt caused by the extreme changes of temperature experienced lately; hot in the daytime and cold early in the morning. It is those who get up a little before the sun who realise the great difference between sunrise and midday. Others will scarcely credit it. I have invariably found mildew after these changes. Green fly has given us no trouble whatever, and at the time of writing we are free from thrip, a blackish brown pest that quite spoils our light-coloured Roses during many summers, more especially after a spell of hot and dry weather.

Since writing the above I have had one more look at the newer varieties and the following are certainly first class. Mrs. Aaron Ward is a deep Indian yellow, washed with warm salmon rose, tinged with the deep coppery yellow found in Prince de Bulgarie and Monsieur Joseph Hill; erect in growth and flowers carried boldly above the foliage. Mlle. Simone Beaumez is a large, well built up flower, rosy white in the centre and tinged with saffron yellow that becomes more intense as it reaches the edges. Mrs. Peter Blair, chrome yellow, golden yellow centre, large and quite distinct. The

Lyon Rose has been talked about a great deal, and so far as it has come with us deserves all praise. It is a cross from Melanie Soupert and Solfiel d'Or, the pernetiana that was claimed as the precursor of a new race. Unlike Solfiel d'Or, the *Lyon Rose* has already proved its perpetual qualities, and takes after its Hybrid Tea parent in many respects. It is very large, long in the bud, and opens into a grand flower, made up of extra large shell-like petals. Both in the open and under glass it has pleased us, and is certain to be largely grown for some time. Its foliage is good and without traces of mildew here, the colour coral red, tinted with chrome yellow at the base. The raiser describes it as "shrimp red" at the edge of the petals, but it has more the clear colouring of prawns than shrimps, very sweet, keeping its colour in sun or shade.

Subscriber.

RIDGEWOOD.

NATURE THE ARTIST.

It is surprising how beautifully and picturesquely trees and plants, even the commonest, will group themselves the moment they are freed from man's control. We see this in any spot that has been thrown out of, or never taken into, cultivation, even though it bear only Thistles, Briers and the commonest of flowers. In corn-fields and market-gardens, on the contrary, the æsthetic effect of the plant-world sinks to a minimum.—SCHOPENHAUER (2 "Parerga," page 459).

FORTHCOMING EVENTS.

September 1.—Royal Horticultural Society's Exhibition, Vincent Square, Westminster, S.W.

NOTES OF THE WEEK.

Co-operative Flower Show, Crystal Palace.—The flower show to be held at the Crystal Palace on Saturday, the 22nd inst., in connexion with the Coming-of-Age Co-operative Festival, promises to be very successful. Entries are being received from as far north as Northumberland, and there is every prospect of a very good show being got together. In addition to the flower show, the programme includes concerts, choir contests, big co-operative exhibition, dramatic literature performances, athletic sports and many other attractions.

The National Chrysanthemum Society at Windsor.—The annual country meeting of the National Chrysanthemum Society was held at Windsor recently. In the morning the party paid a visit to the Royal Gardens, and afterwards assembled at Layton's Restaurant. The president of the society, Sir Albert Rollit, took the chair at luncheon, which was served in the two largest rooms in the restaurant, nearly 200 guests being present. The Mayor of Windsor, Alderman E. Bampfyld, occupied the chair on the right of the president. After luncheon the chairman proposed the royal toasts, and afterwards "The National Chrysanthemum Society," which, he said, had for half a century done a great floral work in promoting the cultivation of a flower which was beautiful, of easy culture and decorative in the autumn of the year, when its varied colours were without rivals, and when there was a dearth of other inflorescence. The Windsor branch of the society had also been most successful, as he knew from his local associations. He urged support of the society by the proposal of new members. In proposing the toast of "The Mayor of Windsor," Sir Albert said their honoured guest was a pattern Mayor. As a member of the Royal Horticultural Society he could say that the Mayor's recent luncheon to them at the Windsor Town Hall had been most hospitable; while recently he had the honour, with Lord Desborough and his Olympic athletes, of having been entertained by the Mayor before the start of the Marathon Race from the castle.

Potato Sutton's May Queen.—Those readers of THE GARDEN who require a really good early Potato, valuable alike for frame or open air culture, should make a note of the above for the coming year. On a sheltered border in light and rich soil excellent tubers were dug in eight weeks from the planting, and a few days later the yield was as good as one could wish, the tubers handsome in appearance and very clear skinned. The flavour, too, is of the best. A large number of the tubers I have lifted have been of good exhibition size and quality, but the largest and most shapely tubers I have yet seen were in the first prize collection of six sorts at the recent GARDEN show in the Royal Horticultural Hall on July 30. These were indeed a superb-looking sample and came from Mr. R. Brown, gardener to Lady Tress Barry, St. Leonard's Hill, Windsor.—E. H. JENKINS.

The Gooseberry mildew.—Mr. Henry Cannell of Swanley sends two letters, with specimens of Gooseberry, showing the effect of his "One and Only Perfect Wash" in checking the mildew. The specimens were of great interest; the one previously dressed was in perfect condition, but the other was covered with the fungus. Mr. E. S. Salmon of Wye College, who has taken so determined a step in bringing this disease before Gooseberry and fruit growers generally, recently lectured before the Maidstone Farmers' Club. He reported on the recent outbreaks of Gooseberry mildew in Kent, expressing the opinion that this disease had been in the county for two, and probably three, years, and said it had made its appearance at Crockehill, Sutton-at-Hone, Swanley, and Southfleet, in which district over 200 acres were affected. The mildew is causing much anxiety

in the Swanley district. The opinion has been expressed that the trouble is due to infected fruit baskets being brought into Kent. If this be accurate, the first precaution should be to disinfect the baskets by dipping in some wash. It is stated that on several of the farms the infected plantations are being successfully treated by Mr. H. Cannell, sen., of Swanley with the "One and Only Perfect Wash" already mentioned. One letter is as follows: "I have great pleasure in writing to you with reference to your 'One and Only Perfect Wash.' I have tried it on Apple, Plum and Pear trees—Apple sucker and aphid, Plum aphid and scale (both very bad). After two applications, on careful inspection not a single pest could be found alive. My Gooseberry bushes were simply covered with caterpillars. After spraying in the evening, on examination next morning the ground was literally covered with dead pests. It is just as effective for mildew. My Roses are a picture of health and vigour after two applications. It is in the highest degree effective. It is also harmless to the trees (non-poisonous). There is no risk or discomfort to the user. It is economical in cost and, above all, absolutely reliable.—JAMES STEPHENSON, *The Gardens, Sutton Scarsdale, Chesterfield.*"

The annual borders at Carton, Maynooth, Ireland.—For a number of years quite a feature has been made of annuals in the borders flanking one of the main walks in the kitchen garden of the Duke of Leinster, at Carton, Maynooth. This kitchen garden, which, by the way, has within its walls ten acres of ground, is beautified with borders of flowers, and in its season those devoted from year to year to annuals are most effective. This season they are doing well, and the show is very fine indeed. Salpiglossis, Asters, Godetias, Clarkias, and, in fact, almost all the good annuals of the day, are cultivated in generous masses in these borders, and the display is evidence of the real value of these annual flowers at this time of year. The borders occupy each side of the main path running along the garden, and the effect has been and is very fine indeed.—S. A.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Gooseberry mildew in Kent.—By a clerical error the notice sent on the 13th inst. by the Board of Agriculture and Fisheries referred to the recently-discovered case of American Gooseberry mildew as having occurred in Kent. The particular case referred to occurred in Essex, and the Board would be glad if the notice could be amended accordingly.

Rose Marechal Niel and canker. I sent a short note to the "Rose Annual, 1906," of the National Rose Society about the freedom from canker of an old Maréchal Niel grown by a neighbour of mine. Its freedom from this pest he attributed to the fact of its being budded on Isabella Gray, which I pointed out was one of the reputed parents of Maréchal Niel. I have lately had a letter from a Mr. Kemp of Clapton, who said he had been told that the parents of this our best yellow Rose were Isabella Gray and Solfaterre. Certainly, from my memory of the latter's perfume and habit, this pedigree would not be unlikely. Can any of your readers give me any information on this interesting subject? Perhaps Mr. Kemp when he sees this letter may be able to add to the information he gave me. To the best of my recollection Isabella Gray had a most pernicious habit of splitting, and, like several Roses of that date, frequently came with a green centre and had the same rather full, rounded calyx as the Maréchal.—J. T. STRANGE, *Sulhamstead, Berks.*

Lilium candidum and the disease.—You were kind enough last year to give me advice about my *Lilium candidum*, which were badly attacked by fungus. I followed your directions, sun-baking the bulbs and then rubbing sulphur well into them before replanting. The result has been most satisfactory and I have had a nice show of bloom, whereas last year not a single plant bloomed. I wish to thank you for your advice.—EMILY O. PARR, Bromley.

Wistaria multijuga.—Noting the illustration of *Wistaria multijuga* in THE GARDEN for the 18th ult. I herewith send you a photograph of a plant growing on the lodge at Millfield, Cobham, Surrey. Unfortunately, it was impossible to photograph the whole of the plant, as the *Viburnum* in the picture obstructed the view of the finest racemes, many of which were 36 inches in length. For years it never flowered until I adopted the plan of pinching the shoots in summer, so that practically there was no spring pruning to do.—F. W. PEARCE (gardener to Mrs. Hansard).

The variability of Spencer Sweet Peas.—The assumption that the well-known variability of Sweet Peas of the Spencer type is due to insect or atmospheric cross-fertilisation is by no means assured. Whatever may be the exposure of the point of the stigma in any flowers there is, in the first place, no assurance that prior to that exposure self-fertilisation had not already taken place, and, second, there is the fact that the pollen cases still remain covered by the keel just as much in the Spencer type as in the Eckford strain. But how easy it is for any one another year to put this matter to the test. Let them sow or plant out from pots in the open six or more of the Spencer varieties that are known to have sportive or variable characters in clumps of ten or twelve plants. Allow each plant to flower first to see if true to name or otherwise, and have all plants untrue pulled out. Then have every expanded bloom cut off and at once envelop each entire clump in fine muslin through which light and air can penetrate but no insects or pollen grains. Have the whole of the seeds produced, saved and carefully sown the following year. If each lot come true to name then would it be certain that the variability now so common was due to external fertilisation; if the variability still was evidenced then must it be attributed to heredity of character. How much all Peas, for many years after being put into commerce, show this sportive tendency is well known to all seedsmen, and only the very closest and constant oversight in rogueing stocks, no matter how extensively, will keep them true. Sometimes, as we see in edible Peas especially, the variability results in producing an improved stock, which is called an improved selection, though that character is less plentiful than is the backward tendency. Few persons who grow Peas in their gardens know how much they owe to the seed grower or Pea expert for the excellence of the stocks sold to them. There seems to be some stocks of the Spencer type of Sweet Peas that remain true to name. That being so, if external fertilisation be the cause of variation why do these varieties escape? When it is remembered that Sweet Peas are now the product of "in and in" breeding, that many of them have in them the blood of numerous progenitors in varying colours, is it any cause for wonder if variability does evidence itself so markedly in the progeny? It would be well if some independent authority, such as the floral or scientific committees of the Royal Horticultural Society, conducted next year experiments with the object of testing the matter fully. Certainly the future of the Sweet Pea is not dependent on any such test, but at least it might set at rest the question as to how far natural variability or external fertilisation produces these sports, which are so unpleasantly numerous.—D.

DAFFODIL NOTES.

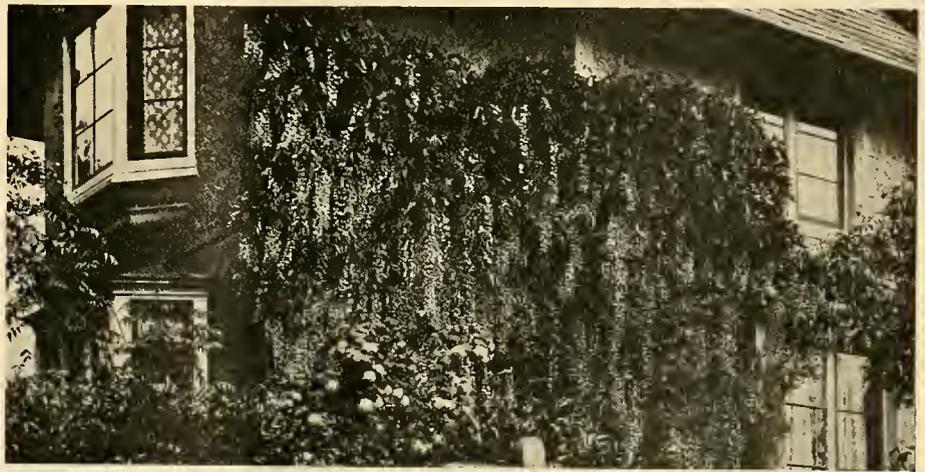
LARGE AND SMALL CUPS FOR POTS.

AS I said in my previous notes, the large trumpets somehow seem to be more suitable for pots than either the large or small cups. Just for curiosity I turned up some old Midland Daffodil Society's schedules to see how the pots for competition were generally made up, and I found in both the sixes and the twelves that in every case the large trumpets outnumbered both the other sections put together. This bears my remarks out, and is a fair criterion of popular taste. Hence in making a selection I would not advise more than five out of twelve pots to be made up with these cupped varieties. Sir Watkin, the giant Welsh incomparabilis, is the best of all and can easily be flowered early in February. Autocrat is an excellent one to come in a little later; it is a beautiful soft yellow self with a nice stiff perianth, and is a particular favourite of mine. The orange red and red edged varieties never appeal very much to me; their colour suffers more or less from being grown under unnatural conditions, and I generally give them the cold shoulder. Nevertheless, for coming in in March they may be got fairly in character. Barri conspicuus and Crown

flowered and well grown is exceedingly handsome. The Phenixes too are effective, and are frequently grown in pots; probably Orange Phenix is the most popular.

POLYANTHUS AND POETAZ FOR POTS.

Three of the best *Polyanthus Narcissus* are Maestro, Mont Cenis and Sir Isaac Newton or, as it is more often called, Newton. The latter has a yellow perianth and an orange cup, whereas the others have white perianths, and in the case of Maestro an orange red cup and in that of Mont Cenis a rich yellow. Both are exceedingly floriferous. The above three make an excellent trio for those who admire this type. Very many object to their strong scent, and it certainly is overpowering in confined spaces. Muzart orientalis I grew for the first time last year, and I was charmed with it. It is a late flowerer naturally, so I would only advise it for late forcing. In its general appearance it is more like the Poetaz type, as the stem is tall and does not carry many flowers; there are seldom more than three. The perianth is white, and the cup a dull deep orange something like the colour we get in *M. Madeleine de Graaf*. It is not very free, so the bulbs may be planted fairly close together. Before very long the old-fashioned *Polyanthus* will be seldom grown. The new race of Poetaz is in every way superior. All that I wrote about it in THE



WISTARIA MULTIJUGA AT MILLFIELD, COBHAM, SURREY.

Prince are good representatives of the red edged, and Gwyther and Lulworth of the red orange cups. The latter is a dwarf-growing plant and is especially effective in small pots. "There is no rule without an exception," and the exception here is the old Leedsii type, with their white perianths and lovely pale citron or creamy white cups. They are good in pots, and their delicate colouring and refined look always form a delightful contrast to the trumpets. Of the cheaper ones, Minnie Hume and Mrs. Langtry are the best; of the more expensive ones, Duchess of Westminster and Katherine Spurrell. I believe Seagull is good too, but I have not tried it; the price is now much lower than it used to be, but half-a-sovereign a dozen is prohibitive for many of us. Everyone should include a few pots of Campernelle Jonquils. It is a matter of taste whether the ordinary type or the rugulosus type is chosen. Some prefer the stiffer and more regular rugulosus, while others like the looser flower of the type. Poeticus ornatus does well, but if several Leedsii are grown I do not think it is really wanted. Poeticus recurvus will not force.

DOUBLES FOR POTS.

Whether it is for sentimental reasons or not I am unable to say, but the old double yellow (*Telamonius plenus*) has a good many admirers, and I must admit that a good large pot nicely

GARDEN last autumn I can fully confirm. The head of a large wholesale bulb and seed firm told me that he had had a small private show of Narcissi for his customers this spring, and that he was surprised at the way they all went for the Poetaz. Let me enumerate some of its advantages: First, its looser and less stiff habit; secondly, its more pleasing scent; and, thirdly, its hardiness. Compared with the *Polyanthus* type, this new decorative class has taller flower-stems and bigger individual blooms, although there are not so many in a truss. They are most effective in pots. Elvira has white petals with a rich golden yellow cup, and there are generally three or four flowers on a stem. It is the latest of the Poetaz. Ideal has from four to six flowers, and the perianth is white and the cup a decided red orange. Klondyke has about the same number of flowers, but the perianth is pale yellow and a good deal turned back; the cup is a deeper shade of yellow. Jaune à Merveille is exceedingly handsome, and may be described as a sort of yellow Elvira. Unfortunately, this variety at present is very scarce; last year, although I wanted about a hundred and fifty, I was only able to buy twenty-five. I would strongly advise everyone to give this new type a trial, and when the flowers are done, not to throw the bulbs away, but to plant them out just as you would a pot of Emperor. JOSEPH JACOB.

THE ROSE GARDEN.

CLIMBING TEAS AND NOISETTES ON PERGOLAS.

WITH the passing of Dorothy Perkins, Hiawatha and other late-flowering ramblers our pergolas will present a rather dull appearance during September and October unless we have had the forethought to plant some of the climbing Teas and Noisettes. Unless the garden is much exposed there are few of these lovely Roses that could not be utilised. I have seen in a comparatively cold garden such a tender sort as Climbing *Devoniensis* thriving most successfully, sending out its long reddish growths in great luxuriance. But I should not recommend this particular sort, as it is rather a shy bloomer; there are numerous and good varieties that would give their blooms freely until the frosts come to check them.

That cheerful cherry red *Reine Marie Henriette* has not yet been surpassed in its own particular colour, and if it is provided with a good deep root-run, as all Rambler Roses should be, we should find less of that mildew that frequently mars the beauty of this Rose. *François Crousse* is one of the most brilliant sorts, its flowers being as rich in colour as our *A. K. Williams*; but, unfortunately, it is scentless. *Waltham Climber No. 3* is deliciously sweet, and a well-shaped double flower, the colour a fine tone of crimson. *Souvenir de Mme. Joseph Metral* has a splendid large bloom, quite of exhibition size and form, and it is the most lovely shade of rosy carmine imaginable.

Climbing *Captain Christy* should be planted where a cheerful pink is wanted, and its blooms are more elegant in shape than the original dwarf form. *Mme. Hector Leuilliot* is splendid; its huge orange yellow flowers appear likely to displace *W. A. Richardson*, although in the bud state there is no fear but that the old favourite still holds the field. *Mme. Alfred Carrière* is a beautiful flesh white; it is not so pure a white as *Aimée Vibert*, but it is more vigorous. However, both should be grown and mingled with *Grüss an Teplitz* and *Longworth Rambler*, the quartette making quite a beautiful show in themselves. *Mme. Jules Siegfried* is another of the hardy Teas with a delicate creamy flower not unlike *Enchantress*. *Jaune Desprez* is old, but it is still beautiful and so luxuriant in growth that it should not be ignored. *Rève d'Or*, although not very free-flowering unless allowed to grow unpruned over a lofty south wall, is yet too good in foliage to be omitted for pergola work, and when its fine golden flowers peep out amid a mass of brownish foliage it is a pretty object. *Zepherin Drouhin* is such a delightful shade of rosy pink that one must find space for it, if only on the pillars of the pergola, and its sweet fragrance supplies what some of the other varieties lack.

A glorious bit of colour is provided by planting *Bardou Job* on one of the upright supports of the pergola, and it is one of the best autumn Roses we have. *Kaiserin Friedrich* is a pink-tinted form of the old *Gloire de Dijon*, and most charming it is in the autumn days, reminding one of *Marie van Houtte* in its beautiful blending of cream and pink. Somehow the old *Gloire de Dijon* seems to be neglected, and for why I cannot conceive. We have yet to produce a better all-round Rose than this one when it is grown as it deserves to be, but it is so hardy and free that I am afraid we sometimes imagine it does not require artificial aid. This old Rose, like all the rambling and climbing Roses, well repays us for liberal waterings with liquid manure, both before the summer bloom and also afterwards to help the autumn crop.

In planting Roses for their autumnal blooming the pretty hybrid Musk Roses should not be

overlooked, especially that valuable novelty *Trier*. This is a lovely Rose with its pyramidal sprays of buff and white blooms. Another useful novelty of the same group is *Snowstorm*, a Rose not unlike *Pissardi*. All of these would be very suitable to make a low hedge between the pergola supports, and to add to their number the *Perpetual Thalia* should not be overlooked for the same purpose. P.

ROSE AUGUSTINE GUINOISSEAU REVERTING BACK.

AN Augustine Guinoisseau Rose bush which I bought some eight years ago has suddenly reverted in part to a *La France*, from which I have always understood Augustine Guinoisseau originally sported. The bush is now bearing blooms of both varieties at the same time, which has a curious effect. I do not know if any of your readers have ever experienced a similar occurrence.

Forest Park, Windsor. ARTHUR L. WIGAN.

[We have frequently had plants of this Rose suddenly produce a growth bearing *La France* blooms, which proves it to be a sport of that old variety. We understand the introducer kept the variety some years before he sent it out, possibly because of its tendency to revert back. However, it is a very lovely Rose, and we do not mind if it does occasionally produce flowers of a deeper colour than its own. Both Roses are deliciously sweet.—Ed.]

SARAH BERNHARDT.

(HYBRID TEA.)

A ROSE of even more brilliant colouring than *Liberty*, with semi-double flowers of the size of *Bardou Job*, will surely be welcome to all lovers of this picturesque type. We have such a flower in *Sarah Bernhardt*, which should enable the planter to make some very effective groupings this autumn. The variety is semi-climbing and thus must be allowed a freedom of growth such as we accord to *Grüss an Teplitz*, *Gustave Regis*, *Alister Stella Gray*, *Gloire des Rosomanes* and varieties of that type. One can imagine what a glorious effect will be produced when *Sarah Bernhardt* is freely planted. It provides a really splendid bit of colour much enhanced with the wealth of golden stamens in the half-open flowers. There are about nine petals composing the flower, so that it is somewhat fuller than *Bardou Job*. One would do well to plant *Sarah Bernhardt* on the upright posts of a pergola on the sunny side, or else as a free bush, affording the plant a space of 3 feet each way and looping up a branch or two to a stick if necessary. P.

THE FRUIT GARDEN.

PLANTING STRAWBERRIES IN AUTUMN.

THE BEST VARIETIES.

THE amateur who looks through a list of Strawberries is often at a loss to know the best to plant in the garden, as the most reliable varieties are required, at least these should be selected in preference to mere size. At the same time, if both size and variety can be secured so much the better. I have for many years advocated treating the Strawberry more like an annual or biennial, and this done it can be grown in land quite unsuitable, as by deep cultivation it is remarkable what vigour the plant has. It will pay for cultivation if not left too long in one place. Another point amateurs should observe is not to replant from exhausted plants. This is a great mistake, as runners should be secured from strong tufts or new stock from a distance. The soil should have been deeply dug in advance. I have frequently planted after late Potatoes and got excellent results.

Select an open place for the main crop sorts, a south border for early ones and a north for the latest. This gives a long succession. I recently saw in an amateur's garden (the soil very poor) six rows of three varieties, early, mid-season and late, and in soil that he was told would not grow Strawberries, whereas they have been excellent. The land was trenched, the manure was placed halfway down at the digging and there was an excellent return. He will take one more crop and then destroy, and to get fine fruits yearly a new bed will be planted each season and one destroyed, but of course having a fresh site, not planting on the old quarters for at least three years.

PLANTING.

August or September is a good time to plant, though I have done so in November, but prefer the earlier dates, and the soil being prepared as advised. If the land has had a Potato or other vegetable crop, dig deeply and incorporate some decayed manure with the top spit. Much depends upon whether the soil is heavy or light. If the former, any light material, such as spent manure, old Marrow beds or road sweepings, will do good, or a dressing of lime well dug in after being spread evenly over the surface. For light soils more food is required and deep culture is necessary. The plants do well 2 feet between the rows and 18 inches between the plants. I admit this is somewhat close, but it must be remembered that the plants are not long on the land, and this is a fair space, as the first season there is ample room to work between, and the second year, after the crop is cleared, the land is at liberty and gives good results without digging if drills are drawn for such crops as Broccoli, Kale or Savoys.

I fear some of my readers may object to a two seasons' crop only, and this mostly applies to gardens where Strawberries are not a success. Here I advise more frequent planting, and feel sure the results will give satisfaction. Firm planting is important, placing the crown of the new plant quite under the surface of the soil. If above the plants are loose and give poor crops; indeed, after a severe winter it is a good plan to make the new plants quite firm by treading and to draw a little soil out of the rows to the crowns to encourage surface roots. The after management is simple, merely hoe between, keep clean and remove runner growths.

VARIETIES.

In poor land a good grower is advisable, and there are none better than *Royal Sovereign*. This is early, a good fruit and a splendid bearer. The older *President* is still a reliable midseason variety, and I am unable to omit *Vicomtesse Hericart de Thury*, not a large fruit, but a wonderful cropper, and does well where others fail, also a splendid preserving fruit, rich and good, hardy, prolific and excellent. Of newer sorts that have been proved the *Bedford Champion* is an excellent fruit but very large, and those who object to size would find *Reward* most suitable. This is a cross between *British Queen* and *Royal Sovereign*, and it has the Queen quality with the free growth of the *Royal Sovereign*; it is a beautiful fruit as regards size, colour, shape and finish, a midseason variety of vigorous growth. *Laxton's Latest* is also a very fine fruit, a dark coloured variety and of free growth; it is useful for its late supplies. One of the best croppers for poor soils is *Pillbasket*, of good flavour, also bears enormous trusses.

Givon's Late Prolific is excellent, and does well where others fail. Of the Pine family the *Filbert Pine* is a reliable fruit, late and excellent and of freer growth than the *Frogmore*. The *Elton* is very late, but somewhat acid in flavour. I have named enough varieties for any amateur who has difficulties to contend with and omitted new sorts that have not yet been long in cultivation. There is no need to have too many kinds, but only those that are reliable and of good quality. The new perpetual fruits are most interesting.

I noted these in *THE GARDEN* earlier in the year; they greatly prolong the season and are of easy culture. (G. WYTHES.)

ANTS IN THE FRUIT GARDEN.

IN recent issues various ways have been given to destroy ants. Although they are not generally an annoyance, still in some soils and situations they are troublesome. I have found them so on light, dry soils, giving much trouble in Peach houses when in bloom. During the past hot weather I have found them giving trouble on Red Currant bushes, carrying the fine soil on to the berries. As our soil is light and dry, they make their nest in almost any position. In this instance they selected it among some large patches of White Pinks and double White Arabis. These are used as an edging to the centre path of the garden. After trying several things it occurred to me to use Abol White Superior Insecticide. I used two measures to the gallon, then with an Abol syringe and the coarse spray (using the solution at about 100°) forced the liquid into the nest. Every one with which the preparation came in contact was killed. I then lifted up the foliage of the Pinks, &c., and forced it among them, there being a large number of eggs and young ones. After I had made all wet I left it until the next day, when I found only a few left where the solution had not touched them. These received a dose which entirely destroyed them. On the third day not one could be seen. Boiling water is recommended, but in this case that would have killed the plants. Not so with Abol. This may be used in dwelling-houses; it is not poisonous, and is quite safe where animals are kept. J. C. F.

TREES AND SHRUBS.

THE DAISY TREES.

OLEARIA or Daisy Trees are worthy of more attention than they receive, for they are profuse bloomers and very showy. In many parts of England they will be found quite hardy, but should the frost be very severe must be sheltered in winter. The illustration accompanying this note shows a well-grown specimen of *O. macrodonta*, its silvery grey thorn-pointed leaves and white blooms making an effective foil for the rosy pink Rhododendron growing beside it, as they come into bloom together. S. M. W.

A WHITE-FLOWERED HONEY-SUCKLE.

(*LONICERA MAACKII*.)

THE species of *Lonicera* commonly known as Honeysuckles are distributed throughout the temperate regions of the Northern Hemisphere, reaching as far north as the Arctic circle, but only in the Malayan Archipelago crossing the Equator, attaining their southern limit in Java. The headquarters of the genus is in Central and Eastern Asia, and recent botanical explorations have added considerably to our knowledge of the species belonging to those regions. Some 150 species are enumerated in Rehder's synopsis of the genus *Lonicera*; of this number 20 belong to North and Central America, 18 to Europe, including the Mediterranean region, and the remaining 112 are Asiatic.

Although previously introduced to this country, *Lonicera Maackii* was not in general cultivation until introduced by Messrs. Veitch a few years ago through their collector, Mr. E. H. Wilson, who sent seeds of it from China. A small plant in flower was recently exhibited by Messrs. Paul at a meeting of the Royal Horticultural Society at Vincent Square. The plant forms an upright, medium-sized, deciduous shrub, with

slender horizontal branches clothed with oval, lance-shaped, pointed leaves narrowed to a stalk at the base and arranged in pairs on the branches. The trumpet-shaped flowers are produced in pairs in the axils of the leaves along the whole length of the growths; they are white when they first open, but assume a yellow colour before they fall. The stamens are about half the length of the corolla tube, and are furnished with bright yellow anthers.

Being perfectly hardy, extremely floriferous and not particular as to soil, this Honeysuckle should find a place in all gardens where flowering shrubs are appreciated. The only attention it requires after it has become established is a thinning out of the branches after the flowering is over so as to encourage the production of well-ripened growths on which the succeeding flowers are borne. H. SPOONER.

FLOWERING SHRUBS IN JULY.

IN the majority of gardens there is during the summer months almost an entire absence of shrubs in flower, and very little of interest or beauty is to be noticed from the time when the large number of spring-flowering subjects cease till the autumnal tints appear. Now this is, admittedly, not as it should be, for there are many beautiful shrubs which flower in July and onwards. If for this reason only they deserve much extended cultivation. A want of knowledge of these shrubs is, undoubtedly, the reason why they are not planted, but with the increasing interest now being extended to this most fascinating branch of gardening, one may reasonably expect to see them more extensively grown. To those who are interested in the subject the excellent and exhaustive article in the current number of the Royal Horticultural Society's Journal, by the Hon. Vicary Gibbs, should prove of great value, and may be looked upon as a perfectly safe guide as to what to plant and what to omit.

It is indeed surprising to find how large the number is when one inspects a representative collection, but the undermentioned kinds have been carefully selected, and may be regarded as among the best for garden decoration.

The *Spiraea* family, which contains many of the most beautiful spring and summer-flowering shrubs, is responsible for a number at this season, and nearly all the larger growing ones are to be seen at their best. *Spiraea lindleyana*, the species of largest growth with pinnate foliage and great panicles of creamy white flowers, is a handsome shrub if allowed sufficient room to develop and display its elegant semi-pendulous growth. If it gets a little out of place, hard pruning can be resorted to. This not only improves its appearance, but frequently invigorates the growth. The newer *S. Aitchisoni* resembles the preceding, but is more refined. Its reddish stems and pure white flowers, which appear at the beginning of August, render it possibly more attractive. *S. assurgens* would be worth growing if the fresh green foliage were its only merit, but during July each stem produces large terminal panicles of creamy white flowers. It is of vigorous growth, and as new stems are freely sent up from the base, the old wood can be occasionally removed with advantage. The typical *S. japonica* is a very pleasing shrub with pink flowers, and it has several excellent varieties, including *alba*, *Bumalda superba* and *Anthony Waterer*, all of which are dwarf, compact growers. The last-named is one of our finest coloured flowering shrubs, and should be much more largely planted in gardens. If space will permit of planting a large or small bed of this sort, a telling effect may be produced. The colour of the flowers is rich red, not equalled by any other hardy shrub with which I am acquainted. There are numerous other species and varieties which flower in July and later, but the foregoing is a selection of the most noteworthy, which may be thoroughly recommended.

The *Cytisus* and *Genista* families are responsible for several very beautiful summer-flowering shrubs, but as these do not transplant well after becoming established, it is advisable to select positions when planting where they can be allowed to remain. There is, however, one important exception to this rule, namely, *Cytisus nigricans*, which we have found does not resent being disturbed. A. E. T.

(To be continued.)



ONE OF THE DAISY TREES (*OLEARIA MACRODONTA*) IN A GARDEN IN DONEGAL.

THE FLOWER GARDEN.

EARLY SOWING OF CANTERBURY BELLS.

WHEN well grown few plants are handsomer or make a finer show than this well-known favourite; it needs little care, growing well in any ordinary garden soil. Seed is generally sown in June or July, but a better result is assured if it is sown either in March or April, for then the seedlings have time to grow into fine plants before autumn. The illustration is of part of a border of Canterbury Bells which gave a striking example of the success of spring sowing. It was planted with self-sown seedlings which came up in various parts of the garden early in the year. These were removed to a nursery bed and grown on there until September, by which time they had become fine strong clumps ready for their permanent quarters. These plants stood the winter well in spite of a damp soil, and flowered profusely, many of the plants being 3 feet in



CANTERBURY BELLS IN SCOTLAND.

diameter. The illustration gives an idea of the wealth of bloom and shows the wisdom of early sowing.
I. S. TURNBULL.

BUD-DROPPING IN SWEET PEAS.

I HAVE been troubled with Sweet Pea buds shrivelling and dropping off. I enclose one specimen of shrivelled buds and two of flower-stems from the same plant where terminal buds have dropped off. The Peas are in light, open soil, well manured with soot and stable manure some time before sowing. They are 6 inches apart, and look very healthy apart from this. The flowers are large and well formed in most cases, but many buds on all plants have dropped off. We suffered here from drought some weeks ago, but the Peas were carefully watered during the time. I should be very grateful for your advice.
J. M.

—I shall be much obliged if you can tell me the cause of the disease that has attacked my Sweet Peas. The buds dry up and fall off; in many cases all, sometimes one flower in three matures. I can see no reason, as they are all

doing the same. The soil is rich, and manure was put in the trench before the seeds were sown. The seeds sown in pots are doing the same. If you can reply to my query in your next number I should be obliged, as, if there is a remedy, I should like to try and save some.
J. H.

[It is impossible to assign one cause of this trouble that is applicable to all cases. There is little doubt that it is almost invariably due to a check in progress, which may be the result of over wetness or over dryness at the roots or to extreme variations of the temperature affecting the tops. A frequent cause is a check at planting out, but our correspondents do not say whether the seeds were sown in or out of doors. Some varieties appear to be more prone to it than others.—H. J. W.]

PANSIES FOR SMALL GARDENS.

"SEEING is believing" is one of the wise saws that we have all known since we were children, but whose force and impressiveness only strikes us now and again. I have grown *Violas* off and

summer. She told me her secret was nothing but daily picking and never allowing seed-pots to form.

This brings me to my second point. The picked flowers were not thrown away, but were used for decorating the dinner-table and the sitting-rooms, sometimes arranged with foliage, sometimes as "blobs" of colour, the small vases each filled with just one self variety. It was a case of a fortune in the refuse which many might unthinkingly throw away.

HOW THIS IS DONE.

The first thing is to get suitable varieties. To be useful for both garden and house purposes long flower-stalks are a prime necessity. Other important factors are freedom of flowering and a not too compact habit. A certain looseness seems more effective and telling when they are not used in geometrical designs or as a carpet for other things. The following is a list of good varieties which will serve as a guide to those unfamiliar with their names. Nearly all of them can be bought at 2s. or 2s. 6d. a dozen. Blues: Archibald Grant, dark; and Admiral of the Blue, medium. Mauves: Blue Duchess, pale blue; Maggie Mott, bright mauve; and Kitty Bell, pale lavender. Whites: Duchess of York, loose flower, rayed; and Snowflake, very pure, rayless. Yellows: Royal Sovereign, deep yellow, rayless; and Klondyke, longer flower, rayed. Purple: Duncan, imperial purple (I hear this was extensively used in the Coronation decorations). Fancies: Countess of Kintore, purple and white; Mrs. Chichester, white, pale purple edge; Ada Anderson, lavender and white; and White Duchess, white, blue edge.

MANAGEMENT.

Violas grow in any good garden soil, provided it is not very light and sandy or very heavy clay. In the former case nothing is better than a good dressing of well-rotted cow manure, well dug in in the autumn before the young plants are put in. In the latter, littery horse manure should be used. In any case it is well to treat the ground with Vaporite or a similar preparation to kill any wireworms, slugs or other depredators that have a weakness for the young tender shoots. If these simple precautions are taken they may be said to grow anywhere but in deep shade.

PROPAGATION.

They may be increased by seed or by cuttings. In the case of seed, save only from the very best kinds or buy from the best sources. It may be sown thinly in rows out of doors in a shaded position in July or August. In about six weeks' time or a little more the seedlings may be transplanted to the place where they are to bloom next spring. Where no particular colours or types are wanted this system has much to recommend it, for the expectation of "something good" is always exhilarating. I should, however, never advise any one to raise seedlings out of doors in very cold or exposed situations. In the case of cuttings, to ensure a display next year it is best to take them in July or August. Nice short-jointed young lateral shoots of 2 inches or 3 inches in length that have never borne flowers should be chosen and the lower leaves cut off. These should be firmly inserted in a prepared bed of light soil in a semi-shaded position. There they may remain until they are put into their blooming quarters in the following March or April.
JOSEPH JACOB.

THEIR UTILITY.

I was recently staying with a friend who has a tiny garden. Speaking from memory I do not think it would be more than 30 feet by 40 feet, but it looked so bright and gay. What was in it? Practically nothing but *Roses* and *Violas*, and it was the *Violas* that made the show, for the *Roses* were not yet out. It had been gay for several weeks, so the lady of the house told me, and she expected to have flowers all the

NOTES FROM A LONDON SUBURBAN GARDEN.

My garden lies in the south-east of London, six miles and a-half from London Bridge, and, therefore, in no sense of the word can it be called other than a London suburban garden. The situation is an open one, and considering the way in which the present day builder cuts up the

ground for building purposes in and around the great Metropolis my garden may be fairly considered a large one.

For many years before moving into my present house I had a keen desire to have a hardy herbaceous border, and there are probably other readers of THE GARDEN who share this desire. So many owners of town gardens are content with a few bulbs in the spring and the usual summer arrangement of golden Pyrethrum, blue Lobelia, Calceolarias and Zonal Pelargoniums neatly planted in the beds and borders, either by themselves or by contract with the local florist, that I determined when laying out my new garden to have as little to do with such gardening as possible. Not that I despise the Zonal Pelargonium, for in its place it is a valuable adjunct to the amateur's town garden.

My chief desire for a hardy herbaceous border was so that we might have plenty of flowers to cut from for the house and to make up bunches for friends and visitors who, living in the heart of London, have few opportunities to grow flowers for themselves. A little gift of this kind is always highly appreciated, especially when it contains uncommon flowers not to be met with in the florists' shops.

In arranging the plan of my garden provision was made for a terrace at the back of the house about 9 feet in width with a balustrade, where in the pleasant summer evenings we can take tea and enjoy the prospect. A flight of steps at each end leads to the path that runs round the lawn and separates it from the flower border. The lower end of the garden is devoted to fruit trees and vegetables, with a middle path leading directly to a rustic summer-house. It is from this point that the accompanying photograph was taken looking straight up to the house. On each side of the path I planted about eighty varieties of hardy perennials, not in any particular way for artistic or colour effect but chiefly for a supply of useful flowers. They were planted in three rows quite informally and have proved most satisfactory. The front row is necessarily composed of very dwarf plants, the next row consists of plants varying from 1½ feet to 2 feet and the back row to taller ones.

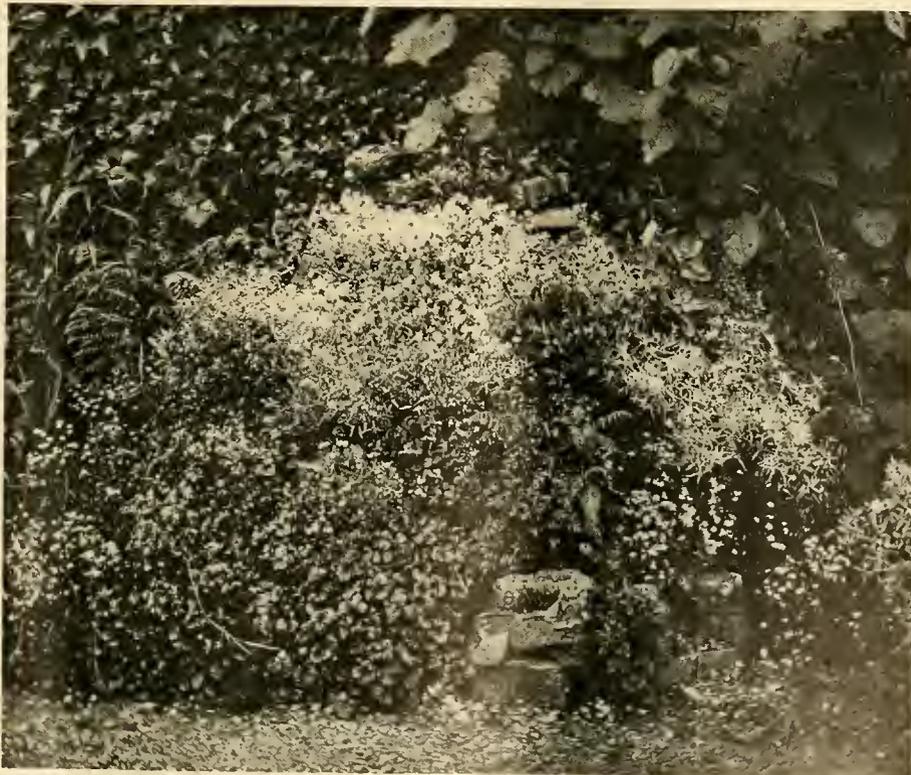
It may be interesting to some readers of THE GARDEN if I mention a few of the principal occupants of these two borders. There have been losses, the soil being very heavy and on clay, but the plants that have done well and



MIXED BORDER IN A LONDON GARDEN.

deltoidea, *A. rosea*, *Erigeron glabellus*, *Gypsophila prostrata*, *C. paniculata*, *Hepatica triloba*, (*Enothera macrocarpa*, *Silene maritima*, *Tiarella cordifolia*, *Veronica rupestris*, *V. amethystinum*, *Arabis alba* and *Pulmonaria saccharata*. I find *Campanulas* have been of great service, particularly *C. persicifolia*, *C. latifolia*, *C. pumila alba*, *C. Hostii alba* and one or two others. Middle row plants, of course, include one or two of those already mentioned, but others are *Erigeron philadelphicum* (essentially an amateur's flower for its easy culture), *Stenactis speciosa*, *Centaurea montana alba* and the blue variety, *Dielytra spectabilis*, *Lupines*, *Rudbeckia Newmanii*, *Achillea Ptarmica* The Pearl, several of the *Heleniums* and *Heucheras*, *Monarda didyma*, *Asperula hexophylla*, *Achillea buglossis*, one or two of the *Geums*, &c.

In the back row generally, for later flowering, we include *Michaelmas Daisies* and perennial *Sunflowers*; the white and purple *Galegas*, which make a fine effect when planted at intervals; *Centaurea macrocarpa*, a bold golden yellow *Cornflower* that does not last very long; *Echinops Ritro*; *Doronicums*; *Rudbeckia submentosa*; *Spiræa Aruncus*, a very useful decorative plant; and *Thalictrum glaucum*, the foliage of which is, perhaps, more useful than the blooms, are all plants that have succeeded well with us and are shown in the photograph. There are many others which might be named, but space will not permit.



A CORNER OF A LONDON GARDEN IN SPRING.

In the other photograph a small rockery is represented when in flower last May. It was built of material supplied by Messrs Doulton and Co., which they call "Grotto," really the breaking up of their kilns. I think it is more like rockwork than bricks or burrs, and is to be had in very large pieces. This little rockery was built to save one corner of my garden being constantly lumbered up with pails and pans, clothes' props and all kinds of odds and ends that our maid did not know what to do with. Its dimensions are 9 feet in length, 5 feet through and about 4 feet in height. Small as it is, it is an object of interest when in flower in the spring-time. The *Mossy Saxifrage*, a few odd pieces of *Stonecrop*, *London Pride*, *Aubrietia purpurea*, *A. rosea*, *Alyssum saxatile*, *Linaria pilosa*, *Sedums*, *Waldsteinia trifolia* and *Cerastium tomentosum* complete the arrangement. C. H. P.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE VEGETABLE GARDEN.—Vacant ground from which crops have already been gathered this season should be dug and heavily manured without delay, and the same quarters planted with spring Cabbage and Coleworts. So long as the ground is well tilled and treated as we have described, good results are sure to follow. Continue to sow winter Onions; these are so useful for saladings in the dull season of the year. Tripoli and other Onions for next summer's use may still be sown. Sow the seed in rows 8 inches to 10 inches apart and in drills a quarter of an inch deep. It is necessary that the surface soil be well broken up and made friable, and subsequent to the sowing the ground should be rolled over or beaten with the back of the spade. Continue to earth up Celery from time to time, choosing fine days for this work. Cut and dry all kinds of herbs at the present time for winter use. It is not generally known that Parsley can be dried. This should be rubbed fine and placed in wide-mouthed bottles for flavouring during the winter months.

The Flower Garden.—The present is an excellent time to plant the beautiful Madonna Lily (*Lilium candidum*). Do not make the mistake of embedding this bulb and covering it with soil, as is common with so many other kinds. We have succeeded with this beautiful flower by simply placing it on the surface soil, where it emits roots very readily. In other cases we have just embedded the base of the bulb in the soil, leaving the upper portion exposed. Plant the bulbs several inches apart, and group them, if possible, in the hardy border at intervals for effect. China and other annual Asters are just coming into flower, and may be improved by frequent applications of manure water at this time. They are



1.—HYACINTH, NARCISSUS AND TULIP BULBS SUITABLE FOR POTTING.

voracious feeders, and readily respond to generous treatment in this respect. Annuals and perennials that have ceased to flower should have the seared heads removed as soon as possible. Those subjects which it is desired to perpetuate by seeds should be carefully gathered and harvested, placing them in muslin or tiffany bags, or, if more convenient, for a time spread out on sheets of paper in the open or under glass for the weather to thoroughly dry. By these means it is possible to obtain an abundant supply of seeds, which in many cases may be sown at once or else next spring for the purpose of perpetuating the different subjects. Dahlias and early-flowering Chrysanthemums in the open border should be

watered freely in hot weather, supplementing this attention by copious applications of liquid manure.

The Greenhouse and Conservatory.—For early flowering we are now potting up our Roman Hyacinths, Freesias, double Daffodils and other bulbs for forcing. Five bulbs of the first mentioned in a 5-inch pot will make pretty plants in the late winter. Carefully crock the pots, using light sandy soil, embedding the bulbs so that their apex alone is in evidence. Place them in a cold frame or in cool, darkened quarters to root. The present time is most opportune for lifting the beautiful Calla Lilies. These have been growing outdoors for some time past, and have made strong and vigorous growths in consequence. See that each plant has a pot large enough to accommodate its roots without unduly confining them, and stand in a cool, shaded position for a time to become established. Fuchsias that are going out of flower should be placed outdoors now for the wood to ripen. Water must be given less freely now that the flowering season is practically finished. The beautiful Abutilons that were planted out some time ago should be partially cut back at the present time. They will then make new growths that will bloom through the autumn and winter. Winter-flowering Geraniums should have their final potting at the present time. Raspail Improved is a magnificent variety. We are just now repotting Cyclamens in small pots, using a compost made up of two parts good fibrous loam, one part leaf-mould and sand, well mixed and passed through a sieve with a coarse mesh.

Trees and Shrubs.—Privet and other evergreen hedges should be trimmed at the present time, as they must be kept under control if appearances are to be all we desire. Evergreen shrubs and trees may be propagated by cuttings at this period. The useful Bays, Laurels, Box trees and conifers in variety, and many of our choicer shrubs may be raised by inserting the cuttings in cold frames, and in the case of some of the more hardy subjects in a semi-shaded border. The choicer subjects are raised from cuttings about 2 inches to 3 inches in length, the coarser and stronger-growing ones being made rather longer. Dibble in the cuttings a few inches apart, pressing the soil firmly at the base of each one.

The Fruit Garden.—Early Apples and Pears should be gathered as soon as they are ripe, and stored in a cool, dry room or shed. In gathering these fruits they should be lifted by the hand to a horizontal position, when they can easily be separated from the branch. Unless this separation takes place easily, it is a sign that the fruit is not ready to be gathered. Runners and elongated foliage on Strawberry plants should be removed with care, thus concentrating all the energies of the roots on the sturdy plants thus retained. Continue to plant new beds of Strawberries with runners layered in pots that were severed from the old plants a short time since. Plants of this kind invariably give excellent results. D. B. C.

POTTING BULBS FOR GREENHOUSE AND ROOM DECORATION.

THE season is once more with us when we must seriously consider the question of potting bulbs to produce flowers in the late winter and early spring months. Providing a few simple rules are observed there are no plants easier for the beginner to grow, and the main points in their culture are given below. The sooner the work is

done now the better, but if a succession is required, other batches may be potted up at intervals of two or three weeks until the end of November.

As bulbs in pots are grown under more or less artificial conditions, it is absolutely essential that the best only be employed for the purpose; by this is meant the best bulbs of a variety and not the best or choicest sorts. Many amateurs are apt to be led away by size when using bulbs or corms for pot work, but, as in many other things, size does not mean everything. What



2.—THE BULBS PROPERLY POTTED AND READY FOR PLUNGING BENEATH ASHES.

the beginner should endeavour to secure are bulbs of medium size, firm and heavy. A bulb that is both firm and heavy is sure to have been well ripened, which really means that it is well stored with reserve food, and is, consequently capable of producing large, sturdy flowers. In Fig. 1 such bulbs are illustrated. On the left four Roman Hyacinth bulbs are placed, at the back three Narcissus, and on the right four Tulips. It will be noticed that each kind varies somewhat in shape.

The potting of the bulbs is the next question that must be considered. The size of the pots used will vary to some extent according to the purpose for which the plants are required, but generally those measuring 6 inches in diameter at the top are the most suitable. A pot of this size will easily accommodate four Roman Hyacinths, four Narcissus such as Paper White, or six of the small Duc Van Thol Tulips. The best soil for the bulbs now under notice is one composed of three parts good turfy loam, one part sharp sand, with a 6-inch potful of steamed bone-meal added to each bushel. This will, doubtless, have to be varied according to what the cultivator is able to obtain, but these bulbs are good natured subjects, and will do well in almost any soil, providing it is not sour. Each pot should have about 1 inch of crocks placed in the bottom, then three-parts filled with the prepared soil and the bulbs placed in position thereon. Care must be taken not to place the bulbs on a hard bottom, else when roots are formed they will be unable to penetrate the soil beneath the bulb and the latter will be lifted out of the pot in consequence. It must not be surmised, however, that loose potting is desirable; after the bulbs are in position place more soil round them and then make the whole moderately firm. When potting is finished the bulbs and pots should appear as shown in Fig. 2.

The treatment of the bulbs after potting is a stumbling block to many, yet on it depends to a great extent the future display of flowers. The best system to adopt is to plunge the pots outdoors in damp sifted coal ashes, so that the tops



3.—THE BULBS PLUNGED BENEATH ASHES.

of the bulbs are covered with at least 6 inches of ashes. Fig. 3 depicts pots thus plunged. A variant of the method there shown is to place an inverted pot of the same size over each potful of bulbs, so as to prevent the growths being injured by the sharp ashes or any deleterious substances that may be present. The object of plunging the bulbs is to induce the formation of a good root system before top growth takes place to any great extent. Unless the bulbs are thus treated it frequently happens that leaves are formed before any roots have been made, and then failure is practically certain.

After a few weeks' sojourn beneath the ashes, some, at least, of the bulbs will be ready for removal. To ascertain when they have reached this stage it is a good plan to carefully turn the ball of soil out of the pot: it may be returned again without the least harm accruing to the plants, providing reasonable care is exercised. Fig. 4 shows a potful of Hyacinths at the proper stage for removal from the ashes. It will be observed that the roots have thoroughly permeated the soil and crocks and that top growth has just commenced.

When removed from the plunging material the pot should be stood in a cold frame and gradually inured to light and air. When the tops are quite green and in active growth the plants may be removed to the greenhouse or window to develop and open their flowers. When growth is active abundance of water must be supplied, as if the plants are but once allowed to suffer for the lack of moisture at the roots, a serious and irreparable check will be the result.

TREATMENT OF RIPENING FRUIT UNDER GLASS.

FRUIT which is ripening under glass in the autumn requires very careful treatment. The recent fine sunny weather has been most favourable. Not only should one study the condition of the present fruit crop, but also the welfare of the trees for future bearing. The wood must have all the assistance possible in maturing as well as the crop of fruit on it. A free circulation of warm air through the house is essential. During bright weather the ventilators must be opened at both the top and front of the house night and day; but the ventilators should be opened wider at the top than at the front. At sunset each evening the volume of air must be reduced by about one-half during the latter part of August and the early part of September, and by one-third during the remainder of the latter month. In October the front ventilators should be closed at night in damp or foggy weather and only left open about 1 inch on fine nights.

Heating.—It is false economy to refrain from using the heating apparatus in autumn altogether. On certain occasions, *i.e.*, when the weather is fine, and certainly while it is dull and cool, the pipes should be warmed both night and day in the case of late Grapes, which are somewhat backward in ripening. All late varieties of

Grapes should be ripe by the first week in October if they are to keep well throughout the winter months. If the pipes be warmed in fine weather, and while a nice current of air is passing through the house, the ripening and colouring of the fruit will be hastened and perfected. AVON.

TREATMENT OF CLIMBING ROSES UNDER GLASS IN THE AUTUMN.

SOME of the most beautifully-formed blooms are to be had from Roses growing under glass in the autumn. They may not be as large as those that are produced earlier in the year, but the colour is good, and in every way these late blooms are highly satisfactory. But cleanliness is a very important matter. Dead and fading leaves soon accumulate and form bunches in the branches, also they fall to the ground, and not only make the house look very untidy but act as hiding places for insect pests. A vigorous shaking will dislodge the loose leaves, then all should be gathered up and burned. Afterwards syringe the surface of the border with some approved insecticide. Aphides are now collecting on the young Rose shoots; fumigation will quickly destroy these pests, but it is well to do this work directly the insects are observed rather than to wait until they have multiplied considerably and injured the branches.

Pruning.—Some pruning or thinning out of the branches should be done forthwith. First cut out some of the older branches which have borne flowers, and then the weakly ones which are not likely to be profitable. The object should be to prevent overcrowding of shoots, so that all young wood retained during the winter months will mature thoroughly and bear blossoms freely next spring. AVON.

THE EDELWEISS.

THE Edelweiss (*Leontopodium alpinum*) is perhaps one of the most popular plants of the alpine flora, and the one plant of thousands that the average mountain tourist is most anxious to discover. Interesting the plant is undoubtedly, though beyond this it possesses but few attractions from a decorative point of view. Of course its correct home is the rock garden, where it should be planted in not too rich soil, yet quite firm. The plant is seen always to good advantage if rather freely grouped in colonies in the rock garden. The plant may be grown with complete success when a few strong seedlings are firmly planted in a narrow chink of rock, so placed that a deep fissure of gritty or sandy loam may be assured for the roots to ramble in. Plants in pots may be grown and flowered when the collar is tightly wedged between some pieces of stone or old mortar. At this season of the year we frequently receive parcels of the plant by post merely wrapped in a bit of sphagnum moss and some oiled paper, and in this way they travel well. But whether these collected plants will continue to succeed under cultivation in our lowland gardens depends as much on the way they have been lifted as upon any subsequent treatment on arrival. Assuming such plants do come to hand, and possessing a fair amount of fibrous roots, there is no better way of starting such things than by planting them not too deeply in cocoanut fibre and sand. Many plants that frequently rot, and that rapidly, when placed in soil will start new roots quite quickly when planted in this simple way: Give one good watering when planted, place in a rather shaded place and not a stuffy, ill-ventilated frame, and leave them alone for a week at least without further moisture. In this way scores of rare alpine plants have been treated after a long journey with a good deal of success. On the other hand, those who have no opportunity of obtaining plants direct from their mountain home will find seeds by far the best method of obtaining a stock. Indeed, seeds must be looked to for perpetuating

the stock also, for the plant is not always a success when divided.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

CARNATIONS.

"Ormonde" sends flowers of Carnations, of which there are several of the same colour. Pelegia is the best of them; Twilight is the same colour—pink, flaked lavender.

FLOWERS OF THE BOTTLE BRUSH TREE FROM KENT.

A correspondent with the signature of "Canterbury Bell" sends excellent inflorescences of the Bottle Brush Tree (*Metrosideros floribunda* or *Callistemon salignus*) from a garden at Encombe, Sandgate, Kent, with the following letter: "I send you two blooms of the Australian Bottle Brush (*Metrosideros*), cut from a bush growing in the open. It is planted on a slight slope facing south-west, backed by high *Laurustinuses*. The only protection we give this shrub in the winter is some Bracken placed in its branches. This year there are forty-two blooms, some of which have been flowering since the end of June. I think you may be interested, as I believe *Metrosideros* has never before been flowered in the open in England, except in Cornwall. Even in such a favoured spot as Encombe I was told I should not succeed in flowering this shrub except on a wall."

DIANTHUS NAPOLEON III.

We have received a bunch of flowers of this beautiful Pink from Mr. J. Crook, The Avenue, Camherley, with the following interesting note: "A bunch of that fine *Dianthus Napoleon III.* The flowers are from plants that have been blooming in my garden for two months, and promise to continue for some time. This is one of the finest border plants, and should be more grown. I have a group 2 feet across, and in this way it produces a remarkable effect. There is a prevailing idea that it is difficult to manage, but this is not so when it is understood. I had six plants in early spring, and have got forty-eight plants from them."



4.—HYACINTHS AT THE STAGE FOR REMOVING FROM THE ASHES.

THE TOWN GARDEN.

FLOWER BEDS.—The hot and almost invariably over-drained soil of town gardens renders it somewhat difficult to keep the ordinary summer-bedding plants in good progress as long as one would like, but much may be done by the aid of the water-pot and some liquid manure. As far as smartness of appearance is concerned, the most important point is to keep all dead and dying leaves and flowers picked off, while another important cultural point is to persist in loosening the top inch or two of soil. Then will arise the necessity for a generous use of the water-pot or hose, with a view to thoroughly soaking the soil to well down below the roots. As to whether liquid manure will be advantageous or the reverse each cultivator must decide for himself, but it should certainly never be had recourse to until the plants have exhausted the supply of food placed in the ground for them before any planting was done. Should it be deemed requisite it must always be given in a weak condition and following two or three hours after a soaking of clean water. It may be necessary to apply water twice or thrice a week and liquid manure about once a week or once in ten days.

SEED-PODS.—The conditions of culture which prevail in town gardens are not generally favourable to the production of good seeds, and amateurs are recommended to leave this task to those who are equipped for carrying it out properly. Apart from the fact that they will thus secure far finer seeds they have the additional advantage of a longer season of blooming, for the plant that has its energies directed towards seed-development will give scant attention to the production of flowers. Immediately a bloom has reached the zenith of its beauty, rather before for preference, it should be promptly removed and placed in water. By the adoption of this method the grower ensures a more protracted display in the garden and has also a constant succession of flowers with which to adorn his rooms.

FEEDING DAHLIAS.—There is no disputing the fact that among all our florists' flowers there is none more generally satisfactory in town gardens than Dahlias. Where the soil is too poor to grow the Cactus and show and fancy varieties, the grower can always fall back upon the floriferous Pompons, the neat blooms of which are so charming for decorative purposes; they thrive magnificently in poor soil and do not demand any special attention in the way of feeding. Plants belonging to the other sections, however, and which have been restricted to four or five stems, will now require plenty of water and liquid manure if the blooms are to come of the finest size and colour. First apply abundance of clean water and two or three hours later give weak liquid manure made from any natural manure that may be at command. When the time comes for a second application of special food let it be made up from soot or one of the concentrated fertilisers, so as to afford the change of diet that is as much appreciated by plants as by human beings. Finally, loosen the surface of the soil and mulch with manure. Subsequent applications of water will, of course, have to pass through this dressing and the virtues contained therein will, consequently, find their way down into the soil for ready appropriation by the roots.

ROOM PLANTS.—In the holiday season the room plants are apt to come off rather badly, and it is only the almost unkillable *Aspidistra* that will stand the neglect that is inevitable. If the house is to be left, it is better to place the whole of the plants out of doors in some shady position where they will get the benefit of any rain that may fall and not suffer from the intense heat of the sun; if an arrangement can be made with a friendly neighbour to come in and do the necessary watering. H. J. W.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FLOWER GARDEN AND PLEASURE GROUNDS.

THE beds and borders in the flower garden and pleasure grounds should be kept smart. All the flowers and decayed leaves should be picked off and water given where needed. Now is the time to take cuttings from *Pelargoniums* and all plants that require this method of propagation. Cut all *Box* and other edges, and also all kinds of shrubs now that are overlapping their neighbours. These latter should be cut so that they look afterwards as though they have not been touched, and to accomplish this it is necessary to thin out the long growths. A plant or shrub pruned badly is an eyesore for a long time. Now is a good time also to train climbers on walls. Varieties of *Vitis* have made tremendous growths this season.

In the rock and alpine garden much will now require doing in the way of reducing many plants that have overrun their space. This should be neatly done. Collect seed and clean as this reducing work goes on. Seeds may be sown as soon as they are ripe. Shade all newly-planted seedlings or plants, or the sun will burn them up before they can get established. With regard to

Carnations, all borders kinds should be layered by this time or they will not become rooted well enough to go safely through the winter.

HARDY FRUIT.

Attention should be paid to the early ripening varieties of Apples and Pears this month. A pot or two of water will often save a tree or crop if used at the right time. Early Apples and Pears must be gathered when ripe or they lose flavour and become mealy. If they are gathered too soon they are insipid. *Citron des Carmes* and *Doyenné d'Ete* are two of the earliest Pears, and neither are much good, but should be eaten as soon as ripe. *Beurré Giffard* and *Jargonelle* are the first Pears of any exceptional merit, while the *Old Windsor* and *Williams' Bon Chrétien* are both good and closely follow. *Irish Peach*, *Beauty of Bath* and *Devonshire Quarrenden* are the pick of early Apples, and do not keep long in good condition. Thinnings of Apples for cooking should be sufficient now. *Lord Suffield*, *Lord Grosvenor*, *Keswick Codlin* and such sorts as *Peasgood's* and *Stone's Seedling I* have found cook very well. Apples and other hardy fruits carrying large crops should have a thorough watering. The drying sun of the last week in July and first week of August has penetrated to the roots, and a good soaking should be given. Late Cherries and Currants and Gooseberries should have wasp-proof netting as a covering. Continue to place Figs in muslin bags out of the reach of bees and wasps; the Figs ripened outside are delicious. Tie the growths up neatly so that every portion will be benefited by the sun's rays, including the fruit.

KITCHEN GARDEN.

Brassicas.—Continue to plant out all the late kinds. Sow now the last batch of Cabbage seed and also Cauliflowers. This will stand the winter and give good supplies next May, June and July. Parsley should be thinned out and the young plants kept well watered. Clear away all crops that have finished, as these look untidy. Take up second-early Potatoes and store; these are good this season. Give abundance of water to *Scarlet Runners*, *Vegetable Marrows* and plants of a like nature, or they will soon cease to yield their supplies in hot, dry weather. Earth up

Celery as it becomes ready for so doing, and give thorough soakings previous to this being done.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

PALMS.—The atmosphere in the Palm house should now be kept drier to give the plants a chance to harden the growth they have made during the summer, and be better prepared for use indoors during the winter months. An occasional dose of weak liquid manure, to which a little soot has been added, will sustain those plants that have their roots confined in small pots in a healthy condition and impart a dark green colour to the foliage. The exceptionally hot weather experienced of late has been very favourable to

Insect Pests, especially to red spider. Plants which have been attacked, and which it is not safe to dress with insecticide, should be laid on their sides and vigorously syringed for two or three days in succession, after which the syringe should be freely used in the house containing plants so affected, for if neglected the pest will spread rapidly.

HARDY FRUITS.

Apricots.—These require copious supplies of moisture, and even when the fruit is cleared there should be no want of attention in the way of food and moisture. The trees should be encouraged to make strong leaders, these being of great help to the trees in the future. The earlier these strong growths are matured the better. Continue to stop foreright shoots. These should be pinched in a small state with the thumb and finger; do not use the knife. Syringing overhead should be continued for some time after the fruit is gathered; this will keep red spider from the foliage, and the young growth will mature sooner if assisted. Late varieties with heavy crops should be liberally fed, and young or newly-planted trees kept nailed to the wall to prevent loss of branches from high winds.

KITCHEN GARDEN.

Winter Turnips.—This is a good time to sow the first lot of *Chirk Castle* and *Blackstone Turnips* for winter use. Sow the seed broadcast and not too thickly, a surface sowing of *Ichthemic Guano* or some approved fertiliser being given as soon as the crop is thinned. *Orange Jelly* is a good winter Turnip, and although perhaps not quite so hardy as *Chirk Castle*, will stand severe frost without succumbing. A second sowing should be made about the first week in September, as even during frosty weather this Turnip will increase slowly in size and come in most useful at the new year.

Cauliflower.—The principal sowing of Cauliflowers which are to be planted out in hand-lights as an early batch for cutting in May should now be made. I prefer an east border, as then, should the weather be very favourable to growth, the plants are not liable to get too forward by transplanting time as when grown on a sunny south border.

FLOWER GARDEN.

Seed Gathering.—Now is a good time to look after the ripe or ripening seeds of all good hardy flowers. By gathering the best seeds of *Fox-gloves*, *Poppies*, *Honesty*, *Primroses*, *Scillas*, *Chionodoxas* and *Narcissus*, and sowing them at once in half-wild places now that the earth is warm and moist, the beauty of the garden may be made to overflow into the woods and walk-sides, the fringes of carriage-drives, or even into hedges near the garden. The sowing of seeds and the rooting of cuttings or layers almost continually are among the most important of all operations in good gardens. T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Wintering Incarvillea Delavayi (N. G. H.).—With a covering of ashes about 2 inches thick your seedlings of *Incarvillea Delavayi* should winter quite well without lifting, but some kinds of coalashes are injurious to plants under them, and we rather advise straw or peat moss litter about the same thickness. Of course the straw would require to be fastened down to keep it from blowing away. If Spruce branches are obtainable more easily, the bed may be covered with these—about two layers over it. But you could lift the tubers and store them in dry sand until spring, and this is safer than allowing them to remain in districts where they perish so readily as they do in yours. Some of the seedlings may give a few flowers next year, but some will hardly do so until the following one.

Phloxes (E. G. King).—We could form no idea of the Phlox from the small crushed bit received, but from your letter we take it to be an instance of sportiveness or reversion to more normal conditions. Occasionally indifferent treatment, resulting in deterioration, will produce something very near akin, and in such a case if transplanted and given good cultivation the plants should show signs of improvement. Many plants are inclined to sport at times, and can only be regarded as one of Nature's ways of providing new varieties of plants. At the same time these "breaks" are not always in the nature of improvements, and if in your case they savour of inferiority, your only course is to discard them. This should not be done too hurriedly, and often enough the "sport" is but a thing of a season and may not reappear another year; and the stems being of annual duration only, the sport may exhaust itself as the result of one season's growth.

Sweet Williams diseased (Mrs. G.).—Your Sweet Williams are attacked by eel worms in the stems, and by the fungus *Puccinia dianthi* on the leaves. The Larkspurs are attacked at the base of the stems by the bulb mite (*Rhizoglyphus echinopus*) in considerable numbers. Asters frequently go off the same as yours, but the cause is not known; there was not any sign of fungus or other pest. As regards the Sweet Williams and Larkspurs, the only thing to be done is to pull up the plants and burn them, and so prevent the attack spreading. Then give the soil in which they were growing a good dressing of vaporite, apterite or gas lime, either of these being mixed with soil to the depth of 4 inches or 5 inches.—G. S. S.

Names of plants (G. B.).—Your plant with the scarlet tube-shaped flowers is a *Pentstemon*, a well-known garden flower of which myriads of varieties can be obtained if a packet of seed be purchased and sown now. The plants should stand the winter freely in North Devon, and then, planted out next spring, flower finely all the summer and autumn. You would get in that way much finer varieties than the one you name. That will seed freely also, but too late for sowing this season probably. If you get seed you may, if you prefer, sow in a shallow box or in pans, keeping them under glass and shaded till growth begins. You may also put in young tops 4 inches long as cuttings into sandy soil under a hand-light or in pots in a frame. The other plant with the creamy edged leaves is *Arabis alba variegata*. Tops of that put in now as cuttings under hand-lights will strike freely. The old plants also may be lifted in October, and divided and replanted.

Bulbs for hillside (E. Ch. P. M.).—We cannot specially mention any bulb trader, as all who advertise in our columns offer bulbs cheaply. Your best course would be to write to two or three of those advertisers and ask for their price lists. The quantities of each you may want depends on the area of the hillside to be planted. Narcissi in variety, including Emperor, Sir Watkin, Horsfield, Barri conspicuus, Ornatus and many others which any trader will give you a list of. Also Scillas or Bluebells in two or three colours, some May-flowering Tulips, Crocuses, Snowdrops and the blue *Chionodoxa* or Glory of the Snow. The greater the quantity of bulbs ordered the cheaper are they relatively.

TREES AND SHRUBS.

Leaves of trees diseased (B. J. B.). The brown spotting of the foliage sent does not appear to be due to the attack of either fungus or insect, but rather to some condition in the soil that is uncongenial. Either the roots have got into something that is injurious to them or they may be suffering from over-drainage or lack of drainage. Similar appearances on the leaves might be caused by the cold winds in the spring if the trees are in an exposed situation, or even by acid brought down in the rain.

Canadian Poplar gone wrong (Reader).—In the shoots sent there is not the slightest trace of any disease proper, such as is caused by parasitic fungi or insects. A microscopic examination of various parts shows nothing but dead tissues. We are inclined to believe that the splitting and decay has arisen from the severe topping soon after replanting and that possibly something may be wrong with the roots or the soil. The nurserymen from whom you bought the plants might be able to explain matters if you mentioned the nature of the topping and your method of replanting, with a hint as to the nature of the soil.

Cutting a Yew hedge (Lindfield, Sussex).—You may cut your Yew hedge in April or in August, whichever is most convenient to you. A top-dressing of manure may be put on at any time, and a very light dressing of nitrate of soda well watered in will do good. You could make the wire shapes you require to train the shoots on. Select strong shoots, and while young bend them into the position you require. We do not know of any firms who supply such things, though, doubtless, any firm of horticultural sundriesmen would have them made for you if you wish it. If the Yews are not in good health let them go unclipped for a year or two. The Yews you removed from the hedge are probably dead. If not, springle them twice a day over head and well water them at the roots occasionally; this is all you can do for them. It is a bad plan to put a lot of fresh manure about the roots of trees when you are planting them; better by far give a little fresh soil.

THE GREENHOUSE.

Salvia leaves for inspection (J. P. W., Lindfield).—The material sent is insufficient to determine what is the cause of the white spots upon the leaves; they are, however, either the result of the punctures of insects or they are of the nature of the warts which often occur on the leaves of Vines, due to keeping them for a time in an atmosphere too moist and too close for their good health.

Flowering plants failing in a conservatory (Lodwig).—We do not entertain the slightest doubt that the failure of flowering plants in your conservatory is caused by it being an unsuitable structure and with most unsuitable surroundings. Light and air, so essential for flowering plants, are almost shut out, and we cannot advise anything likely to give satisfaction there. Such a structure could be furnished in an ornamental manner with Palms and Ferns, which would succeed therein, and this we consider the only possible solution of your difficulty.

Information about Bougainvilleas (F. J. Heil).—*Bougainvillea glabra* is so readily propagated by means of cuttings that seedlings are seldom raised. Plants from seed have, however, been brought under our notice, but in no single instance when they flowered did they vary from the ordinary form. There is, however, a variety much cultivated in this country known as *sanderiana*, in which the bracts are of a much richer purple than in the type. Whether it originated from seed or as a sport we are unable to say, as its early history seems to be unknown, it having been found in an old garden in the

South of England. The more vigorous-growing *Bougainvillea spectabilis* varies more than the other in the colour of its bracts, but, with one exception, they are all more or less of a purplish tint. The exception is the variety *lateritia*, whose bracts are in colour a kind of brick red, but in this country at least it is decidedly shy-flowering and is very seldom met with.

Treatment of bulbs from South Africa (W. J. Hall).—You did quite right to pot up the bulbs and other plants received from South Africa. Care should be taken not to overwater them till they commence to grow. An average temperature of 45° by night during the winter will not be warm enough for some of them, but if the night temperature at that season does not fall below 45° most of them will succeed therein. Of the plants enumerated *Bowiea volubilis* pushes up a long, climbing flower-spike, but the green flowers, though curious, are not at all ornamental; *Crinum Moorei* is a well-known bulbous plant with large white Lily-like flowers; *Cyrtanthus sanguineus*, a pretty little red-flowered bulb not at all difficult to cultivate; *Gladiolus psittacinus* and *G. salmoneus*, two interesting species of *Gladiolus*; *Liliosa virescens*, a pretty climbing plant with red Lily-like flowers; *Hæmnanthus Katherinae* and *H. natalensis*, two pretty bulbous plants with large globular heads of brightly coloured flowers; *Kempferia natalensis*, a member of the Ginger Wort family with purplish flowers; *Richardia Rehmanni*, the pink-flowered *Arum Lily*; *Sudersonia aurantiaca*, a climbing plant with yellow flowers; and *Spathoglottis longifolia*, an easily-grown terrestrial Orchid with whitish flowers. Of the others *Cyathea Dregei* is a Tree Fern and *Encephalartos brachyphyllus* and *E. villosus* belong to the Cycas family. These last three are evergreen in character and would prefer somewhat more heat, as also would *Stangeria paradoxa*, which is nearly related to the *Encephalartos*, but they might possibly thrive in a minimum winter temperature of 45°. To stamp out the rust in *Chrysanthemums* pick off all badly-infested leaves and burn them, as in this way the spores are prevented from spreading. Then spray the plants at intervals with a solution of potassium sulphide, made by dissolving 1oz. of potassium sulphide (liver of sulphur) in a quart of hot water, making this up afterwards by adding clean water to 2½ gallons. As the *Amaryllis* root so readily there must be something, we should say, radically wrong either with the bulbs themselves or the soil in which they are potted. On such a subject it is difficult to advise without inspecting the bulbs, but we advise you to turn them out of their pots, shake quite clear of the old soil and repot in some fresh compost made up of two parts good loam to one part of leaf-mould and nearly one part of sand. Then place them in the greenhouse, for they do not need any great heat, and water very carefully. As the season is so far advanced, it is quite probable that they will only make a few leaves this year, but will root and start away next spring. During the winter scarcely any water should be given them.

ROSE GARDEN.

Roses for the South-West of Wales (L. B.).—The conditions you name are not very favourable for Rose growing, but we think your friend would succeed in growing such Roses as the following: *Rugosa*—Blanc Double de Courbet, Conrad F. Meyer, Mme. G. Bruant and Mrs. A. Waterer; Hybrid China—Blairi No. 2 and Charles Lawson; Bourbon—Robusta and Mme. Pierre Oger; Damask—Mme. Hardy, La Valle de Bruxelles and Mme. Zoetmans; Moss—Crimson Globe; Noisette—Aimée Vibert, Rêve d'Or and Jaune Desprez; Chinas—Armosa, Fellenberg, Mme. Laurette Messimy, Common Blush and Fabvier; Hybrid Tea—Cheshunt Hybrid, Mme. Alfred Carrière, Longworth Rambler, Waltham Climber No. 1, Pink Rover, Mme. J. Siegfried, Grace Darling, Gustave Regis, Grüss an Teplitz and François Crousse; Hybrid Perpetual—John Hopper, Clio, Jules Margottin, Ulrich Brunner, Magna Charta and Mme. Isaac Pereire. Most of these are strong growers, and should be afforded a space of about 3 feet apart each way. Procure as many as you can on their own roots and have the soil deeply dug, working in some gritty material or coal ashes with the clay.

Twelve rambles to bloom simultaneously (Enquirer).—As you mention Dorothy Perkins and Hiawatha, we do not know whether you desire a list of sorts to flower at the same time as those varieties. If this should be the case, we recommend the following, which would bloom from the third week in July and through a part of August: Mandat's Triumph, Lady Gay, The Garland, Queen of the Belgians, Flora, Dundee Rambler, Mrs. F. W. Flight, Rivers' Musk, François Foucard, Débutante, Adélaïde Morelle and Moschata. The following would commence to bloom about the first week in July: Philadelphia Rambler, Félicité Perpétue, Leopoldine d'Orléans, Bennett's Seedling, Queen Alexandra, Pink Roamer, Edmond Froust, Sweetheart, Blush Rambler, Waltham Rambler, Elise Robichon and Ernst Grandpièrre. You could make a selection from the

following, which commence to flower about the third week in June: René André, wichurana rubra, Gardenia, Virginian Rambler, Psyche, Alba rubrifolia, Paul Transon, Rubin Zepherin Drouhin, Helène, Jersey Beauty, Ne Plus Ultra and Wedding Bells. Or if you desire a still earlier selection the following would commence to bloom about the first week in June: Carmine Pillar, Waltham Bride, Aglaia Ruby Queen, Electra, Alberic Barbier, Trier, Tea Rambler, Grüss an Zaberin, M. Desir, Reine Olga de Wurtemberg and Mme. Alfred Carrière. When burnt clay is referred to for potting purposes it is usually understood to be clay that has been burnt in a heap. A quantity of wood is placed together and set alight then clay with a little fine coal is placed upon the wood in a conical shape. As soon as this is burnt through more clay and coal is added, and so on until a large heap has collected. This is excellent material when cool to apply to land that is bad to work. It is spread on the surface and mingled with the other soil. A little of this burnt clay may be mixed with potting soil to much advantage. Burnt garden refuse is also good for similar purposes.

MISCELLANEOUS.

Recipe for weed-killer (Ashford).—The constituents of weed-killers are manufacturers' secrets, but no doubt they are largely composed of powerful poisons such as sulphuric or carbolic acid and arsenic. It is far better to purchase the liquid in tins or drums. This concentrated liquid is mixed with water at the rate advised by the vendors before it is used. You will find in our issue of July 4 advertisements of weed-killers from Joseph Bentley, Limited, Barrow-on-Humber, Hull; and from C. E. West, Higham Hill, London, N.E., both of whom will supply you with the liquid. Great care must be exercised in applying it, using an old water-can with a rose spreader and mixing the liquid in a large wooden tub used exclusively for that purpose. The operator should wear old clothes and leather gloves.

Names of plants.—*H. Payne.*—Roses: 1, E. T. Cook (Hybrid Tea); 2, G. Nabonnand (Tea).—*J. B. Reed.*—The smooth-wooded Rose we take to be the Bour-sault Morlettii, and the other variety Rosa rugosa calocarpa. This should be grown as a free bush, pruning it very sparingly.—*G.*—Roses: 1, Frau Karl Druschki; 2, Souvenir de Pierre Notting; 3, Grüss an Teplitz.—*A. T. King.*—Rose Mme. François Pittet.—*J. C. A.*—Roses: 1, Réve d'Or; 2, Mme. Pierre Cochet; 3, Mme. Moreau; 4, Mrs. Harry Turner; 5, Lady Roberts; 6, Baron Gonella; 7, Prince Arthur; 8 not recognised; 9, Celine Forestier.—*An Old Reader.*—Quite impossible to name the specimens, which were crushed beyond recognition. Such things should always be enclosed in a wooden box and carefully packed.—*W. C. Yates.*—The Carnation is doubtless a local seedling; it is not good enough to name, but it was much faded.—*H. L. Kenyon.*—The flower of the Picotee sent is what gardeners term a "sport." In any large collection of Picotees some of them will annually take this ground colour. It had the petal edge of Mrs. Gorton.—*Subscriber.*—1, Quercus pedunculata variegata (Variegated Oak); 2, Potentilla fruticosa; 3, Tamarix species, probably T. anglica. Kindly send when in flower.—*Devonia.*—The prickly shrub is Solanum pyracanthum; the other Feijoa selowianum.—*A. Rath.*—Your Sweet Peas are: 1, King Edward; 2, Countess Spencer; 3, Dainty.—*Azaga.*—1, Cedrus Deodara; 2, Pinus Laricio nigricans (Austrian Pine); 3, P. excelsa (Bhotan Pine); 4, P. sylvestris (Scotch Pine); 5, Sambucus nigra var. laciniata; 6, S. racemosa var. laciniata; 7, Prunus Luurocerasus var. colchica.—*F. J.*—Adiantum formosum.—*A. Buckingham.*—Ampelopsis Veitchii.—*M. T.*—1, Physostegia virginiana; 2, Digitalis lutea.—*Miss M. H.*—Lysimachia punctata.—*Indigo.*—Colutea arborescens.—*Polygonum.*—Polygonum baldschuanicum. It flowers best when not pruned at all. Thin out only in winter or spring.—*D. R. P.*—1, Digitalis lutea; 2, Cimicifuga racemosa; 3, Lysimachia punctata; 4, Genista tinctoria; 5, Symphoricarpos orbiculatus var. variegatus; 6, Geranium pratense var. flore-pleno.—*F. A. Bates.*—1, Myriophyllum verticillatum; 2, Blanket Weed. They are both common plants, the former reproducing itself from resting buds in winter, while the latter reproduces itself from spores. They may be destroyed by treating with copper sulphate at the rate of 1 lb. to 1,000,000 gallons of water. Care should be taken in estimating the contents of the pond, as an overdose will be fatal to Nymphaeas and other plants. See THE GARDEN, July 7, 1906.—*J. Stowe.*—Spirea filipendula flore-pleno.—*Col. F.*—Valeriana officinalis

SOCIETIES

STUTTON COLDFIELD AND DISTRICT AND WALSALL AND DISTRICT GARDENERS' ASSOCIATIONS.

THE annual outing of the above associations took place recently to the extensive seed warehouses at Wordsley and seed farms and trial grounds at Kinver, by the kind invitation of Messrs. Webb and Sons, the King's seedsmen, Wordsley, Stourbridge. The party, numbering about 150, included Mr. Joel Cadbury, president of the Amalgamated Associations, Mr. Thompson, Mr. Jeffs and Mr. Grove, was conveyed by special trams from Dudley to Wordsley, where they were met by Mr. Edward Webb and the heads of departments, who conducted them over the offices, warehouses and greenhouses. Adjoining the warehouses is the extensive range of glass; here all the best types of florists' flowers, Calceolarias, Cinerarias, Begonias,

Primulas, &c., are to be seen in their respective seasons. The size and rich colouring of the Gloxinias and Begonias now in bloom, which have excited so much interest at the leading shows of the season, came in for much admiration, as also did the heavy crops of Melons, Cucumbers and Tomatoes. The party had the privilege of inspecting the various types of vegetables which were awarded the only gold medal at the Franco-British Exhibition.

From Wordsley the visitors resumed their journey to Kinver, where luncheon was provided by Messrs. Webb, over which Mr. Cadbury presided. The party then left for an inspection of the trial grounds, where an enjoyable time was spent in looking over the numerous trials of flowers and vegetables. Some idea of the magnitude of these operations may be gathered when it is mentioned that there are hundreds of trials of Peas, Beans and other vegetables, 240 rows of Sweet Peas and 250 trials of other annuals, but time did not allow of a complete inspection of the seed farms, which extend to 2,000 acres. At five o'clock tea was served, and after a hearty vote of thanks, which was proposed by Mr. Cadbury, supported by Mr. Thompson and Mr. Jeffs, to Messrs. Webb for their hospitality, the party dispersed to visit the rock houses and Roman encampment at the famous Kinver Edge, a return being made to the Kinver tram terminus en route for home. It was generally voted that the outing had been one of the most enjoyable ever held by the societies.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

THE monthly meeting of this society was held at the Horticultural Hall, Vincent Square, Westminster, on the 10th inst., Mr. Charles H. Curtis in the chair. Four new members were elected. The amount of sick pay for the month was £46 8s. 6d., which is heavy for this time of the year. A member was granted 10s. per week for two or three weeks from the convalescent fund in addition to his sick pay to enable him to get a change of air. Arrangements for the annual dinner are being made.

KIRKCUDBRIGHT HORTICULTURAL SOCIETY.

THIS society held its annual show in the Town Hall, Kirkcudbright, recently, when there was a good competition in both the open and amateurs' sections, cut flowers in particular, with vegetables, being well shown and of good quality. The show was larger than that of last year, and many things were of better quality than at the preceding exhibition. Non-competitive exhibits of Roses and other flowers were shown from the gardens of Mr. James Brown, Knockbrex, where his gardener, Mr. Bennet, grows Roses exceedingly well; and these flowers were also exhibited by Messrs. T. Smith and Sons, Stranraer, the collection exhibited by that firm being representative of the best flowers of the day. In the competitive classes, Mr. W. McGuffog, Balmac, was awarded the medal presented by Miss Blackburn for a table of cut flowers, with an excellent exhibit. In the class for a circular table of plants, Mr. James Duff, Threave, was first with a good table; Mr. A. Anderson, Bareapple, and Mr. W. McGuffog, Balmac, being respectively second and third. Other leading winners in the show were Messrs. W. Brown, J. Drummond, W. and D. Kelly, R. Webster, W. McCormack, B. Rutherford, R. Middleton, A. S. Murchie, J. Hannah, J. A. Gourlay and Mrs. Gibson. In the ladies' classes for bouquets, &c., Mrs. Blyth, Mrs. Allan and Mrs. Coleman were the first in various classes.

BISHOP'S STORTFORD HORTICULTURAL SOCIETY.

THE thirty-ninth annual exhibition of the above society was held on the 3rd inst., at Silver Leys, and was a great success from all points of view.

PLANTS.

The first prize for a group arranged for effect was taken by Mr. J. Vert, gardener to the Right Hon. Lord Howard de Walden, Audley End, Safron Walden, and was beautifully arranged, having splendid Lilium auratum, Crotons, Dracenas and Humea elegans. The second prize went to Mr. G. Beech, gardener to T. Barker, Esq., M.P., for a very fine group; Mr. Harrison, gardener to Colonel Archer Houlton, Hallingbury Place, Bishop's Stortford, being a close third.

For foliage plants Lord Howard de Walden was again first, and Mr. Woods, Stanssed, second. The last-named exhibitor was first for stove and greenhouse plants in flower, also for Ferns.

CUT FLOWERS.

It was a trying day for Roses and cut flowers owing to the great heat. The premier award for Roses was taken by F. E. Croft, Esq. (gardener, Mr. G. Longhurst), Stansted Abbots, Mr. Pritchard being second; and in the smaller class Tresham Gilbey, Esq., was first.

The class for twenty-four bunches of hardy herbaceous flowers is always a great feature here, and Messrs. G. Paul and Son, Cheshunt, were an easy first with grand flowers. This well-known firm rarely fails in the open class, and they had splendid trusses of Chrysanthemum King Edward, Platycodon grandiflora, Aconitum prenaicum and Phloxes. Mr. Parker of Hertford was second, and Mr. Woods third. In a smaller class Mrs. W. T. Gee was first, Colonel Healey second, and Mr. W. Holland third. The collections of Sweet Peas were numerous. For the best collection Mr. Barker was first and H. Harrison, Esq. (gardener, Mr. Lee) second. For twelve bunches Messrs. Johnson and Tresham Gilbey won in the order named.

TABLE DECORATIONS

These were fewer than usual, but they represented splendid quality. Miss E. A. Spencer, Stansted, was first,

having Carnation Raby Castle and Grass arranged in low glasses. Miss Vert, Audley End, Safron Walden, was second with choice flowers of Odontoglossum crispum.

FRUIT.

For a collection of eight dishes there was some splendid fruit staged, and Colonel Archer Houlton (gardener, Mr. Harrison), Hallingbury Place, Bishop's Stortford, was a good first, having very fine Grapes Muscat of Alexandria and Black Hamburg, Peaches, Nectarines and Melons. Mr. G. Beech, gardener to T. Barker, Esq., M.P., The Grange, was an excellent second. For baskets of fruit M. Glyn, Esq., was first; second, Colonel Archer Houlton; third, Mr. Barker. For black Grapes Messrs. J. Balfour, Mrs. Menet and Mr. G. Barnes won in the order named. For other black varieties Messrs. Balfour, Glyn and Colonel Archer Houlton were successful. Plums and other small fruits were numerous, and Messrs. Barnes, F. A. Taylor and Croft had very fine Cherries.

VEGETABLES.

These occupied much space, there being a great number of single dishes. For the collection of twelve distinct varieties J. Balfour, Esq. (gardener, Mr. Jefferies), Moor Hall, Harlow, was a splendid first, having perfect roots, fine Cauliflowers, Onions, Tomatoes and Emperor Beans. Mr. F. E. Croft was a good second and Mr. J. B. Woods third. For six varieties Mr. W. J. Kindell was first, Mrs. Gee second and G. Barnes third. For Tomatoes Colonel Archer Houlton led, Mr. Barker being second.

NON-COMPETITIVE GROUPS

Messrs. Paul and Son, Cheshunt, sent beautiful herba-ceous cut flowers, Messrs. Bolton and Son, Roses, Mr. Scruby, Roses and Mr. Chaplin, Waltham Cross, herbaceous flowers. These groups added greatly to the decoration of the tents.

* * * Owing to the demand on our space we are obliged to hold over the report of the Royal Horticultural Society's Exhibition until next week.

"Country Life" for August 22 contains, among other articles, an illustrated account of Kirklees Park, Yorks.; "Hereford at Evesbatch Court" (illustrated); "The Pochard in Kent," by John Walpole-Bond; "The Fascination of the Trout," by A. R. Haig Brown; "In the Garden" (illustrated).

Obituary—Mr. Henry Balderson.

THE death of the above well-known amateur horticulturist took place on the 12th inst. at his residence, Corner Hall, Boxmoor, Herts, and though for the past two years illness has prevented him taking an active part in horticultural matters, till the last he was much interested in his garden at Corner Hall, and was a warm supporter of all matters appertaining to horticulture. For many years the Royal Horticultural Society found in him a strong supporter, and he was vice-chairman of the fruit committee, and by his presence and help a good friend to the gardening charities. At his Boxmoor residence he grew Grapes well, and nearly fifty years ago was one of the promoters of the present Hemel Hempstead Horticultural Society. In 1900 he was Mayor of the borough, following the late Sir Astley Paston Cooper, Bart. He was till the time of his death an alderman of the borough, chairman of several important committees and of the gasworks, a director of the waterworks, a prominent Freemason, a great friend of the local friendly societies and for over fifty years church-warden of Boxmoor, also for some time vice-chairman of the Board of Guardians. His last public act was the opening of the new fire station. Mr. Balderson was born at Gadebridge in the year 1830. In his early days he was an ardent Volunteer, being in 1859 second lieutenant when the corps was started. He leaves six daughters and one son, losing his youngest son in the South African War.

CATALOGUES RECEIVED.

Bulbs—J. Veitch and Sons, Limited, Royal Exotic Nurseries, Chelsea, London; W. Cutbush and Sons' Nurseries, Highgate, N.; Sir Josslyn Gore-Booth, Bart., Lissadell, Sligo; D. W. Thomson, 113, George Street, Edinburgh; E. P. Dixon and Sons, Limited, Paragon Square, Hull; J. A. Laing, Seal Chart, near Sevenoaks; Cooper Taber and Co., Limited, 90, Southwark Street, S.E.; and E. H. Krelage and Sons, Haarlem, Holland. Bulbs and Winter Flowers—W. Paul and Sons, Royal Nurseries, Waltham Cross. Gladioli.—H. H. Graff, hybridist, Simcoe, Ontario, Canada.

* * * The Yearly Subscription to THE GARDEN is: Inland, 6s. 6d.; Foreign, 8s. 9d.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

THE GREAT SHREWSBURY SHOW.

THIS, the thirty-fourth meeting of the Shropshire Horticultural Society, is once more past and gone. It opened under pleasant auspices on Wednesday, the 19th inst., in the beautiful Quarry Grounds, the weather, although dull, being pleasant, with a fresh breeze blowing from the east.

The great advance made in horticultural progress during the past twenty-five years is focussed and practically demonstrated at this annual meeting at Shrewsbury as it is perhaps at no other horticultural meeting in the kingdom. High culture is here represented in every department of practical gardening. The only thing lacking to complete its inclusiveness is an important class for Orchids. The season of the year bars this, as there are comparatively few in bloom at the time the show is held.

Of rare, interesting and beautiful plants, not only the best are seen here, but such examples of high culture, combined with the art of artistic arrangement in combination, are brought before the public as is witnessed in few, if any, other shows within the kingdom. The groups of plants arranged for effect and the great specimen plants dominate, no doubt, the exhibition as far as the general public are concerned. The groups were eleven in number, each occupying 250 square feet, divided into two classes—one for ornamental foliage and flowering plants combined and another for ornamental foliaged plants only. Messrs. Cypher and Sons took the first prize of £25 in each class.

It would occupy many pages of THE GARDEN to describe the plant and cut flower treasures of this wonderful show. I must, however, mention an exhibit of hybrid Water Lilies by Mr. Amos Perry of Enfield which interested hosts of the visitors. They included most of the best varieties and were in lovely bloom. The tank in which they were arranged was surrounded by rocky mounds profusely planted with beautiful water plants, producing, I thought, as a whole a delightful picture of this natural style of gardening.

There is one class in the plant section I should particularly like to mention, namely, Class 7. The prizes here are offered for stove or greenhouse plants grown in pots not exceeding 10 inches in diameter, the object being to promote high cultural skill in the growth of plants, and truly its object on this occasion was fully attained. Such grand specimens grown in such small pots conclusively prove that the art of plant growing in England is still well to the

fore. The first prize in this class also went to Messrs. Cypher.

Fruit is a most important section of the show. I can only describe it as simply grand. The new champion class—introduced this year for the first time—for thirty dishes of fruit decorated with flowers proved most successful and popular. Mr. Barnes of Eaton Hall Gardens was the victor, closely followed by Mr. Goodacre of Elvaston Castle Gardens. The Grape and other fruit classes were well filled; but, generally speaking, the Grapes were not so fine in bunch or berry as I have seen them on other occasions at Shrewsbury. Lord Hastings's grand exhibits of former years were absent. To close this brief mention of the fruit exhibits would be incomplete without noticing the magnificent groups of fruit trees in pots exhibited by Messrs. Rivers of Sawbridge-worth and the King's Acre Nurseries, Hereford.

No section of the exhibition has shown greater progress of late years than has that devoted to vegetables. Instead of being considered of minor importance, it now commands the ready homage not only of growers, but of the public generally, by the magnificence and perfection of growth it has attained to. The exhibits in the open class completely filled a large tent. The greatest interest was centred in Class 138, in which the society offered a first prize of £10 for nine dishes. It goes without saying that as the two champion vegetable growers were competing in this class—Mr. Beckett of Aldenham Gardens and Mr. Gibson of Welbeck Gardens—that something worth looking at would be placed before the judges. It proved so, Mr. Beckett's collection being in the estimation of competent judges one of the best and most perfect collections ever put up. It also won a challenge cup value 10 guineas. Mr. Gibson's collection was also superb, but a few points below the first-prize group.

OWEN THOMAS.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

September 1.—Royal Horticultural Society's Exhibition of Flowers and Fruit, Vincent Square, Westminster, 1 p.m. to 6 p.m.; Lecture at three o'clock on "The History of Garden Making," by Mr. Thomas H. Mawson, A.R.I.B.A.

East Anglian Horticultural Club.—"The Cultivation of the Cucumber: its Diseases and Remedies." This was the subject chosen by the president of this club, Mr. J. Powley, for an essay competition open to all members for the August meeting. Three papers were received and read, great interest was taken in the subject, and the three judges, Messrs. T. B. Field, H. Read and H. Goude had a good

lengthy deliberation before making their awards. The prizes were awarded: First, Mr. C. Matthews; second, Mr. F. Kemp; third, Mr. C. H. Fox. The subject brought out a good discussion, and included many practical points. Mr. F. Williams, gardener to Louis Tillett, Esq., M.P., staged some grand Peaches, as also did Mr. W. Shoemith, gardener to F. W. Harner, Esq. Flowers, pot plants and vegetables were also in strong force in the monthly competition. —P.

National Dahlia Society.—The annual exhibition in connexion with the above society will be held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, on Thursday, September 3. Full particulars can be obtained from the hon. secretary, Mr. H. H. Thomas, 68, Shakespeare Road, Hanwell, W.

National Rose Society's autumn show.—This promises to be one of the most interesting exhibitions of the year, the recent rains having helped the plants considerably. We always enjoy this display, as Roses in September are as welcome in the garden or at the exhibition as they are in July. There seems a richer depth of colouring in the flowers and the fragrance is stronger. This exhibition is, we feel sure, responsible for much of the interest that is being taken in the raising of new sorts that bloom particularly in the autumn months. Raisers should direct their attention to the autumn-flowering climbers in particular. There is a sad dearth of these as yet.

The Countess of Selkirk's Cottage Gardens Prizes.—As in former years, the Countess of Selkirk has given prizes for cottage gardens and climbers upon the estate of St. Mary's Isle, Kirkcudbright, and there were thirty-one entries for the competition. The awards, together with a general report on the gardens, have just been issued by the judge, Mr. R. Service, Dumfries. In the report Mr. Service remarks upon the use so largely made of bedding plants, and urges that the cottagers should devote more of their gardens to hardy border flowers instead of these. He comments, in generally favourable terms, upon the gardens and the taste displayed in their cultivation and arrangement. The leading awards are as follows: Gardens within a two-mile radius of Kirkcudbright. Best gardens—First, Mrs. Kelly, The Stell; second, Mrs. C. Dorrance, The Stell; third, Mrs. M'Coull, The Stell; fourth, Mrs. Anderson, Auchenfleur. Best creeping plants—First, Mrs. J. Dorrance, Mutehill; second, Mrs. Graham, Auchenfleur. Gardens and creepers outside the two-mile radius—First, Miss Dickson, The Doon; second, Mrs. Graham, Low Newton; third, Mrs. Kelly, Burnfoot of Borgue. Balmae district, gardens and creepers—First, Mrs. M'Kie, Little Balmae; second, Mrs. Welsh, Dromore.

Dundee Parks Superintendent. Mr. James Carnochan, who has been for a number of years superintendent of the Dundee City parks, having intimated a desire to have an assistant on account of his advancing years, the parks committee came to a satisfactory arrangement with him for the appointment of an assistant and successor. There were some sixty candidates for the appointment, and it was finally given to Mr. Alexander MacRea, gardener to Mr. Gilroy, Balumbie, who was appointed unanimously. Mr. MacRea, although a comparatively young man, has had a long gardening experience, beginning at Geddes, Nairn. After passing through a number of good gardens for experience, he was for some time with Mr. A. F. Burk, Adderley, Monifieth, whence he went to Balumbie, where he has been for eight years. Mr. MacRea's long experience and knowledge of the district give confidence for the belief that his régime will be a great success.

Dundee Horticultural Association.—The members of the Dundee and Broughty Ferry Horticultural Associations had

on the 15th inst. an opportunity, of which a number availed themselves, of visiting The Tower, Wormit, the property of Mr. George Duncan, for the purpose of seeing the rock garden there. This is a successful piece of work, executed by a Dundee firm of landscape gardeners, one of whom accompanied the party and explained the construction, while Mr. Duncan was most assiduous in entertaining the visitors. As the rock garden was formed about three years ago, the plants have had time to establish themselves, so that the success of the undertaking was proved by the flourishing condition in which the plants were found.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

"The Garden" Flower Show.—As one who saw much of this novel and excellent exhibition, and who critically examined a large number of the exhibits staged on the occasion in question, I should like to endorse in the fullest possible manner all that "One of the Judges" at page 381 has said concerning one of the most remarkable exhibitions I have seen. Those of your readers who had no opportunity of seeing the very fine collections of fruit and flowers staged on the occasion in question will gather much from the detailed report of the show, and not a little also from the excellent series of pictures. Several of these pictures reveal in a way that is otherwise impossible the superb character and excellence of a few of the winning groups, and will further assist in bringing into closer touch that larger body of readers interested in gardening who for many reasons were prevented from seeing the display for themselves. The very widespread interest taken in the show may be gathered from the report itself, and it will be seen that exhibitors from Gloucester, Derby, Cambridge, Herts, Sussex, Lanark, Maidstone and Market Harborough were among the most successful. The freshness of the exhibits, apart from their high quality, was a matter of frequent comment during the day, and reflects the greatest credit upon those responsible for their preparation, packing and staging. Many exhibits from long distances, unattended by their owners, were staged with care and skill, losing little or nothing in consequence. In short, the occasion, like the display, may well be regarded as unique, and for this extremely gratifying result the contributors thereto, in common with the promoters, have every reason to be satisfied with the results of their efforts.—VISITOR.

Popular confusion in nomenclature.—Your correspondent P. Clapham, page 395, is very severe upon the nurserymen and seedsmen for the inaccuracies to be met with in some catalogues. That grievous mistakes are sometimes made cannot be denied, but the greatest sinners in this respect are the botanists, who are continually chopping and changing the names about without any apparent reason, except that of self glorification, in order to pose as the authority for some new name. I might quote many instances, but one will suffice to illustrate the troubles to which we gardeners are subjected in an attempt to get the correct name of any particular plant. In the forties of the last century William Lobb, when travelling in Brazil for Messrs. Veitch, sent home an exceedingly pretty flowering climber, to which the name of *Manettia bicolor* was given. As the tubular-shaped blossoms are in colour red and yellow, the specific name of *bicolor* is a decidedly appropriate one. By this name the plant was always known till about seven or eight years ago, when it was named at Kew *Manettia luteo-rubra*, and as such it is given in the "Kew Hand List," with that of *bicolor* as a synonym. Some little time after that it was figured in the

Botanical Magazine as *M. bicolor*, the old name being there retained. Yet another indignity has fallen to this unfortunate plant, for it is, I see, at Kew now labelled *Manettia inflata*. It is easy to understand that the compiler of a catalogue is at his wits' end to know which to take as his authority—the name the plant has been known by for half a century and supported by the *Botanical Magazine*, the "Kew Hand List" or the present-day labelling at Kew. We are sometimes told to take the "Index Kewensis" as our authority, but the price of such a work is beyond the means of many. There is another point connected with catalogue nomenclature, and that is many names are too firmly fixed in the popular mind to omit them from a nurseryman's catalogue, even if they are according to the botanist's dictum incorrect. For instance, Indian *Rhododendrons* would leave many in doubt as to the plants intended; but Indian *Azaleas* are understood by everyone, yet botanists tell us that with the exception of our little *Azalea* or *Loiseleuria procumbens* all plants known as such in gardens are *Rhododendrons*. Granting this to be the case, it is absolutely necessary for a nurseryman to retain the name of *Azalea* in order to render the plants recognisable to many. Exactly the same applies to the *Hippeastrums*, which are still generally known as *Amaryllis*. A great number of instances might be quoted, but enough has been given to show that the compiler of a trade catalogue is not the only sinner.—H. P.

Notes from County Down.—The seasons this year have been very variable, the spring cold and late, difficulty being found in starting bedding plants and Vegetable Marrows out of doors. Many early seeds were failures, and Peas and Sweet Peas had to be sown twice to provide proper supplies. Everything has, however, improved since, a fine supply of Cucumbers and Melons in frames being forthcoming, and, by the way, there is nothing like a large supply of dead leaves for keeping up long heat in the frames. In our rambles by the shore and through the woods here, we picked up the Sea Starwort, the Willow Herb and the Bog Pimpernel, all beautiful flowers of the field.—WALTER SMYTH, *Holywood, County Down*.

Keeping Vineries free of wasps. I have been much troubled with wasps in the Vineries here, and although all ventilators were covered with butter cloth and bottles of syrup hung about they still managed to get in and do considerable damage. The beginning of last week an idea occurred to me, and I cut small branches of common Laurel and hung them up in the houses, and since the leaves began to wither I have not seen a single wasp. I hope this may be of use to others similarly situated.—H. TOMLINSON, Gardener, *Cossington, Bridgwater*.

Sweet Pea Countess Spencer.—Since reading the remarks of Mr. G. Clapham *re* the above under "Sweet Pea Prospects" in THE GARDEN of the 25th ult., and those of Mr. J. F. Barwise in the issue of the 8th inst., I have devoted some time to a careful study of this variety. I am of the same opinion as Mr. Clapham as regards sports, but in even worse plight, for out of a score plants I have only four giving true flowers. After reading Mr. Barwise's theory of possible cross-fertilisation by means of "insects, wind, or any other agency," I went straight away to my plants and examined scores of blooms, and I must say I found the Spencer varieties, at the stage when fertilisation takes place, with stigma quite as carefully protected by keel and wings as in any of the "old-fashioned Eckfordian type." I do not say Mr. Barwise has not seen flowers with stigma exposed, for I have seen such myself at various times and on plants of several varieties, both old and new; but the peculiarity was always due to some malformation of the bloom, brought about by an uneven development of wings or keel. For my part I am inclined to think Mr. Clapham has got nearer

the true cause than Mr. Barwise, because to any observant student of the Mendelian theory of cross-fertilisation the whole gist of the matter lies in the supposition that the variety Countess Spencer, being a new "break" among Sweet Peas, is an impure dominant, and therefore likely to retain that character generation after generation; and to my thinking—but I may be wrong—it is only by using it as one parent in a new cross and getting it bred as a pure dominant that fixed varieties having the same conformation and colouring can be obtained; and if one knew the history of any similar variety—Audrey Crier, for instance—since raised, possibly that is the course that has been taken.—WILLIAM BOOTH, *Howsham, Lincoln.*

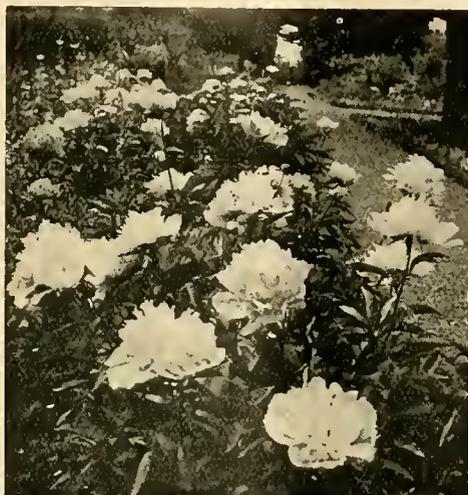
Cross-fertilisation of Sweet Peas.—Mr. J. F. Barwise's account of his seeing the stigma of some Sweet Peas protruding outside the keel before the stamens were ready to fertilise came as a surprise to me. Since then I have examined several hundreds of blooms, but have failed to discover one where the stigma was in such a well-developed state as Mr. Barwise says. If such a state of things does occur, we can at once account for the number of rogues which appear every year among the modern Sweet Peas. My experience has been that before the flower is half developed pollination has taken place, and by the time the stigma appears outside the keel fertilisation is effected. I quite agree with Mr. Barwise that the wings do not lie so closely over the keel in the modern Sweet Pea as in the older sorts, but that does not in the least, in my opinion, alter the cause of so many rogues appearing. When I wrote that out of fifteen plants of Countess Spencer only six were true, this has been my average for at least four years, and when Mr. Barwise says that his packet did not contain a rogue I forthwith broke the Tenth Commandment. I shall watch with great interest during the remainder of the season for the appearance of the stigma before the pollen sac has burst, for this to me is a point which should not be lost sight of, and I thank Mr. Barwise for mentioning it.—P. CLAPHAM.

Cervantes' Daffodil.—With reference to the Rev. Joseph Jacob's remarks over this "first of all" early trumpet variety, allow me to mention that it is as far apart from a relationship with Princess as John o' Groats and Land's End in England. There is no possible affinity, as I know all about it, being its introducer at the start twenty years since. It is a wonderful increaser and succeeds in any soil, the lighter the better. We usually flower it here before Christmas. We are sorry that the stock is very much run on this season by market growers, this on account of the wants of our private customers.—W. BAYLOR HARTLAND, *Ard Cairn, Cork.*

Growing Carnations.—I notice your correspondent, C. Ruse, gives some useful hints on growing Carnations in your issue of the 15th inst. On one point I do not quite agree with him. When layering he advises giving an upward cut for about 1 inch through the stem. I find it is much better to stop the knife at, say, from a quarter of an inch to half an inch, so long as the cut is made clean through a joint. The drawback to having such a long tongue is that it is apt to snap off when taking them up for planting out, however carefully the work may be done. When this happens the plant is useless, as the roots are emitted at the joint which should be near the tip of the tongue. I have had these mishaps happen myself when planting out, but by making a short tongue it is avoided. Of course, they will root just as well from a long tongue and may be taken up all right with extra care, but where one man has a few thousands to plant out it is a case of quick handling when suitable planting weather comes round.—A. CHILDS, *Brown Candover, Alresford, Hants.*

A remarkable crop of Peas.—In these days of intensive cultivation and heavy cropping I think it may interest your readers to

hear about a remarkable crop of Peas (Duke of Albany) which we have just marketed from our small holding in Kent. Early in May we planted one-eighth of an acre with half a bushel of the above Peas. Between August 1 and 8 we picked from this plot 36 bushels and there are still quite 4 bushels to gather; therefore, forty multiplied by eight would give a yield of 320 bushels to the acre. Is not this a record yield, as the average crop is computed at 150 bushels to 170 bushels per acre? The price obtained has been 3s. a bushel, or £6 for the crop, which works out at £48 to the acre. The seed was supplied by Messrs. Harrison of Maidstone. We attribute this heavy crop to two things—thin sowing and constant hoeing, added to a favourable season. Our market garden has only been under cultivation for four months, and the whole gives returns approaching these figures. I think we shall be able to prove an axiom which I have propounded for many years, namely, that "Agriculture can be made a paying profession for women."—EDITH BRADLEY, *Greenway Court, Hollingbourne, Kent.* [No doubt a crop of Peas working out at 320 bushels per acre was a record one. Yours being 40 bushels for twenty rods runs to about 3 bushels per rod, which, after all, for deep-worked, well-manured ground, of



A FINE GROUP OF PEONIES IN DR. MCWATT'S GARDEN, MORELANDS, DUNS, N.B.

such a Pea as Duke of Albany is far from being exceptional. Presumably the Peas were not staked. If they were, while materially adding to the cost, the produce would have been heavier. We assume, however, the Peas were grown field fashion, that is, lying on the ground, in rows 2½ feet apart. Thus treated we have had a bushel of ripe seed per rod from Senator. A very interesting addition to your note would have been rent of land, cost of manure, of labour, of seed, of gathering, of baskets, of marketing and other small items of expenditure to set against your £6 receipts, that a balance of net profit might have been shown. Also, while you claim that agriculture may be made a paying vocation for women, will you please say how much of the labour of trenching or deep digging of the soil, getting on manure, &c., was done by women.—Eo.]

PEONIES IN SCOTLAND.

THE above illustration is from a photograph kindly sent to us by Dr. McWatt of Morelands, Duns, N.B. The Peonies are growing in Dr. McWatt's garden, where the soil and climate are evidently very suitable for these handsome plants.

THE FRUIT GARDEN.

GOOSEBERRIES ON NORTH WALLS FOR LATE SUPPLIES.

THE value of the Gooseberry on a north wall is often overlooked by amateurs who like these fruits over as long a period as possible, and, once the wall is furnished, the trees give very little trouble indeed. A few years ago I advised an amateur to make a trial of Gooseberries, and double cordons were planted. The wall, being only 7 feet high, was quickly furnished and has never failed to bear a good crop, though the plants get rather rough treatment, shears being employed to keep the growths cut back, and only a nail here and there to keep a main growth in position. I have seen a good crop from north walls when the earlier crops in the open were quite ruined by frost in consequence of their early flowering.

Another point that should not be overlooked is to plant several sorts, as variety is liked for dessert purposes. At the same time I do not advise all the Lancashire Prize Gooseberries for wall work, on account of their peculiar growth, but most of them are much better grown thus, as, having a spreading growth, they will repay the support of a trellis or north wall. They give a splendid return and fruits of delicious flavour, and the buds are protected much easier from birds early in the year and when the fruits are ripe, as a net or thin tiffany hung over the trees is easily placed in position.

Trees are grown purposely for this work, and their training is a simple matter. It is necessary to continue the growths of the main shoots and stop all breast wood to within a short distance of the shoot—that is, continue the terminals and stop all side shoots not required. I have mentioned the large-berried varieties, and in addition would advise a large percentage of the small-berried sorts, as I consider these even superior to the larger ones. These latter bear so freely and make a much closer growth, so that the wall is much sooner covered. Autumn planting, as soon as the leaves have fallen, is best, as the purchaser will secure much stronger trees, which will grow much better the next season and give less trouble. As regards the distance to plant, so much depends upon the shape of the trees at the start. A fan-trained requires more room than a double cordon. Those with three shoots, or triple cordons, are best, and they may be planted so that each tree has at least 1 foot to 1½ feet clear from the side growths when planted. A great deal depends upon the size of the tree and height of wall to cover. On a low wall, single cordons planted 1½ feet or 2 feet apart soon furnish the wall and give a crop the first season. The trees should, late in the autumn each year, have a liberal mulch of decayed manure at the foot of the wall.

The following varieties are suitable for this system of culture: The new Langley Gage, a recent introduction from Messrs. Veitch's Langley nurseries, is a splendid white berry for flavour, and the plant has a free habit. Golden Gem is also a delicious fruit, small, but of the best possible flavour. Langley Beauty is a large yellow fruit of great excellence. Among the older sorts of the smaller berries worth noting are Golden Drop, Yellow Champagne, Sulphur, White Swan, Whitesmith, Cheshire Lass or Shiner, Glenton Green, Greengage and Hedgehog, and the well-known reds such as Keen's Seedling, Crown Bob, Red Champagne, Warrington (very late) and Industry. There are so many large varieties that I will only note a few. Greens: British Queen, Shiner, Glenton, Stockwell and Telegraph. Reds: Crown Bob, London, Dan's Mistake and Speedwell. Whites: Alma, King of Trumps, Swan, Transparent and Lancer. Yellows: Drill, Keepsake, Leader, Leveller and Trumpeter. The above include early and late sorts, and are noted for their flavour. G. W. B.

THE KITCHEN GARDEN.

AUTUMN SALADS FOR AMATEURS.

AMATEURS are at times at a disadvantage, as the seasons vary so much that a sowing on a given date is not always reliable. Dates of sowing, however, are not the most important points, as the soil, situation and other details so much influence the crop. At the same time it is by no means a difficult matter to get good salads from October to Christmas, and this may be done at a small cost by growing in good land, by not crowding the plants, thinning freely and transplanting when necessary. It may be thought that to do this glass protection is a necessity, but this is not imperative, though if a cold frame is available this is a great help, as Lettuce, one of the best salads, is the most tender, and is always a valuable adjunct, but not by any means a necessity.

Endive.—This is one of the most useful salad plants grown; it is harder than Lettuce and of easy culture. Seeds should be sown in August, and if the plants are given ample moisture they will give a good return at the season named. The Moss-curl variety is the best looking, but not so hardy, and for late use I would advise the Round-leaved Batavian; this is very hardy and superior to the white. Sown very thinly in good soil on an open border the plants grow quickly, and the thinnings planted out 12 inches apart give a later supply. It is important to give plenty of room, as a crowded plant is very tender and is soon injured by frost. In transplanting do the work in dull or showery weather. Care should be taken to preserve the roots, and, if possible, to get some soil attached, as this greatly assists the plants. There is another very good hardy Endive, the Winter Curled, a large leaf and very hardy also, and Carter's Oval-leaved, a new plain-leaved Endive, is specially good for winter salads. I have had this on an open border well into the spring. There is also a distinct salad plant known as Sutton's Winter-leaved Lettuce which is well worth amateurs' attention. The leaves are of excellent flavour and hardy, and the plants stand a long time.

Lettuces.—I am unable to advise these with the same remarks as I have the Endives, as owing to their tenderness they are not so reliable, but some are more suitable than others, and if a frame is available my remarks as regards their good keeping are applicable. Even without glass it is an easy matter to lift Lettuce at the approach of frost and put them in boxes in a place of shelter, where they remain good for a considerable time. There is a very hardy Lettuce named Sutton's Little Gem, which is well worth a trial. It is a Cos variety, but very dwarf, and it certainly stands severe weather where others fail. It is small, crisp and good. The hearts are very solid, and when sown in August or September is one of the best winter varieties I have ever grown. Of older sorts the Stanstead Park and Hammersmith Hardy Green Cabbage are excellent autumn and winter varieties. These sown thinly on an open quarter, and well thinned out afterwards, will be found the most hardy of this section. I have referred to cold frames, and where these are available it is a good plan to lift full-grown Lettuce at the approach of frost and place therein, leaving the smaller plants for succession.

Chicory.—This plant is a valuable addition to the salad bowl, and to get the best results should be grown somewhat like Beet, the roots lifted and stored; the new leaves are the portion used for salad, but amateurs can get good results by sowing now and leaving in the row and cutting the plants over as required. Of course the leafage is much smaller, but it is plentiful, hardy and the plants continue to grow for a long time. The older roots sown early in the season should be placed in a cellar or dark shed, where they

will give a quantity of blanched leafage all through the winter.

Corn Salad.—This is a hardy green salad not grown nearly as much as it should be. It is often known under the more popular name of Lamb's Lettuce, and is of great value for salads from October to March. Several sowings should be made, on good land, very thinly in an open quarter and cut over as required. Sown in August, September and early October there will be a good winter supply and a quantity of green sweet leaves that are most useful; indeed, with this and Endive, Lettuce may be dispensed with. The best variety is the Broad-leaved Italian.

Other aids that help to make a good salad are the useful Chives, a hardy perennial early in the year, also the small green Onions. Dandelion is also useful, and Watercress early in the year is most welcome. This can be grown from seed in a moist soil, and Mustard and Cress are too well known to need describing. G. WYTHES.

THE ROSE GARDEN.

THE ASHFORD ROSE.

THIS is the only known name for a most beautiful Rose of tall or climbing habit which is now to be found in a few Irish gardens, but which is nowhere to be found more beautiful than in the gardens of the Right Hon. Lord Ardilaun, at St. Anne's, Clontarf, Dublin. This is as it should be, as the Rose was first observed on the walls of Lord Ardilaun's other mansion at Ashford in County Galway, where it had probably been for many years before its merits were again recognised when a renewal of the taste for such Roses set in. At St. Anne's it is freely used, and its great trusses of fine flowers of a charming pink are of the greatest service on wall, trellis and arch. The Ashford Rose is evidently a form of Rosa Pissarti, and has even more vigour than its allies, while the foliage is of a healthy green, and its rapidity of growth renders it of the utmost value for places where free-growing Roses are required. It soon covers a great space, runs to a considerable height if required, and gives for a long period an abundance of its large trusses of flowers. One of its great advantages is the freedom with which it strikes from cuttings, and it is being multiplied at St. Anne's and the other Irish gardens into which it has found its way. It is a great favourite with Lady Ardilaun, whose taste has done so much in transforming the fine walled garden at St. Anne's, in which the Ashford Rose is cultivated; and it responds to the liberal treatment given to it by Mr. Campbell, Lord Ardilaun's gardener. S. A.

ROSE COUNTESS OF GOSFORD.

This lovely Hybrid Tea, which one might call a glorified Mme. Laurette Messimy, has been very fine this season, and it will certainly rank very high as a decorative Rose for the garden. There is nothing of the formal shape about it, the flowers being of those huge loose types we have learned to admire so much; it is a pleasure to see such Roses in the early morning or late in the evening. There is a richer suffusion of salmon in its blossoms than we have in Mme. Laurette Messimy, otherwise there is a great similarity in style. Messrs. McGredy and Son, the raisers, have obtained some excellent novelties, and they exhibited several at the National Rose Show this year, which will be heard of in the near future. Perhaps the thin loose flowers are being introduced rather too plentifully, for one might say that two-thirds of the novelties now sent out are of this character. Obviously they must possess special merits in either colour or form, or they will not be wanted, for have we not now a collection already overburdened with sorts that are too much alike? P.

DAFFODIL NOTES.

THE CUTTING BED AND ITS OCCUPANTS.

NO one who can avoid it likes to spoil their show in the garden, but many who want flowers in the house are more or less obliged to do so just for the want of a little foresight in the autumn in making a bed or beds in the kitchen garden, or in that very useful border which surrounds the outside of the wall, and filling it with Daffodils. This is really as necessary an adjunct of a well-planned scheme of gardening operations as are Daffodils themselves.

And how useful it is! Here the flowers that are to be cut for the house are grown. Here, too, new sorts may be tried, and here expensive varieties may find a home and be looked after until a little stock has been got together. Although the present series of notes are not cultural in the strict sense of the word, I must allude here to the importance of doing the cutting bed well. I strongly advise double digging, and in old gardens a good application of slaked lime or the newer form of ground lime. Gardening papers are just now full of articles and notes on the value of lime in the soil, and as far as Daffodils are concerned I can thoroughly bear them out. After the beds are dug I cover them with a coating of lime on a calm day, and then fork it in immediately. The bulbs can then be put in at any time. If ground lime is used I would only half cover the ground, and then would leave it about a week before planting. Four feet wide is a convenient width, and the bulbs are best planted in rows across the beds, the rows being about 8 inches apart. I have dwelt on these cultural matters because it is important to have as good flowers as possible in the house. They are then admitted to a closer companionship, and, both for their own sake and for our own, ought to be in their "best." Out in the garden we may leave them in their everyday clothes. One great desideratum, from the strictly cut flower point of view, is length of stem, and nothing helps so much to this end as good culture. It is the only substitute we can offer for the ideal climatic conditions of Cornwall, where such is the growth that who knows but that the Daffodil of Cornwall will one day rival the Cabbage of Jersey in providing the astonished visitor with a walking-stick. Another desideratum is elegance. The Daffodil above all others for cutting is Frank Miles. Its graceful perianth is a sort of standard yard which we may use as our basis of comparison. Maximus is its counterpart in the long trumpets; but, sad to say, it is a shy bloomer. Citron and Duchess of Westminster among the Leedsii and Princes among the long trumpets, Almira and Eyebright among the small cups, are flowers that have that undefinable something that lends them specially to vase decoration. Not but what all Daffodils are beautiful, and doubtless there are some who would prefer the stiffer type of Tenby and Emperor, or Mme. de Graaff and J. B. M. Camm, or Autocrat or Crown Prince.

A third desideratum is succession. Those who can give both a north and a south aspect have a distinct advantage. Wherever it is possible it is best to divide the bulbs for cutting, and put some in an early aspect and others in a late one simply to extend their flowering season. If, in addition to this, we choose early and late varieties, it is surprising the time that they are available. The earliest section are the large trumpets, and the latest the Poets; between the two come the large and small cups. I will now give two lists of suitable sorts, arranged, as far as possible, in their order of flowering. The first and longest contains only old and cheap varieties, and the second and shorter a few of the newer and more expensive which might be used to supplement or extend the other, as the case may be.

Old varieties: Golden Spur, Princes, Queen Bess, Sir Watkin, Campenelle Jonquils, Glory

of Leiden, Orphee, Emperor, J. B. M. Camm, Empress, Frank Miles, Minnie Hume, Mrs. Langtry, Beauty, Autocrat, Duchess of Westminster, Flora Wilson, Barri conspicuus, Crown Prince, Citron, Falstaff, Vanessa, Mabel Cowan, ornatus, Elvira and Klondyke.

Newer sorts: Blackwell, Golden Bell, Duke of Bedford, Mme. de Graaff, Ariadne, Eyebright, Dorothy Wemys, Comus and Horace. I have not put maximus in the list, because it is a shy bloomer in most gardens, nor Almira, because it is not a good doer as a rule, but, all the same, they are beautiful flowers. JOSEPH JACOB.

NEW PLANTS.

PINK PRINCESS CHRISTIAN.—A useful addition to the perpetual-flowering border Pink. The flowers are blush coloured at the margin of the petals and heavily coloured a dark maroon at the centre. The variety is exceedingly floriferous and of considerable vigour, the flower-stems reaching to nearly 2 feet in length. Shown by Messrs. B. Ladhams and Co., Limited, Southampton. Award of merit.

Thalicttrum diptero-carpum, shown by Messrs. James Veitch and Sons, Limited, will be described and illustrated next week.

Sophro-Cattleya-Lælia Marathon.—This plant is interesting as well as beautiful, owing to its being a reputed cross between *Sophro-Lælia Psyche* and *Cattleya Empress Frederick*. The flowers are of nearly true *Cattleya* form, of medium size and very showy. The lanceolate sepals and ovate-lanceolate petals are of a uniform bright rosy purple colour, the labellum being of the richest velvety purple, with golden striation in the throat. The edges of the labellum are much crimped, thus adding to its beauty. Shown by Messrs. Charlesworth and Co., Bradford. Award of merit.

Odontoglossum Zenobia.—This is a new hybrid of more botanical than garden interest. The plant shown had a long, branching raceme, bearing in a sparse manner medium-sized flowers of a deep maroon colour, the edges and tips of the segments being yellow. The labellum also has yellow markings at its base. Shown by Mr. de B. Crawshay, Rosefield, Sevenoaks. Award of merit.

Odontoglossum wiganianum superbum.—As its last name implies, this is a really superb form of a good Orchid. The plant exhibited possessed one raceme composed of nine large and handsome flowers. The sepals and petals are of a rich yellow colour, dotted on the lower portions with good-sized, brownish crimson dots and blotches. The labellum is very large and spreading, the white ground being regularly marked with crimson. All the segments have crimped or wavy edges. The plant was a most vigorous one and attracted much attention. Shown by Sir Trevor Lawrence, Bart., Dorking. First-class certificate.

Cypripedium Rosetti.—This is a reputed cross between *insigne sanderianum* and *Maudiae*, and partakes of both parents in character. The flower is very large, the dorsal sepal being remarkably broad and heavily edged and tipped white. The petals are very long, lanceolate, with beautifully crimped edges. The labellum is of large size, pointed and of a shiny greenish yellow hue, a colour that predominates in the flower. Shown by Lieutenant-Colonel G. L. Holford, Westonbirt, Tetbury, Gloucestershire. Award of merit.

Sophro-Lælia-Cattleya Medea vinicolor.—In addition to a beautiful outline this Orchid possesses a colour that is almost unique, this being a self bright plum colour. The flowers are of medium size, and are borne on stont, almost erect stems, thus showing them to the best advantage. Shown by Lieutenant-Colonel G. L. Holford. Award of merit.

Pilumna nobilis alba.—This is a pure white form of an Orchid that is none too well known.

The sepals and petals are very small and inconspicuous, the labellum being the most prominent segment. This is very broad and spreading, and of the purest white. Shown by Messrs. Charlesworth and Co., Bradford. Award of merit. All the above were shown before the Royal Horticultural Society on the 18th inst., when the awards were made.

THE FLOWER GARDEN.

INCARVILLEA DELAVAYI.

HARDY in all but the coldest soils, *Incarvillea Delavayi* is one of the midsummer flowers which yearly greet us from their accustomed places. Introduced from China some fifteen years ago, the merits of this plant were early recognised, consequently it became much sought after; and where the plants have been allowed space to develop and their requirements understood, the result has been the establishment of splendid clumps, which

quality, as the plant succeeds in the natural chalky soil of this district. Generally the trouble with *Incarvilleas* is to winter them, so that it is always good practice to give abundant drainage, and on heavy soils this is absolutely necessary. Where the plants are of doubtful hardihood it is safest to place over each crown before winter a spadeful of cinders or a similar quantity of moss litter. *Incarvillea Olgæ*, from Turkestan, makes a splendid second to the first-named species: the flowers are larger, but the foliage is more sparse and growth is less vigorous, rarely exceeding 1 foot in height.

Incarvilleas are easily raised from seed sown in light sandy soil in a cold frame as soon as it ripens in autumn. Probably the best results follow spring sowing in boxes or frames, as then satisfactory growth is made the first season and the plants attain a size which enables them to withstand the trials of winter. Once the seed germinates and the plants are fairly growing they are transplanted 6 inches or 9 inches apart either in frames or a half-shaded position outside (spring sowing) in light rich soil. No further attention is necessary save weeding and hoeing until autumn, when the roots are dug up and



INCARVILLEA DELAVAYI PLANTED AMONG OTHER SUBJECTS IN THE BORDER.

amply testify that such confidence has been singularly well placed. *Incarvillea Delavayi* has distinctive features which commend it to amateurs. It is of free growth and very easy to establish, to which may be added its stately appearance; then the leaves are particularly beautiful, forming a pleasing and effective accompaniment to the soft colour of the trumpet flowers.

I think that *Incarvilleas* are specially adapted for grouping with such subjects as accentuate rather than compete with its own beauty, for nothing detracts more from its effectiveness when in flower as being placed in association with gaudy and high-toned flowers. Planted in informal groups as seen in the illustration, where the neutral grey tints of *Retinospora plumosa argentea* have been employed, against which the bright and pleasing shade of the rose flowers stand out with telling effect, then, as a carpet, the *Viola Wm. Neil*, the effect is certainly good.

The *Incarvillea* is a Bignoniaceous plant, an order sparingly represented in gardens. The rootstock is swollen, and often tapers to a length of 15 inches to 18 inches, consequently it can only be successfully grown in a good depth of soil. This need not necessarily be of special

stored in moist sand in a frost-proof structure till spring. The following year they are planted in their permanent positions, prepared on the lines indicated, where they will flower and continue to increase yearly.

Walsgate Gardens. THOMAS SMITH.

SAVING SEED OF SWEET PEAS.

I HAVE lived abroad for many years, and on my return to England this year have grown my first Sweet Peas with very satisfactory results, owing to advice read in your columns. I wish to save some seed from Gladys Unwin and Mrs. H. Philbrick; is it advisable to do so? At what time should I allow pods to form? Is any special treatment required during such period? How am I to know when the seed-pods are ready for picking?

EAST ANGLIAN.

[There is no special reason why you should not save seed of the two varieties you name if you particularly wish to do so, although, speaking generally, seed of Sweet Peas is so cheap that it is hardly worth while to trouble about gathering and storing at home. No special treatment is needed. You may let seed-pods form at any time, and gather them when they shrivel.—ED.]

A RARE AND BEAUTIFUL IRIS.

(IRIS GATESII.)

AFTER the excellent article on the "Culture of the Cushion Iris," with accompanying illustration of *Iris iberica*, which appeared in *THE GARDEN* on the 18th ult., the photograph of *I. Gatesii*, another member of the *Oncocyclus* section, may be of interest to any who intend to grow, or have already grown, any of these beautiful plants. The species, which hails from Armenia, should be included in every collection, as it is as easily grown as any other of the same section, while its flowers, which have a ground colour of creamy white, dotted on the falls and delicately netted on the standards with faint purple, are larger than any other of the same section. The plant illustrated possessed originally four flowers, instead of three, as in the illustration, a snail having destroyed one by eating through its stem during the night. The height of the flower-stems were nearly 2 feet. A good way to grow them where the soil is retentive of moisture is to lift them as soon as they have died down, which takes place shortly after the flowering period, and store them in dry sand till about November, when they may be potted up, using abundance of sand in the soil. Keep them in a cold house during the winter, during which time very little water is needed. When March comes, if weather permits, plant in their flowering quarters, sheltering with some light material if necessary during cold spells of weather, taking care they are not overgrown at any time by any other more vigorous plant near them.

Bathurst Lodge.

A. E. PORTER.

A BORDER OF HARDY FLOWERS.

THE border represented in the illustration was very effective during the latter end of June and the beginning of July. The idea was to make as effective a show as possible with large masses of a few very free-blooming plants. The narrow border on the left-hand side is composed of *Pentstemon Newry Seedling* and the yellow *Calceolaria*. These are raised each year from cuttings inserted in a cold frame during September, and are planted out the following April. Only a few *Calceolarias* are used along the edge to brighten up the *Pentstemons*. These two begin flowering in June and continue well into October. On the right-hand side the *Pinks* are very beautiful; they have been there about five years and are constantly increasing. The most striking *Campanula* used is *C. grandis*,

the clumps of which are from 6 feet to 8 feet across, while large masses of *Canterbury Bells* are also very effective. These want to be studied closely. There are all possible shades, with also some very pretty splashed forms. Not quite so readily seen in the picture is *Campanula persicifolia* in various forms. The *Roses* at the back are the common *Cabbage* variety. Among other occupants the border contains *Sweet Williams* in various shades (white, pink and red), *Delphiniums*, various forms of the *German Iris*, perennial *Asters* varying from 1 foot to 6 feet, *Solidago*, *Chrysanthemums*, *Meconopsis Wallichii*, *Aquilegias*, also various annuals such as *Godetias*, *Clarkias*, *Coreopsis*, *Larkspurs* and *Statice sinuata*. The border is rearranged every two years, owing to the number of strong-growing plants in it.

W. P. WOOD.

St. Peter's, Kent.

THE CULTURE OF VIOLETS.

SEASONABLE NOTES.

IN a sense the culture of Violets continues throughout the year, but in the beginning of September plants from the border are to be



A BEAUTIFUL IRIS FROM ARMENIA: I. GATESII.



A PRETTY BORDER OF HARDY FLOWERS IN A KENT GARDEN.

lifted for winter "blooming" under glass, and pot plants are taken into the greenhouse or sunny window for the same purpose. If there is a healthy Violet plantation in the garden, the plants of which have not been allowed to throw all their strength into runners, it is certainly advisable to lift some of them and encourage them to produce plentiful blossoms during the flowerless season of the year, when their fragrance and beauty will be most delightful. Supposing an empty frame to be at the gardener's disposal, let this be filled up with old hot-bed manure to within 12 inches of the glass, making the material rather firm so that it will not sink much afterwards. Upon this decayed manure 6 inches of good loam and leaf-mould should be placed, and I find it best to add a little road-grit and some pieces of charcoal, as the former keeps the soil in a friable condition and the latter mitigates the danger of its turning sour.

In this soil the lifted Violets are to be firmly planted 7 inches apart; their top foliage will then be about 2 inches below the glass when they are well established and the flower-buds will rise rather higher. It is essential for success that flowers and glass should be close together, as if more space is given leaf-production will be over-vigorous and the blossom harvest very scanty. Sometimes it happens, even when best measures have been adopted, that the buds grow too tall, so are injuriously pressed against the glass, but if a thorough watering is given to the soil it will be possible to press the plants down lower into it

without disturbing their roots. It is more risky to raise plants that are too low, yet this can also be done with care. A hand-fork should be thrust down beside each to its fullest depth, some good soil being piled up all around the plant, and, as the fork slightly lifts the plant, the left hand of the operator should press the soil firmly down, so as to fill up any space left beneath or around the roots. If all is made firm and a thorough watering is given then—not before the work—the lights being kept closed for a day, it is improbable that any of the foliage will suffer.

Plants lifted from the border can be potted, but this is not generally very successful, as Violets should be grown in pots from April plantings, and the pots be sunk out of doors in a shady place during summer. I have had plenty of good Violets during winter, however, by planting lifted plants in deep boxes of the suitable compost and ranging these on such a high shelf of the greenhouse that their foliage almost touched the glass. To grow free-blooming Violets in pots or boxes in a sunny window is quite possible, but best results are obtained by covering each plant with a small bell-glass.

The Violets planted in frames should not be watered again for a very long while; indeed, authorities state no watering should be done during winter; if they are kept moist, there will be few, if any, flowers. The frame should occupy a sunny position, failure often being due to having them in shade. It will be necessary to ventilate very freely, or sickness and insect pests will result, and I find that foliage sprinklings do good in dry spells of weather, especially when gales are blowing dust about freely. The plants must be protected from any touch of frost, so mats should be laid over the glass and also hung over the wooden sides in severe winter. A perfect soil for potting Violets consists of two parts loam to one each of river sand and leaf-mould; as many as six roots can occupy a 6-inch pot, and the plants will require watering occasionally, as pottery does not retain moisture as the earth or frame-bed would do.

Outdoor Violets are too often neglected, allowed to form runners and given no extra nourishment. Throughout summer they should be given liquid manure every second or third week, and if liquid cow manure is objected to, there are several chemical forms in which suitable food can be administered. Soot water can be alternated with other manures, such as those made of an ounce of guano in a gallon of water and a quarter of an ounce each of sulphate of ammonia, superphosphate of lime and sulphate of iron to two gallons of water. Outdoor beds can have supplies of liquid manure right up to the end of November.

Violets do not thrive on sandy gravel soils unless the borders are prepared first by a copious mixture of stiff loam and cow manure; a clay soil needs to be lightened by plenty of road grit, and the ashes from vegetable bonfires should be added to them as well as manure. Excellent

Violets can be grown at the base of fruit trees, because the manure given the trees will benefit them as well, and the partial shade will also be advantageous to their welfare.

LONG-STEMMED VIOLETS

are beautiful for dinner-table arrangements and bouquet making; they should never be gathered short and packed together in the tight market posy which used to be the only form for bunches of Violets. Double as well as single Violets can be cultivated well if the above rules are carried out, but it is seldom that the former thrive perfectly except in southern counties and sheltered warm gardens.

An old writer on this subject states: "White, dull red and deep blue scented varieties grow wild; there are also double white, red and dark blue garden sorts. The Parma Violet has very

COLOURED PLATE.

PLATE 1355.

POLYANTHUS PRIMROSES.

WHEN asked to write a few notes about these flowers one finds it is rather difficult. They are merely the result of careful selection and cross-fertilisation for a number of years. The ideal plant is one which throws up a good firm stem of sufficient length to carry the flowers well above the foliage and has sufficient bloom to furnish a compact head; the individual flowers should be round, of good size but not necessarily very large, I have measured some over 2 inches in diameter, but these are exceptional and perhaps too large; the colours should be clear and bright and the dark varieties should have a well defined and clean eye. They are essentially garden flowers, but how long they will remain so one cannot say. There is plenty of scope for the keen florist to devote his energies to them and then we might have a long string of named varieties. The increase by division of Polyanthus Primroses tends to weaken them, the little fibrous roots suffering considerably by the process. By far the best method is to raise a fresh lot of seedlings when the old plants have run their course; they need not, however, be destroyed after blooming the first time; if

planted in a sheltered position in good cool soil they will go on for several years. They are easily raised from seed and require little attention; the great secret of success, if one can call it a secret at all, is to give them good soil and a position sheltered from rough winds in the winter and from too much sun in the summer. Sow the seed in boxes or pans, keep them well watered and the seedlings should appear in about three weeks from sowing. Plant them out when strong enough about 10 inches apart. They are perfectly hardy, but if a few selected plants are potted in the winter they flower earlier under glass. W. A. WATTS.



SOPHRO-CATTELEYA WURNHAMENSIS VAR. J. M. BLACK. SHOWN BY R. G. THWAITES, ESQ.

(Natural size.)

light blue double flowers, exceedingly pleasing, will flower under a frame from October till spring. The Bruneau Violet has double flowers, with the outer petals dark blue, the inner ones mottled with white, red and blue. Some Violets have a greater tendency than others to commence flowering in autumn, and to continue, under favourable circumstances, throughout the winter. Such are the Russian and the Neapolitan Violets among the singles, and the double red, and the Champlatreux, double white, or Four Seasons Violet." There is always interest in learning olden ideas and methods of flower culture. E. D.

SOPHRO-CATTELEYA WURNHAMENSIS VAR. J. M. BLACK.

(SOPHRONITIS GRANDIFLORA × CATTELEYA AMETHYSTOGLOSSA.)

THIS is a very beautiful bigeneric hybrid of a distinct and novel shade of colour. The plant is of dwarf habit, and when exhibited on the 4th inst. bore a two-flowered scape, one flower only being expanded. The sepals and petals of the comparatively large flower are of a ruby red tone, the drooping tip of the acutely-pointed lip shaded crimson and carmine, the disc and throat deep yellow. This charming novelty was exhibited by R. G. Thwaites, Esq., Chessington, Streatham (gardener, Mr. J. M. Black), and received a first-class certificate.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

GREENHOUSE AND CONSERVATORY.—The present is an excellent time for potting up a batch of the beautiful sweet scented Freesias; the more popular variety of this plant is *Freesia refracta alba*.

In late August and September the potting up of the bulbs may take place. Suitable soil is light loam with the addition of a little well-decayed manure and plenty of sand. These soils should be well mixed and placed in 5-inch pots. Seven or eight of the larger bulbs, or nine or ten of the smaller ones should be arranged the same distance in the pots. After potting, they should be stood in a cold frame until growth begins, subsequent to which introduce them into the glass structure where a temperature can be maintained at from 45° to 55°. It is a good plan to remove the pots into the glass house in successive batches. If wanted in flower at Christmas they should be introduced into heat in the early part of November, maintaining the temperature at from 60° to 65°. Remove dead flowers and foliage from all plants in these structures. It is not necessary yet to place winter-flowering Zonal Pelargoniums under glass; they should be allowed to remain a little longer outside in a warm and sheltered aspect. As Hydrangeas go out of flower remove the old flower-heads, and where the plants are root-bound place them in pots of larger size. Embed the pots to the rim outdoors in some cool material, such as sifted ashes, coke breeze or Coconut fibre refuse.

Vegetable Garden.—For winter supplies we have just been lifting and transplanting a few young roots of a good form of Parsley. These, if planted out at the foot of a south wall, should provide a supply of this useful subject in the dull months of the year. Autumn Giant Cauliflowers that are now beginning to turn in will be benefited by an application of liquid manure, and this may be applied frequently until the crop has matured. Turnips sown some little time since should not be left too long before they are thinned out. Allot a square foot to each root if results are to be all that the grower desires. Celery is growing vigorously just now, and growth may be still further promoted by frequent applications of liquid manure. Where blanching has not already been done, plants that are ready should receive this attention now. We prefer to blanch Celery by wrappings of brown

paper cut in strips 6 inches in width. If this be bound round and tied securely, blanching will proceed apace, and the work may be expeditiously done. It may be necessary to draw soil just round about the stems to assist the blanching. Should the weather be dry at the time the earthing up is done where this method of blanching is not followed, the plants should have copious applications of water.

Hardy Flower Garden.—The beautiful Brompton and intermediate Stocks for next summer's blossoming may now be sown in an open position outdoors. Thin sowing is essential to success, and that the seeds may germinate satisfactorily water the ground before sowing the seeds, subsequently proceeding to sow thinly as

above suggested. Should the weather be warm it is a good plan to shade the quarters thus sown until the seeds give evidence of germination, which will not be very long. As soon as they are large enough to handle transplant the seedlings in a cold frame, or if preferred in a sheltered and warm border outdoors. Pansies are now providing an abundant supply of fresh young shoots with which to make cuttings. These should be detached about 3 inches in length, the lower leaves trimmed off and cut through immediately below a joint. If these cuttings be inserted in light sandy soil in the open border or in a cold frame and shaded from the bright sunshine, they will soon root and provide plants for the late autumn, or, what is better, fine tufts for planting out in their flowering quarters next March. These same subjects may be raised from seed at the present time, as these germinate very readily at this period. Useful little seedling plants may be pricked off before the hard weather sets in, from which we may anticipate a glorious display in late spring and early summer. We are still prolonging our display of Sweet Peas by removing spent blossoms and seed-pods, and in the case of the less vigorous shoots cutting back these to within 3 feet of their base.

Window Gardening.—Very pretty effects are secured at the present time from plants of the beautiful Clematis Jackmani that were shaken out of their pots and plunged in the end of the window-boxes. These have been trained round the window and have made a charming picture. Spent blossoms and decaying foliage should be rigorously removed from all plants in window-boxes to maintain them in health, and later on, as the growths of some of the more robust begin to run into the foliage, instead of into the flowers, we should be disposed to remove them and plunge other flowering plants that are in season in their place. Foliage plants arranged in the inside of the window need constant attention if they are to be maintained in health at the present time. A weekly sponging of the foliage contributes in no mean measure to their pleasing appearance and healthful condition. The plants should be turned round from time to time that their growth may not become drawn. Those who desire a winter display of the beautiful Roman Hyacinth and the Paper White Narcissus should make a planting of these subjects at the present time. Three or four of the former bulbs placed in 5-inch pots and three of the latter in 6-inch pots will give excellent results. They may also be planted in boxes 3 inches deep, and by these means will provide cut flowers for winter use. After potting, the pots and boxes should be placed in some plunging material and covered to a depth of 6 inches or 8 inches, until shoots are emitted from the crown of the plants fully an inch in length. They may then be removed from the plunging material and placed in a sunny window, where their progress should go on unhindered. Where it is intended to grow Hyacinths in vases of water, the present is a

good time to place a few of the earliest bulbs in position. The vases should be stood in a dark cupboard until roots have formed. D. B. C.

PROPAGATING EVERGREEN SHRUBS BY CUTTINGS.

EVERGREEN shrubs in great variety are increased by varying methods, each of which has something to commend it. At the present time we are in a position to propagate some of our choicer evergreen shrubs by means of cuttings, and should take advantage of the opportunity to raise a stock of the different subjects by these means. In the present instance we will deal with just two subjects. The first is that of the popular Box tree, botanically known as *Buxus*. This is a hardy evergreen with ornamental foliage. Of this hardy shrub there are two species cultivated, and the height varies from 6 inches to 20 feet. The character of the plants is pleasingly varied, some being green, while others are golden or silver variegated, each having a beauty peculiarly its own. They are not fastidious as to soil, but will do well in any good garden soil that has been well tilled. The Box may be propagated by cuttings of young shoots in August and September, this being the generally recognised time for the work. Cuttings should be made from young shoots such as are depicted in Fig. 1. Here, it will be observed, the growth is vigorous, giving evidence of the fact that there are suitable shoots from which we may safely anticipate good results. These same shoots should be shortened to about 3 inches and the lower leaves trimmed off, in which case we have ready for use ideal cuttings, from which we may expect a satisfactory rooting process.

The illustration in Fig. 2 shows the cutting properly prepared and ready for insertion in prepared quarters. Readers will note that it is cut through immediately below a joint, from which the roots will be emitted. Such cuttings should be inserted in the shady border in rows 3 inches apart, and each individual shoot 1 inch or 2 inches from its neighbour. In Fig. 3 we give an illustration of a few cuttings inserted in light sandy soil in the shady border above referred to. It is important to remember that the soil should be pressed firmly at the base of each cutting, otherwise they will fail to root and our labour will be in vain. Under no circumstances should these plants be coddled, as they are quite hardy.



1.—SHOOT OF BOX TREE SUITABLE FOR A CUTTING.



2.—THE SAME SHOOT READY FOR INSERTION.



3.—CUTTINGS OF BOX INSERTED IN A BED OUTDOORS.

in hand, the interest in raising plants by these means will doubtless prove fascinating.

SOWING WINTER ONIONS.

It frequently happens that the sowing of these plants made during the early part of August partially or even totally fails, as the weather often experienced during that month is very hot and dry, and not at all conducive to the growth of small seedlings. Where such failure has been experienced, there is still time to make another sowing, providing the work is done at once. A bed of fine soil must be prepared, and it is best to sow in flat-bottomed drills 1 inch deep and 1 foot apart, watering each drill thoroughly before sowing the seeds if the soil is at all dry.

The seeds may be scattered more thickly than is advisable for spring-sown crops, but even at the autumn sowing it is well to be sparing with the seed. As soon as the plants are well up, much good will be done by running a Dutch hoe between the rows, thus keeping down weeds and allowing air free access to the roots. Although transplanting in spring is successfully adopted by many growers, the best results are obtained from plants set out the latter end of October. These generally get well established before very severe weather is experienced, and will usually produce larger bulbs than those moved in the spring. In addition to the Giant Rocca and Tripoli the White Lisbon is an excellent variety for sowing now, and its bulbs are of decidedly better quality than those of the two first-named sorts.

WORK IN THE HERBACEOUS BORDER.

The aim of every gardener, whether amateur or professional, should be to retain the herbaceous border in as bright and floriferous condition as far into the autumn as possible, and although a great deal will naturally depend upon judicious arrangement and planting at the outset, much may be done to prolong the floral display and make the most of the plants, even at this late date.

Where annuals have been used for filling up spaces not occupied by permanent subjects, they will probably by this time be nearly over and their removal imperative. Such removal naturally means blank spaces, and the beginner in gardening will probably be puzzled over the task of filling them so as to maintain the border in at least presentable condition for a few weeks longer. Fortunately there are a few subjects that lend themselves to removal at this period, and foremost among them come the early-flowering Chrysanthemums. This race of our favourite autumn flower has been so much improved in colour, form and habit during recent years, that with these alone any blanks in a border may be filled without any fear of monotony.

Where a good supply of these plants has been grown in the reserve garden it will be a comparatively easy matter to remove them to the places where they are required to flower. It is a good plan to tread the soil firmly round each plant to be moved a few days beforehand, then one evening give each plant a good soaking of water at the roots and lift and transplant the next evening. Before lifting the plants, however, holes must be prepared for their reception, as it is imperative that a good ball of soil be retained intact with each plant. Each hole should be at least 9 inches square and the same in depth. In moving the plant cut round it at least 4 inches away from the stem with a sharp spade, thrusting the tool in to its full depth, then lift the plant bodily out and carry it on the spade if possible to where it is to flower. Of course where a large number of plants have to be dealt with and conveyed any considerable distance this method would take far too long, and a truck or barrow will have to be employed. The great thing, however, is to avoid disturbing the soil that is in immediate contact with the roots.

When the plant is placed in the hole fill up any cavities round the roots with fine soil, tread

the whole firmly and then give a thorough soaking with clear water. This will settle the soil among the roots, and the plants will suffer little by removal. The soil must be kept moist for a week or two until new roots have been formed. African Marigolds also lend themselves well to this treatment, and last season the writer successfully removed a number when in full flower. Dahlias may also be removed when in flower, but more care is needed with these, it being necessary to syringe the foliage daily for some days after removal. Where old specimens of Coleuses, Fuchsias, Celosias, Geraniums and similar subjects are available in pots these may be successfully employed to fill up gaps for a few weeks previous to the advent of serious frosts.

The perennial Sunflowers, Chrysanthemum uliginosum, Michaelmas Daisies and similar plants will now be giving us their flowers in abundance, and where it has not already been done mulching, staking and thinning the growths should be attended to at once. Michaelmas Daisies especially pay for a 4-inch thick mulching over the roots with well-decayed manure, and copious supplies of water will do much good where it is possible to apply them. Any growths that are too weak to give good flowers should be cut clean out and those that remain staked out so that each has room to develop properly. Several shoots may be loosely looped up to one stake, taking care to avoid the tying up in tight bundles so often seen, and which does more harm than no tying at all. Any stems of herbaceous plants which have finished flowering and are at all shabby should be removed and burned, as once the leaves have turned brown they are of little use to the plants. H.

WINDOW AND ROOM PLANTS.

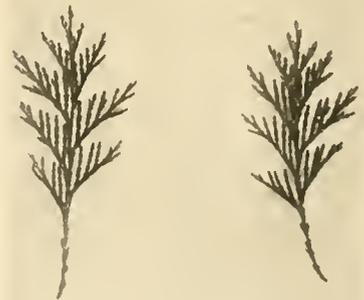
With the approach of shorter and cooler days less water will be required by the general run of plants used for room and window decoration, and much good will be done by paying particular attention to this item. As much light as possible should be afforded the plants now, this applying even to Ferns, and an abundance of air without excessive draughts will do much towards ripening up the growths for the winter. The foliage of plants treated thus will be much hardier and far more suitable for withstanding the rigours of winter than those that have been coddled and kept away from the light. Generally speaking, feeding must soon cease, using only clear water. All foliage plants must, of course, be sponged at frequent intervals to free them of dust that is sure to accumulate. Geranium and Fuchsias will derive much benefit from standing outdoors during the daytime in September, taking care, however, not to stand them direct from a more or less shaded room into bright sunshine.



4.—SHOOT OF CUPRESSUS FROM WHICH CUTTINGS CAN BE PROCURED.

The other subject we propose to deal with in the present instance is one of the beautiful conifers. This is known as the Cupressus, and the variety illustrated in Fig. 4 is the well-known *C. lawsoniana*, and there are few more interesting members of this family of shrubs. Unlike many other conifers, this subject does extremely well in town and suburban gardens, and does not seem in the least particular as to its aspect or the soil in which it is cultivated. We know of plants used as a screen in the front gardens of many of our suburban residences with an eastern aspect, and we also know of the same subject used as an individual specimen growing in the centre of a lawn in some of the smaller gardens, in the rear of houses of a London suburb, with a warm aspect.

This Cupressus may be raised from cuttings procured from a spray such as is represented in Fig. 4. Here will be seen a shoot on which are numerous little branchlets 2 inches or 3 inches long, which make ideal cuttings. The little branchlets may be torn off with what is known as a "heel," which is really a small portion of the main stem adhering to the branchlets. We prefer, however, to make cuttings such as are represented in Fig. 5. Here, it will be observed, the lower pieces have been trimmed off and the stem cut through immediately below a joint. These little pieces should root easily and readily if prepared in the manner we have described. As we said before, the cuttings should be about 2 inches long, and be inserted in sandy soil made up in a cold frame. Those without a cold frame may, perhaps, have a spare hand-light or a bell-glass with which to cover the small bed of prepared soil in which these cuttings may be inserted. They must have protection, however, as these plants are less hardy than some of the other evergreen shrubs with which most gardeners are familiar. September and October is the period during which the propagation of the Cupressus by cuttings should take place. This will, therefore, enable readers to prepare their cold frames with special beds of soil, so that the cuttings and everything may be dealt with at the proper time. The surface soil must contain plenty of sand; the cuttings inserted about 2 inches to 3 inches apart, and in the rows 3 inches apart. Special care must be taken to press the soil firmly at the base of each cutting, in order that the soil may adhere to the roots and thus ensure a satisfactory rooting process. The cuttings should be watered in as soon as they are adjusted in position, and the frame-lights or hand-lights kept close for a time while rooting takes place. Many lovers of gardening feel more than ordinary interest in plants and shrubs raised by themselves, and, as this is a somewhat unusual thing for a beginner to take



5.—SIDE SHOOT FROM FIG. 4 PREPARED READY FOR PLANTING.

THE TOWN GARDEN.

ROSES ON WALLS.—Although Roses are not usually regarded as satisfactory plants for cultivation in town gardens there are one or two extremely vigorous varieties which thrive fairly well, provided that they receive proper attention. Failures are generally ascribed to lack of fresh air, and no doubt this is the principal cause, but in the case of plants on walls and arbours neglect of watering accounts for many, for the plants grow weakly, and when they are attacked by green fly or other pest they suffer far more than they would do if they were in robust health. A satisfactory condition can only be ensured by paying close attention to watering, especially in the direction of giving abundant supplies, and also in the judicious use of weak liquid manures. Before the soil about the roots becomes as dry as dust it should be heavily watered, and if it is thought that liquid manure will prove advantageous, apply it a few hours later. For some time it will not be wise to tread upon the soil at all, but as soon as the surface becomes dry enough to warrant it, loosening should be carefully done with a fork, and if it is possible to spread on a dressing of long manure so much the better, as it will convey a little food to the plants and at the same time conserve the moisture in the soil. If the plants are infested with any insect pest, turn the full force of the nozzle of the hose upon them occasionally in the evening.

WEEDS.—The most attractive aspect of the flower garden will soon, alas! be on the wane, but this is no excuse for the neglect to which it is sometimes subjected. Of course, it is still holiday time with many people and they have then some excuse for having a few weeds in their gardens, but I have seen others of late which were decidedly dirty and the owners had not been away. This is never permissible. If the weeds are not sufficiently numerous to affect the present plants, they will reduce the prospects of success with those that are to follow them, for they are always taking food out of the soil which should go to the legitimate crops and not to the robbers and interlopers. Do not begrudge the time devoted to keeping the garden perfectly clean, as it is well spent and generously repaid.

THE LAWN.—The grass plot is a constant source of pleasure to its owner, even though it does cause him many hours of worry and hard work to keep it in satisfactory condition. At this time of the year the principal work lies in watering abundantly and in cutting, while next month it will be necessary to put in hand the work of renovation, so as to leave all well for the winter. Mowing and rolling should proceed regularly, according to necessity, as these operations favour a close, firm turf. If there are bare patches, such as usually occur on small areas, seeds should be purchased from one of the several firms of high repute advertising in THE GARDEN ready for use as soon as it is required. The work of renovation should commence about the middle of September. In those places where the grass is simply thin it may suffice to scratch them over with an iron-toothed rake, and subsequently scatter seeds rather thickly on the loosened soil, afterwards beating or rolling down very firmly. Where, however, the patches are bare it will be advisable to thoroughly loosen the soil, incorporating with it some sweet manure and then working it down until it is quite as firm as the surrounding ground. When this is completed rake it and sow the seeds, covering with fine soil and rolling in as before. The new grass should not be cut with the machine in the ordinary mowing for a short time, but dealt with by the aid of shears or a scythe, either instrument being used having the keenest possible edge; the ordinary rolling of the whole of the lawn will assist materially in improving the newly-moved areas.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

SOUVENIR DE LA MALMAISON CARNATIONS layered in July should now be ready for severing from the parent plant. The best method is to sever them with a sharp knife and then in a day or two lift them up carefully and place in small pots—3-inch or 4-inch—according to the size and variety. Use soil composed of good loam, sand and leaf-soil, and bone-meal or Carnation manure and a small quantity of Velthea, after which place the pots in a frame or low span-roofed house, and shade for a few days till the plants have become established. Water very sparingly and spray with Carvita or some fungicide in order to prevent an attack. Old plants that have been potted up for providing large plants next season should be watered most carefully and have plenty of air.

Primulas, *Cinerarias* and similar plants should be potted into larger pots and stood on a cool bottom. Prick out *Calceolarias* into pans or seed-boxes, the former for preference, as they are cooler than boxes. Ferns should now have a somewhat drier atmosphere.

Plumbago rosea ought to have the points pinched out once more to ensure charming plants in the autumn. Afford them a little soot water occasionally.

Freesias.—If these are not at hand, they should be secured and potted at once, as they are much better when started early, so as to have a long season to grow in. Seven to ten bulbs are not too many for a 4½-inch pot.

FRUITS UNDER GLASS.

Late Grapes.—If it is desirable to have Grapes over as long a season as possible, they must be thoroughly ripened, and if the nights are cold a little more fire-heat must be given, especially to *Muscats* of *Alexandria*. The late lateral growths must be removed regularly, so that they do not obstruct the light and air. The borders must have a sufficient supply of moisture. Manure should not be used after the Grapes are ripe.

HARDY FRUIT GARDEN.

Autumn-fruiting Raspberries must be afforded water, and the canes thinned in order to strengthen those left for fruiting. As soon as the fruits show signs of ripening nets must be placed over them, or birds will soon eat them.

Fruit Gathering.—All fruits should be gathered at this season as soon as ripe. Early fruits do not improve by being kept. Water trees that are carrying heavy crops, going over the trees a second time so as to enable the water to soak in. Remove the nets from Cherries and Gooseberries, and clean the ground from weeds. Stir the ground with the hoe. Nail all growths of Pear and other trees to the walls. If nailed in position now they can be finally arranged with much more effect in the winter; but if not done now the wood becomes old and tough and cannot be got into position without much trouble and, perhaps, many broken shoots.

KITCHEN GARDEN.

Cabbages and Cauliflowers.—The last sowing of Cabbages should have been made by this time, and, if the earliest sowings have got too far advanced to stand the winter, the later sowings will come on and do well. These plants are quite early enough if planted out in the first or second week in October. A small sowing of Cauliflowers of several successive varieties, such as *Purity*, *Favourite*, *First Crop*, *Magnum Bonum*, *White Queen* and *Universal*, should be made now.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

MIGNONETTE for flowering at midwinter should be sown at once, using 3-inch pots for the purpose, and a mixture of loam, leaf-soil, well-powdered lime rubble and sand. A little well-decayed manure mixed with it will be beneficial. The seeds should be sown thinly, and the seedlings finally thinned to three plants in each pot. Put the plants close up to the glass in a cool, well-ventilated pit.

Kalosanthes.—As these go out of flower select those that are worth saving for another season, and cut back the growths to within 2 inches or 3 inches of the base in the case of the young stock. Older plants do not require such severe pruning. Place the plants when cut back in a cool, airy frame, and keep rather dry at the roots until growth begins, when the balls of soil should be reduced so as to enable them to be placed into the same size pots again. Cuttings may now be inserted, putting four to six in a 3-inch pot, subsequently transferring them without dividing into 6-inch size.

THE FERNERY.

Remove shade from the glass, but before doing so endeavour to harden somewhat the growth of the Ferns by reducing the supply of water to their roots as well as the moisture previously occasioned by syringing their surroundings.

HARDY FRUIT.

Strawberries.—Newly planted Strawberries have had a rather trying time, as there have been few showers to help them on, and artificial watering never appears to do so much good as one would wish from the amount of water used. The greatest help appears to be given by keeping the surface open. Use the Dutch hose and keep the runners cut hard back.

FRUITS UNDER GLASS.

The Early Vinery.—Too often Vines are sadly neglected once the crop is removed. Borders filled with roots should not be allowed to become dry; indeed, occasional applications of manure, either artificial or natural, will enable the Vines to store up material for a vigorous start in the new year. Superfluous laterals should be checked early, shortening the fruiting laterals gradually, so that the basal buds may derive all possible benefit from autumn sun.

KITCHEN GARDEN.

Spring Lettuce.—This is a very important crop, and in many gardens it is needed in quantity. No matter how carefully plants are treated when sown in heat, they fail to turn in so soon as those sown in autumn. Now is a good time to sow for keeping through the winter. Many sow on a warm south border, but this I do not advise. I would recommend an open quarter for winter Lettuces, and sow sufficiently thin to give each plant room to develop. There is no need to be too niggardly with the room. Far better give a bed or beds double the size than cramp the seedlings. Cabbage Lettuces are the most serviceable, as they stand frost well and turn in earlier than the *Cos* varieties, which are valuable for a succession.

FLOWER GARDEN.

Lavender.—No flower garden is complete without its Lavender bushes. Fortunately, it grows freely in almost any kind of soil, and old bushes continue to give a display for many years; but when they get old and straggling they are easily converted into young dwarf bushes again, as even good-sized branches cut off and planted deeply in the soil root freely, and soon form flowering plants again. In any garden a few good-sized bushes are decidedly ornamental, and the flowers are always acceptable.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

A SEEDLING CARNATION FROM KEIGHLEY.

Mr. F. White, Cemetery House, Keighley, sends flowers of a beautiful deep crimson seedling Carnation, the flowers of which are large, possess good calyces and are very fragrant. He writes: "I am sending for your table a few blooms of a Carnation which I raised three years ago from seed supplied by Mr. James Douglas. The plant is a strong grower and blooms very freely. From a layer planted last October I counted fifty blooms and buds. It rarely bursts its calyx."

DELPHINIUMS AND HEATHS FROM SCOTLAND.

We have received from Dr. McWatt, Morelands, Duns, N.B., a most interesting series of Delphiniums and Heaths; of the latter no less than thirty-five forms. The Delphiniums are exceptionally fine, but as they are under numbers we cannot refer to them individually. All we can do is to congratulate the sender on varieties of such beautiful colouring and strength of spike. We must thank Dr. McWatt for the collection of Heaths, a family we take the greatest interest in; they deserve far more extended culture.

COLLECTION OF INTERESTING AUTUMN-FLOWERING SHRUBS FROM MESSRS. J. VEITCH AND SONS, LIMITED, KING'S ROAD, CHELSEA, S.W.

It will interest our readers to know which shrubs are very beautiful at this time of the year, when more attention should be paid to those that bloom at this somewhat dull season. One of the most beautiful things of all sent is *Eucryphia pinnatifolia*, which reminds one of a very beautiful white single Rose. It is one of the loveliest shrubs we know of. Another very beautiful plant sent is *Astilbe Davidii*. It is one of Messrs. Veitch's introductions through their collector Mr. Wilson. The colour is exquisite. When the plant is good, one sees a sea of mauvy purple. We like to see it by a lake side. The other plants sent are as follows: *Colutea arborescens*, *Hypericum Androsæum*, *Hydrangea mandschurica*, *Amorpha canescens*, *Buddleia variabilis veitchiana*, *B. v. magnifica*, *Corylus purpurea*, *Hedysarum multijuga*, *Sambucus canadensis*, *Hypericum kalmianum*, *H. floribundum*, *Indigofera floribunda*, *Fuchsia americana elegans*, *Cornus alba Spathii*, *Polygonum baldschuanicum* and *Potentilla Friedrichsonii*, all of which are of great interest.

GLADIOLI FROM MESSRS. KELWAY AND SONS.

It is a pleasure each autumn to receive a boxful of the new hybrid Gladioli from Messrs. Kelway and Sons of Langport, Somerset, who have done more to popularise these flowers through their beautiful introductions than any one we know of. Among the most beautiful sent on this occasion were Mrs. J. M. Skittery, a noble spike with flowers a soft sulphur yellow, the lower segment marked with crimson: Duke of Richmond, rose, with central line of white down each segment, the spike of great height and strong growth; Hawick Pageant, another

brilliant flower, scarlet, with half the lower segment creamy white; Esser, a very large flower of almost a self scarlet, with a central line of white down each segment. Kelway's White: We have seen this on previous occasions, and it is the most beautiful Gladiolus in existence. The flower is pure white, except for just short stripes of scarlet colour in the centre. We congratulate Messrs. Kelway on having raised such an exquisite flower.

VIOLAS FROM OLD SOUTHGATE.

A correspondent at Old Southgate, signing himself "An Old Reader," sends beautiful flowers of the Tufted Pansies. The blooms are large, of excellent form and colouring, and for so late in the season are admirable in every way. He writes: "I am sending you a few of our Violas for your table. We have them all named, but will not bother you with these, as I dare say you are acquainted with most of them. We take cuttings of same in October, keeping them in a cold frame and planting them out in early spring under Roses in beds, where they are grand, making a nice carpet for the Roses."

A RARE CAMPANULA FROM STEVENAGE.

Mr. Clarence Elliott, Six Hills Nursery, Stevenage, Herts, sends flowers of the pretty little *Campanula Zoysii*. He writes: "I am sending for your Editor's table a few blossoms of the rare little *Campanula Zoysii*, which is just now in flower on my rock garden. I consider this and *C. pulla* the loveliest of all the very dwarf bell flowers. *C. pulla*, with its low slender stems, arched at the neck and bearing solitary bells of a glorious deep glossy purple, rather large for the height of the plant, flowers in June, July and August, according to locality. I find that it flourishes in yellow loam, with sand and some humus added. A drift of this *Campanula* several feet across is very lovely indeed. *C. Zoysii* flourishes in the same soil. Its height is 2 inches to 3 inches. The blossoms, which are tubular and about three-quarters of an inch in length, are of a soft delicate blue and most curiously and beautifully puckered together at the mouth, quite unlike any other member of the family. This odd puckering of the flower is rather suggestive of a *Kalmia* blossom. It is a rare, very choice gem for the rock garden."

CARNATIONS FROM NORTH WALES.

Mr. Watts sends from Bronwyfa, St. Asaph, North Wales, beautiful blooms of Carnations, among them being The Master, a very fine scarlet; Mrs. Kearley, blush; George Maquay, one of the best whites we have for the open garden; and John Guy, yellow. One of the most notable things about these Carnations is their delicate scent and strong growth, and the flowers do not burst their calyces.

LEGAL POINT.

Master and Servant (Regular Reader). A head or sole gardener, unless expressly engaged "by the week," is entitled to one month's notice or one month's wages in lieu of notice. As regards what occurred prior to notice of dismissal, for we presume you treated it as such, the £2, in our opinion, amounted to a personal present from one who was a stranger to the contract of service, and the temporary arrangement interfered in no wise with your established engagement, which ran on in the ordinary way. If your master had made it clear that your work and remuneration there had to be in lieu of your wages with him, and you had assented to it, there would have been something in your master's present contention. The proper tribunal for enforcing a small claim of this kind is the county court.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Rock garden (Puzzled).—It is not at all an easy thing to say what might be done in the way of a rock garden without seeing the spot itself, and it would depend greatly upon circumstances and what you desired to spend in the erection of the structure as to what may be eventually accomplished. So far as the position is concerned—altitude and the like—the spot is an ideal one, and apart from this everything resolves itself into the single item of expenditure. You say nothing about stone in your near district, whether difficult to obtain or otherwise. Limestone or sandstone are both good for the purpose. The interesting series of photographs sent reveal, so far as we can determine, a flat area, and the cheapest and simplest way, when you have determined the extent of the proposed rockery and roughly fashioned its outline, is to erect a bank of earth and out of this form your rockery. A rockery is possible in almost any position the garden affords, but for the cultivation of good alpine should not be in the near vicinity of trees, which would quickly rob the soil. A selection of plants could be made for any position, but the structure should be arranged with a view to growing certain plants.

Fernery (M. F. W.).—If the bank has long been occupied by the Rhododendrons, your best plan will be to dig it all over and give a light dressing of manure. By digging the soil deeply and adding manure as above, it should then grow the ordinary Ferns quite well, while the addition of leaf-soil and loam would materially assist matters. This done, you must sink your blocks of stone two-thirds their depth in the soil of the bank, and in such a way that the flat surface of the stone will act as a receiver for the plant for the washed-down soil and for moisture. Avoid placing the stones like almonds stuck into the top of a cake, but deeply bury them in the soil, so that the Fern roots will presently get into contact with them. In this way, and by planting the Ferns not too erect, the bank may soon be furnished. Avoid all formality in the setting of the stones. If the bank is very steep you must set the stones with a view to retain the soil in position. Any arrangement for the Ferns will naturally depend upon the size of the plants and the varieties you intend employing. The work may be undertaken during autumn or winter, planting being done while the Ferns are still dormant.

How to propagate *Anehusa italica* (Mrs. Gurney).—If you desire to increase any variety of the above-named plant, there is no better way than by root cuttings. The species and its varieties produce seeds, but the plants from these do not come true, hence the value of the root-cuttings. The best time to take the work in hand is from November to the end of January. At this season lift the plant and detach a few of its larger roots, cut them into lengths of from 1 inch to 2 inches, and arrange them around the

interior of a well-drained pot in very sandy soil. A greenhouse temperature of 45° or 50° will suit quite well. Beyond a good watering at the start not much water should be given till growth is apparent at the apex of the root-cuttings. When the cuttings are in free growth transfer them to boxes or pot them singly in readiness to plant out, an operation best done in April or May. The stature of the original plant will be somewhat reduced by the treatment referred to, but the plant, as well as the best of the root-cutting plants, will flower the same season. You might also try dividing the plant when you have lifted it, and by potting the divisions and giving cold frame treatment for a few weeks good established plants would be assured for planting out in due season.

Cutting down Delphiniums (*A. H. P.*).—To induce a second flowering it would be necessary to cut the stems of these plants down to near the ground level, the second flowering depending upon the starting into growth of the latent eyes or buds at the base of the first flower-stem. These secondary spikes, however, are rarely of good quality, and it is a moot point whether much or anything is gained by the second flowering. *D. Belladonna* is, however, a notable exception, and this beautiful plant frequently flowers twice and sometimes thrice in one season, the growth being well nigh perpetual in this case. It is, as perhaps you are aware, a rather dwarf-growing plant of about 3 feet, the colour being a clear and beautiful deep sky blue.

Flowering climbers for a very shady position (*Miss A. C.*).—There are no flowering climbers that would be likely to give satisfaction in such a position as that indicated by you. Such being the case, it will be necessary to fall back on climbers with ornamental foliage, such as the Dutchman's Pipe (*Aristolochia Sipho*); the Virginian Creeper (*Vitis Ampelopsis* hercarea); *Vitis Thunbergii*, a handsome large-leaved Vine; *Vitis vinifera aitifolia* (the Parsley-leaved Vine); and *Actinidia chinensis*, a rapid-growing climber with large, heart-shaped leaves. These are all deciduous, and if you want evergreens the only plants likely to succeed are some of the quick-growing *Ivies* such as *canariensis*, *dentata*, *amurensis* and *negrieriana*.

Plants for stony bank (*Miss A. C.*).—The following subjects would be likely to give satisfaction under the conditions named by you. Herbaceous: *Achillea Millefolium rubrum* (red-flowered Millfoil); *Acanthus candelabrum*, handsome foliage; *Bocconia cordata* (Plume Poppy), noble foliage and panicles of creamy white flowers; *Crambe cordifolia*, large, roundish leaves and loose heads of small white flowers; *Echinops* of sorts, Thistle-like plants, with globular heads of blue flowers; *Eryngium* of sorts, handsome foliage plants, while the roundish heads of flowers are in some kinds of a beautiful metallic blue; *Elymus glaucophyllus*, bluish leaved Grass growing from 3 feet to 4 feet high; *Euphorbia Cyparissias*, *E. pilosa major* and *E. Wulfenii*, different forms of the Caper Spurge, all of a greenish yellow tint; *Ferula gigantea*, a gigantic member of the Fennel family; German Irises of sorts, a most accommodating class of plants; *Polygonum cuspidatum* and *P. sachalinense*, two noble forms of Knotweed, but of far too aggressive a nature to associate with delicate subjects; *Phalaris arundinacea variegata* (Gardener's Garters), a well-known variegated-leaved grass; *Sedum spectabile* and its deep-coloured variety *atropurpureum*. Of shrubs the following can be recommended: *Colutea arborescens* (Bladder Senna) and varieties; *Atriplex Halimus* (Sea Purslane); *Berberis vulgaris* (common Barberry); *Caragana arborescens*, yellow flowers in spring; *Broom* of sorts; *Cistus* in variety; *Helianthemum* (Rock Rose) of sorts; *Lycium europaeum* (Box Thorn); double pink-flowered Bramble; *Rhus Cotinus* (Venetian Sumach); *Spartium junceum* (Spanish Broom); and the common Furze with its double-flowered variety. The *Periwinkles*, too, must not be omitted. The genus *Iris* is such an extensive one that no hard-and-fast rule can be applied to them all, but that set of garden forms known popularly as German *Iris* will succeed and flower fairly well in the shade.

ROSE GARDEN.

Yellow Rose for standard

 (*B. W.*).

(1) We think you would find *Bouquet d'Or* or *Billiard et Barré* a good sort for the position named. (2) You could not do better than plant *Frau Karl Druschki* for a white, and especially as a standard. As the position is somewhat shaded, you would find *Hugh Dickson* a more satisfactory Rose than either *Liberty* or *General Jacqueminot*. *Commandant Felix Faure* would go very well with *Liberty*. (3) *Caroline Testout* is the best pink for your other bed. We should suggest *Pharisæer* or *Gustave Grünerwald* instead of *Mrs. John Laing*. The other sorts would do well, although *Mrs. Sharman Crawford* is badly addicted to mildew. *Mme. Edmée Metz* would be a better Rose. (4) A good

white Rose for an arch would be *Mme. Alfred Carrière* and *Grüss au Zabern*, the first perpetual flowering and the other flowering the end of June. You could plant the two together. (5) *Climbing Frau Karl Druschki* is quite a disappointment. It will not climb any more than the ordinary sort. The white *Dorothy Perkins* will be fine to plant when it is commoner. (6) You could transplant the *Grüss au Teplitz* if you choose a time after a good rain in October, and lift it with a good ball of earth, having previously prepared its new position. (7) *Maggie Mott* is one of the best mauve *Violas*.

Roses for Rose arbour (*E. H. Dupe*). There would be no objection in steeping the Larch poles in creosote, but we think if you steeped 3 feet of the ends that go into the soil, this would be sufficient. Charring the ends is a good plan in order to preserve the poles. As to the varieties to plant, seeing that you desire them to flower at the same time as *Dorothy Perkins*, you should certainly plant the *White Dorothy*, and *Hiawatha* would be another beautiful sort. *Aimée Vibert* is a grand old white, and *Longworth Rambler* and *Grüss au Teplitz* should fulfil your requirements if you encourage good growth by trenching the soil. *Climbing Cramoisie Supérieur* would also be good. *Lady Gay* is equally as good as *Dorothy Perkins*, in fact it is superior in quality of blossom.

W. A. Richardson not blooming (*J. A., Kilmarnock*).—We should advise you to refrain from pruning these vigorous shoots next spring. Nail them out in a palmate fashion on the wall and shorten back any laterals to 3 inches or 4 inches. In order to assist the ripening of the strong growths you could pinch out their points by the end of September. This Rose does not require much pruning beyond shortening laterals and removing old worn-out growth now and then.

Rose Bessie Brown not opening (*M. P. P.*). This Rose has a very bad character as a garden variety. It is really only an exhibitor's flower. When seen so fine at the exhibitions such flowers have been protected with shades and the weak-necked specimens tied up to sticks. This drooping of the blooms is a very serious defect, and it is too double to expand well. If you have some shades put them on sticks and place over your blooms, and we have no doubt they will expand if you give them time. There are Roses now to be had far more satisfactory than *Bessie Brown*. Try such superb sorts as *Pharisæer*, *Joseph Hill*, *Königin Carola*, *Florence Pemberton*, *Mme. Jules Graveaux*, *Melanie Souper*, *William Shear*, *Mrs. Myles Kennedy*, *Jenny Gilletot*, &c., and we think you can well dispense with *Bessie Brown*, unless, of course, you are an exhibitor, then you will want it.

FRUIT GARDEN.

Plum tree leaves diseased

 (*Cuddon*).

The Plum tree, the leaves of which have a silvery appearance, is attacked by the disease known as silver leaf. The cause of this disease has been recently shown to be a fungus, namely, *Stereum purpureum*, the mycelium of which grows in the plant for a considerable time before the fungus produces any fruit. The fungus fruits are produced upon old and dead stems, and the spores which these fruits bear are capable of reproducing the disease. It is therefore necessary that all dead shoots and branches of trees that are attacked should be removed and burnt as soon as possible. No certain cure is known when once the tree is attacked, and it is probably just as well in view of this to cut out all parts at once which show the silvery appearance on the leaf, though good results have followed the use of iron sulphate crystals put into a hole bored in the trunk it is said, and this possible remedy is worth a trial.

Peach leaves falling (*H. G. S.*).—There is no doubt, we think, that watering with sewage water and with chemical manure previously is accountable for the dropping of your Peach leaves. Both want handling with great care and to be used only in a very weak and diluted form.

Plum tree dropping its fruit (*H. R. P.*).—The Plums which are dropping have soft stones, the result of imperfect fertilisation. We hope enough will remain on to make a crop. Japanese Plums have not proved satisfactory in this country. We advise you to bend the tree down next March and graft the stock with a variety named *Reine Claude de Bay*, a very hardy, heavy-bearing Green Gage. Cut back all the shoots badly

affected with blight, but you must not cut them too low; leave at least twelve leaves from the base on each shoot.

Strawberries gone black in the stem (*J. M.*).—An attack of mildew, we think, is accountable for the destruction of your Strawberry crop. The plants being more or less weakened by the setting of a heavy crop and by the scorching hot weather we have had, would help to make them easy victims to this malady, which often attacks one variety, leaving others alone.

Vines and Tomatoes (*Beginner*).—If you wish your Vines to carry Grapes next year, you must not cut back the shoots or laterals, that is, the season's growths on them, as you suggest; but you may pinch the points of each shoot out beyond the fourth leaf, also any small shoots that may have broken out from them. Unless these shoots become strong and stout and have good leaves they will not create strong buds to carry fruiting shoots next year. If you care most for the Tomato plants below the Vines, then cut away the Vines as you wish. All depends on which is to you the most important. It is very unfortunate that the Tomatoes are in such a position, as to ripen them properly they need all possible sun and air.

KITCHEN GARDEN.

Tomato leaves diseased (*R. T.*).—The Tomato leaves are attacked by the fungus *Cladosporium Tomato*, causing the disease known as Tomato leaf rust. This may be checked by spraying the plants with a solution of potassium sulphide, made by dissolving 1 oz. of the material in 3 gallons of water, or with diluted Bordeaux Mixture. When, as in this case, the disease has existed for some years, the spraying should be commenced before the disease appears.

Tomato fruits decaying (*J. R.*).—The Tomato fruits are decaying through the growth of the fungus, *Botrytis cinerea*, upon them. This is an exceedingly common fungus upon all sorts of dead and dying plants, and in the present case the opportunity to attack the fruits has probably arisen from the exceedingly moist conditions you describe under which the plants have been grown. The Tomato does not succeed well under very moist conditions. The frequency with which manure has been applied seems excessive, and this, too, would probably make the plant more susceptible to fungus attacks. The remedy lies in attention to the points indicated.

Tomatoes diseased (*H. M. C.*).—The Tomatoes are attacked by the fungus which causes the disease known as black stripe. It would be well to pick off and burn all the affected parts and spray the plants with potassium sulphide, half an ounce to a gallon of water.

Maggots attacking the roots of Cauliflowers (*A. D.*).—The best preventive we know of is to dip the roots of the plants in the following preparation: One gallon of soot, 1 lb. of saltpetre (or less in the same proportion), add water and mix to the consistency of thick paint.

Earthing up Celery with bog mould (*W.*). There is no advantage to be gained by using pure bog mould for earthing up Celery, and we certainly do not advise you to go to any trouble whatever to procure and use such soil. The chief object in earthing up Celery is to exclude light and thus blanch the leaf-stalks, and any ordinary garden soil serves this purpose well. In the event of very wet weather we think the bog mould would be likely to cause decay.

Lettuce eaten at the roots (*H. D. Player*).—No doubt the damage to your Lettuce plants has been caused by wireworm, which answers to the description of the pale yellow worm-like thing you saw near the injured plants. It is a difficult pest to eradicate, being much like wire. The most effective way is to bury pieces of Carrot, Turnip or Potato just under the surface of the soil, examining them every morning, when many may be found and killed. Another good way of getting rid of them is by applying a liberal dressing of soot and guano to the soil at the time of digging in spring. *Vaporite*, *Kilgrub* and *Aperite* are excellent for killing these pests if used according to the directions supplied with them.

Cabbage or Onions (*Hunslet*).—In the South it is the rule to sow Sutton's April and Flower of Spring Cabbage the third and fourth weeks of July to stand the winter when planted out 12 inches to 15 inches apart to heart in April and May. If plants so treated will not stand out the winter it is because yours is a cold, northerly district, where winters are more severe. Your best course then would be to either sow in the middle of August to plant out later on very firm soil, or else to winter the plants in a frame, planting out in March. Frosts rarely harm Cabbage plants southwards. If Onions stand the winter with you sow Record Onion seed in the middle of August in a sheltered place to lift carefully and transplant in April on to good soil, or you may sow seed of that and of *Ailsa Craig*, the finest of all Onions, in shallow pans in a frame in February, to transplant outdoors in rich soil early in May.



NEW POLYANTHUS

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

GATHERING HARDY FRUIT.

THE suggestions as to fruit gathering given here are intended only for those amateurs who grow fruit on a limited scale for their own use and who wish to enjoy it for as long as possible in the greatest perfection of ripeness. It has no reference to the gathering of fruit on a large scale for market purposes, when a more rough and ready process has of necessity to be adopted.

Early Apples.—To have these in perfection of flavour and juiciness they must not be gathered from the tree more than three or four days before they are eaten; indeed, they are best gathered the same day that they are wanted for dessert. An Apple tree, say, of Mr. Gladstone or Devonshire Quarrenden, can be made to supply perfect ripe fruit over a considerable period by taking particular care to watch for the first fruit to show indication of ripeness. All the fruit does not ripen together, but in succession, and by adopting the plan of plucking the fruit approaching ripeness daily I have known those varieties to give a supply of fairly crisp and sweet-flavoured fruits for three weeks or longer. The same principle applies in a modified degree to autumn-ripening varieties, such as James Grieve, Wealthy, King of the Pippins and others, so that the time these may be had in good condition may be considerably lengthened by adopting the same process. In the case of late Apples the principle is not so pronounced, but even here it is operative, for all the fruit on an Apple tree never ripens quite at the same time.

With *Early Pears* it is even more necessary to watch with diligence the ripening process, and a pleasant and interesting pursuit it is. Even Doyenné d'Été, the earliest Pear to ripen and the quickest to lose flavour and to decay, can be enjoyed in good condition for at least a fortnight by adopting and pursuing this method zealously. In the case of a large tree with a heavy crop it is necessary to watch with eagerness each day for a single fruit showing a tinge of gold on the green surface of the fruit. More will follow every day, when they should be immediately plucked, until all are gathered and consumed. Williams' Bon Chrétien, not to mention other early varieties, should be treated in the same way. The fruit of this fine variety should never be all gathered at the same time, but by a gradual process as the fruit show signs of ripening. In the case of this variety it is better when gathered and stored for a week or ten days before it is eaten. By adopting this method a succession of ripe fruit of this superb variety may be enjoyed for five or six weeks. As in the Apple

the principle applies in a modified degree to later Pears.

Dessert Plums.—As regards some of the best varieties the principle does not apply. In those the flavour goes on improving until the fruit is dead ripe, when many of them, such as the Gages and Golden Drop, become perfect sweetmeats, and the stalk of the fruit, unlike the stalk of the Apple or Pear, which casts off the fruit as soon as it is ripe, clings with greater tenacity as the ripening process proceeds; in fact, with some varieties it will not lose its hold until the fruit has perished from long keeping, as in Golden Drop.

Some Cherries are the same. For the reason of this tenacity of hold which the stalks of the finer varieties have on the fruits, they should never be plucked by hand, or the pressure necessary to pull them off will bruise the flesh. The stalk should be cut off full length with a pair of scissors.

OWEN THOMAS.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

CLERODENDRON FETIDUM FROM DEVON.

Mr. S. C. Stuart, Meriden, Exmouth, Devon, sends fine heads of the nearly hardy Clerodendron fetidum. He writes: "As you encourage your readers to send you specimens of anything curious or beautiful relating to gardening, I think you may like to see these blossoms of a handsome flowering shrub, the Japanese Clerodendron. It grows 5 feet or 6 feet high, and throws up many flowering stems, but is suitable only for large or moderately large gardens, as it extends itself rapidly. In winter it dies down completely, but is indifferent to cold or wet. I hope the blossoms will arrive in good condition."

RUDBECKIAS AND COREOPSIS FROM LEICESTER.

A correspondent, signing himself "L. D.," sends flowers of an interesting Rudbeckia and Coreopsis from Desford, Leicester. He writes: "I am sending you a few blooms of two new annuals, Rudbeckia auperba Orion and Coreopsis annua maxima. The former is a fine vigorous-growing annual, attaining to about the same height and needing similar treatment to Zinnia elegans. Seeds were sown in early March and

raised in heat, transplanted and grown on sturdily in frames until planted out in June. They need a fairly rich soil and sunny position to bring them to perfection. The plants commenced to bloom in July, and the individual flowers last for weeks, as they develop very slowly. The *Coreopsis* is a very free-blooming plant, and seems to flourish in any ordinary garden soil. I gave these the same treatment as that for the *Rudbeckia*, and they began to bloom when quite small in June. I should say that it could be sown outdoors and would give satisfaction, although it would be late coming into bloom. The flowers are quickly over, but there are always plenty to follow."

GLADIOLI FROM IRELAND.

Miss M. E. Dobbs, Camphire, Cappoquin, County Waterford, sends splendid spikes of this beautiful bulbous family with the following note: "I am sending you a few Gladioli for your table, as I am told that they are fine specimens of their kind. I have grown them for over ten years without renewing the stock in any way; in fact, have grown the hundreds I have now from about two dozen corms I got originally and from seeds obtained from them. They have not deteriorated at all, and some have improved in size and colour. Yet people tell me that why they have good Gladioli so seldom in the ordinary garden is that, however much care they take, the good corms always deteriorate into a dull red, till after a couple of years they all become like an inferior *Brenchleyensis*; so perhaps an account of my treatment of them may be of interest. It is very simple and as follows: Plant them early, not later than the beginning of March, January or February if the ground is fit, in soil manured the year before, and give them plenty of water. In heavy soils they want some drainage, but never so much that the soil gets dry underneath them. They should be from 4 inches to 6 inches below the surface, and they should not be dug before the stalks have withered off naturally. If the largest of the little bulblets, which are found attached to the old root when digging them, are saved—all those as large as a garden Pea—and sown in March in furrows 2 inches deep and 8 inches apart, the larger number of them will flower in the autumn just when flowers are becoming scarce, and all will grow into large corms for the following year. I hope the ones I send will travel well, but they will be two days on the journey I am afraid."

PRIZES FOR READERS. SEPTEMBER.

SPRING FLOWER BEDS.

A First Prize of FOUR GUINEAS,

A Second Prize of TWO GUINEAS,

A Third Prize of ONE GUINEA,

And a Fourth Prize of HALF-A-GUINEA

are offered for the best essays on the above subject.

The object of this competition is to bring out the uses of bulbous and other plants for the spring garden, as the autumn is the proper season for planting. Essayists should pay special attention to the combination of bulbous plants with other things, as many of our readers are anxious to know what bulbs to use with such plants as *Forget-me-nots*, *Polyanthuses*, *Wall-flowers* and similar subjects.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The essays must reach this office not later than

Wednesday, September 30. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

September 15.—Royal Horticultural Society. Exhibition of Flowers, Plants, &c., 1—6 p.m. Lecture at 3 p.m., by Mr. Thomas H. Mawson, A.R.I.B.A., on "The Ethics of Garden-making." Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

September 17.—Autumn Rose Show, 1—6 p.m. Royal Horticultural Society's tickets admit. Royal Horticultural Hall, Vincent Square, Westminster.

London Dahlia Union.—The annual exhibition in connexion with this society will be held in the Royal Botanic Gardens, Regent's Park, London, N.W., on Thursday and Friday, the 10th and 11th inst. In addition to good cash prizes the Hobbies Challenge Cup for Cactus Dahlias (amateurs only) will be competed for. Full particulars can be obtained from the hon. secretary, Mr. E. F. Hawes, Royal Botanic Gardens, Regent's Park, N.W.

Dying back of Peach shoots.—The *Key Bulletin* of miscellaneous information (No. 7) contains an interesting article by the well-known fungus expert, Mr. G. Masee, on the dying back of Peach shoots, a disease which has caused Peach growers considerable trouble during recent years. This is found to be caused by a fungus named *Næmospora crocea*, the spores of which are not dispersed by wind but depend upon birds or other animals for their distribution. It appears from experiments conducted that the shoots can only be affected when quite young, but when the fungus has once gained an entrance the mycelium rapidly spreads and infects the entire growth of the season. The spores do not retain their power of germination for more than about three months.

The Peacherine.—"One of the most delicate and delicious fruits known to commerce has, after ten years' experiments, been evolved in California by a well-known fruit specialist. It has been named the Peacherine, from the fact that it was obtained by crossing the Peach and Nectarine. The new fruit has been submitted to experts, who declare that it will prove of great commercial importance. The flavour of both the Peach and Nectarine has been combined, with the result that the flesh of the Peacherine is of the most subtle and delightful flavour. At the same time the warm red hue of the Peach has been transmitted to the skin of the new fruit. Although very juicy, it possesses a firm flesh which fits it to travel. It is unusually early, ripening before any known Peach matures in the open air. Already a leading nursery firm has set to work to propagate the new fruit trees for distribution among private and commercial fruit growers." [The above appeared in the *Daily Mail* recently. The fertility of American soil, rich as we know it is, is as nothing compared to the fertility of inventive resource possessed by our American cousins. When directed, as it frequently is, in the way of horticulture, some marvellous creations in the fruit or flower world are evolved, calculated to stagger the British horticulturist. We have heard of many of these creations before, but the "Peacherine" is a great joke. Our contemporary, we are pleased to notice, has of late given prominence to matters

horticultural in its pages. May we suggest the advisability of appointing a horticultural censor? We have had a Nectarine Peach for ages, and a very good Peacherine it is, if we may adopt this new phrase. As most people know, the Nectarine is a form of the Peach, and is distinguished from it chiefly by having a smooth instead of a downy and rougher skin and also by its flavour. So close is the relationship that it is not an uncommon occurrence for a Peach tree to produce a Peach and a Nectarine fruit on the same branch. A case is recorded of a single fruit being half Nectarine and half Peach.—Ed.]

Grapes at Wisley.—There is just now to be seen on Vines at Wisley Gardens probably the most complete collection of Grapes to be found in any garden in the kingdom. In a large span house, 30 feet wide, are thirty-eight strong Vines planted three years ago last spring, each one carrying from six to seven bunches, generally very fine ones, the major portion ripe, and a few late ones gradually ripening. There are forty Vines in all, twenty on each side, and of whites and blacks an equal number. Two of the Vines—Mrs. Pince, black, and Buckland Sweetwater, white—have been recently planted, having replaced others that were found to be duplicates. The growth of the Vines has been very strong, and many experts looked for bad breaks from the gross wood of last year. Very happily, such has not been the case, for the breaks have been first-rate, and the bunches really very fine and good, and such a Grape as Prince of Wales is there indeed superb. Those who wish to see this collection of thirty-eight distinct varieties should do so at once.

Dunfermline Garden Competition.—The final adjudication of the prizes offered by the Carnegie Dunfermline Trust for flower gardens, flower plots and window-boxes took place on the 21st ult., and the leading prizes were awarded as follows: Single plot in front of dwelling: First, William Ferguson; second, David Wishart; third, George Rollo. Single plot in any position other than facing the street: First, David Adamson; second, Robert Lister; third, Thomas Sinclair. Window-box, single window: First, Alexander Hind; second, Miss A. Munro; third, H. Hynd. Window-box other than single window: First, Mrs. James Anderson; second, James Anderson; third, James Paterson. Flower garden not to exceed two falls: First, R. Boag; second, D. Robertson; third, J. Marshall. Flower garden not exceeding one fall: First, J. Cummings; second, P. Smith; third, James Hamilton.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Autumn-sown annuals.—Your correspondent "H. M. C.," page 395, asks successful sowers what annuals they sow and when. *Linarias alpina*, *L. maroccana*, *L. multipunctata* and *L. reticulata aureo-purpurea* sown during the next few weeks are infinitely finer than when sown in early spring. The plants themselves are much more bushy and the flowers last much longer. The finest variety of *L. maroccana* I ever saw is now just 2 feet across. It is a self-sown plant and has flowered from early in June.—G. CHARLES BENTON.

Fruit trees at the Franco-British Exhibition.—I notice a good deal has been said about the quality of the French trained fruit trees at the Franco-British Exhibition. They are good, it is true; but while criticising them, besides paying compliments, we should say all we see about them, and one looking at the trees now planted there cannot overlook the fact that, besides being well trained, they are also badly affected with American blight, also many of them have died through being moved. This

proves the theory that young trees move much better than older specimens, however often the latter are transplanted.—FREE LANCE.

Beans damaged by frost on August 12.—I beg to ask if it is unusual to have a frost on August 12. We had two plots of Beans damaged same as the enclosed leaf.—R. WARDMAN, *The Gardens, Kirby Hall, York.* [The leaf sent had been severely injured by frost.—ED.]

A remarkable Delphinium stem. I enclose a section of stem of a Delphinium which measures just over 7 inches in circumference. It is from a seedling sown in the open ground last June twelve months, and transplanted to its present position last September. It was grown among a batch of just over 300 others, the tallest spike of which was 9½ feet.—F. W. SMITH, *The Gardens, The Hollies, Weybridge.*

Classification of Daffodils.—It is rather doubtful if a new classification of Daffodils will be a help to either growers or the committees of spring flower shows. According to the wisdom of the Royal Horticultural Society an alteration is wanted; but when people have got accustomed to a certain division of the genus it is rather hard to get them to learn a thorough alteration. Alterations have been made from time to time by Messrs. Barr in their catalogues, from the excellent pamphlet arranged by Mr. Peter Barr in 1884 down to their autumn list of 1907. The variations may easily be seen by the following comparisons. Division I., 1884: Magni-coronati of Baker.—Crown or trumpet as long or rather longer than the divisions of the perianth. Group I., 1907: Large-crowned or trumpet Daffodils.—Tube of flower as broad as it is long, and the crown or trumpet more than three-quarters as long or longer than the perianth segments or petals. Class 1, 1908: Large trumpets.—Trumpets three-quarters as long as the perianth segments or longer. Division II., 1884: Medio-coronati of Baker.—Crown half as long as the divisions of the perianth, but in one or two cases three-quarters as long. Group II., 1907: Chalice-cupped Daffodils or Star Narcissi.—Depth of crown or cup more than one-third and up to three-quarters the length of the perianth segments (petals). Class 2, 1908: Short trumpets.—Trumpets one-half to three-quarters the length of the perianth segments. Group II. (sub-division), 1907.—Depth of cup a quarter to one-third the length of the perianth segments (petals). Class 3, 1908: Large cups.—Cups from a quarter to one-half the length of the perianth segments. Division III., 1884: Parvi-coronati of Baker.—Crown less than half as long as the divisions of the perianth. Group III., 1907: Dolly Cup or Poet's Narcissi.—Depth of cup less than a quarter the length of the perianth segments (petals). Class 4, 1908: Small cups.—Cups less than a quarter the length of the perianth segments. Class 5: Flat cups. Class 6: Double flowered. Class 7: Bunch flowered, *i.e.*, more than one flower on a stalk. Taking the new classes into consideration, it seems to many that taking the larger incomparabilis into small trumpets is a mistake, the general effect of the flowers being very different. Again, classing Poeticus with the small cups is like classing thorough-breeds and hunters as one. The flat cup class is a decided gain, but leaves a great deal in a show to the discretion of the judges. Double flowers have usually been shown in a separate class; but many would be sorry to lose the placing of the doubles with their single relations in catalogues. Bunch flowered seems wrong in name as well as inconvenient in its character. According to the meaning of a bunch, gathered from various sources, it is several things tied together naturally or artificially. "Several" is defined as three or more. Why, therefore, include the two-flowered Narcissi with the Poly-anthus? Why include the Tazettas, which have always been a class to themselves, with biflorus, calathinus, Jonquilla, &c.?—(Rev.) G. P. HAYDON.

THE KITCHEN GARDEN.

CULINARY PEAS IN SCOTLAND.

THE weather during the present summer has been the very antipodes of that of 1907, and it may be of interest to record the behaviour of the varieties that were so good last season, and to see which are in this cold, late district the really reliable sorts to cultivate. The early part of the spring was both cold and damp, and Peas, like other garden crops, made but slow progress. As is my usual practice, I sowed The Pilot and William I. on an early border, and side by side, for first crop. Last year, and indeed for several years, The Pilot yielded the first picking nearly a week before the

Sown on April 27 the old variety Walker's Perpetual Bearer has produced a good crop of fine pods. The new variety The Bell has done first rate, producing a grand crop, but the pods are less in size than last year. On the other hand, Glory of Devon has given a great crop of very large pods, certainly the finest I have seen of this sterling sort. Alderman has grown 8 feet high and given a good crop. Royal Salute, as usual, is very fine, the pods being large and well filled, although at the time of writing (August 15) the earliest row of this variety is hardly ready for picking. The Gladstone is also well up to the average, and I would not ask for a better late Pea except Royal Salute, which here certainly produces a better crop and is of even better table quality. My latest Pea is Carter's Michaelmas, and this year it gives promise of a first-rate crop.

Among dwarf varieties Carter's Daisy is again an easy first. This is the Pea everyone should grow who is at all scarce of room. Little Marvel is also a good Pea for early work. The Sherwood I tried for the first time this year, and am quite pleased with it, as it produces a very heavy crop, but my row of it was seriously damaged by slugs, so that I require another trial before being quite certain about it.

Taking it all through, 1908 has been one of the best Pea years within my experience, and I think it has proved that the list I gave in this journal last spring cannot well be beaten, and I will certainly stick to it for some time yet. I repeat it here: The Pilot, Carter's Daisy, Boston Unrivalled, Glory of Devon, Royal Salute and The Gladstone.

Preston House, Linlithgow.

C. BLAIR.

FRENCH BEANS IN AUTUMN.

To get good dwarf French Beans as long as possible is worth a trial, as this vegetable is more appreciated when other choice things are less plentiful. There is no difficulty in having a good supply of Beans well into November in a mild season, and even in ordinary seasons a good crop may be maintained till quite late in the autumn. For this purpose I advise the use of land that is in good condition. Poor soil will not give a good return, as to get the best results growth must be rapid. It will be found that deeply-dug land well enriched with food will give the best returns. Many amateurs would get a much better crop if the seeds were sown thinner than usual, as with late supplies of vegetables there must be ample room to prevent damping.

As regards varieties to sow and when to sow, of course a great deal depends upon the quantity required as well as the quality. I do not advise the largest sorts, such as Canadian Wonder, although the latter is one of the best French Beans under cultivation for summer supplies. A dwarf, quick grower is preferred for autumn, and one with a sturdy growth able to withstand extremes of cold and wet. There are some splendid varieties to select from, one of the best autumn varieties I ever grew being Veitch's Progress, a very prolific Bean, and by no means a small pod. It is an enormous cropper, even at the late season named, and of excellent flavour. There is no lack of really good varieties. Veitch's Early Favourite is splendid, having long pods of fine quality and good flavour. This is an early variety, but it is equally good for late supplies owing to its rapid growth. Sutton's Plentiful is also very good, and is a stringless Bean, early and remarkably productive. The pods are long, straight and handsome, and the quality all one may desire. Sutton's Perfection is also a very fine autumn variety and stringless, and from seed sown in August or September I have, by a little shelter from frosty nights, had them in excellent condition well into November. The plant has a branching, free habit, and produces pods freely. There are others, such as Negro Longpod, Ne Plus Ultra (a smaller pod, but



A REMARKABLE DELPHINIUM STEM MEASURING OVER 7 INCHES IN CIRCUMFERENCE.

other. This year both were ready on July 3, which is very early for this locality, and with one exception the earliest date during seven years. In 1905 I picked good Peas on June 30, last year it was July 27 before a dish could be gathered. Gradus and Edwin Beckett, as usual, came in together, and I have now decided to delete the former from my list of suitable varieties.

Boston Unrivalled, which last year matured with Gradus, sown on the same date, was this year ten days later, but produced the finest crop of Peas I have ever seen, and the quality is unsurpassed by any other sort. Senator I tried for the first time, and it produced a grand crop; but it matures very fast, and all the pods seem to be ready at one time. This Pea might be described as an early Gladstone, as the pods strongly resemble that genuine late sort.

good), Carter's Longsword (a very prolific variety) and the Magnum Bonum.

The seed, as noted above, should be sown in August or early September, and if on the later date select a small Bean or one with a dwarf habit, such as Early Favourite, Early Gem or Ne Plus Ultra. These dwarf growers soon pod, and continue doing so for a long time. Where possible I advise a south or west border under a wall, as there is some shelter afforded by the wall and it is an easy matter to cover the plants on cold nights with mats, canvas or anything that protects, as often only very little shelter is required, as we frequently get one or two sharp frosts and then none for some time. I advise sowing thinly in rows at least 2 feet apart for the small-growing varieties and a wider distance for the taller ones; indeed, 3 feet at the season named is none too much. If the land is heavy or poor, place some lighter soil in the drills, such as burnt refuse, old leaf-soil or spent manure, anything that lightens or improves. The work done in this direction is not lost, as the land will be in a much better condition for crops the next spring. If the soil is dry at the time of sowing, it is well to thoroughly water the drills. G. WYTHES.

THE FRUIT GARDEN.

HINTS ON THE MANAGEMENT OF STRAWBERRIES IN POTS.

STRAWBERRIES intended for forcing purposes should now be rooted in 3-inch pots, and the strongest and best plants selected for potting into the final pots. It is desirable to have the pots clean and well crocked before placing the plants therein. If the drainage gets stopped up before the plants have finished fruiting, it is desirable that they should be turned out of the pots and the drainage seen to, and if the pots are not clean the roots of the plants will stick to the inside and be difficult to turn out, and great damage will be done. After the pots are crocked it is advisable to shake a little soot over the crocks, as it prevents slugs and worms from entering the bottom of the pots; it also provides nourishment for the plants when the roots reach the crocks.

Strawberries require a good rich soil, therefore it is necessary that great care be taken in the mixing of the soil used: Take two parts of loam, one leaf-mould and sand, some wood ashes, lime rubble, a little soot and some artificial manure, and thoroughly mix them together. Let the whole stand for two or three days before using. This should serve as a very good soil, and Strawberries will flourish exceedingly well in it. Firm potting is essential, as the roots work their way through the soil very quickly. After they are potted they can be stood along the walks until frost sets in, then they should be plunged in leaves or ashes in the frame ground or some sheltered place where they will be protected from the frost.

The time for putting the plants in to force depends upon when the fruit is required. Strawberries require about two months or ten weeks from the time they are put into heat until they are ripe. When put in the houses they should be placed on shelves close to the glass, and great care must be taken not to let the plants get dry. When in flower they should be pollinated every day. After the fruits are set, they should be thinned out to about six on every plant. Water every other day with a little artificial manure, which will help them to swell and ripen quickly. J. P. S.

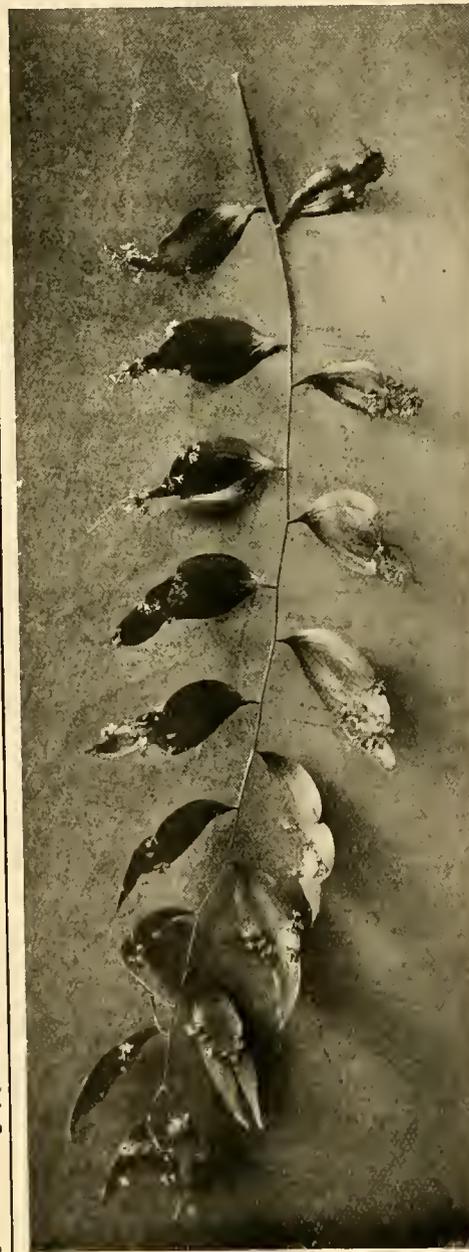
SOME GOOD LATE DESSERT CHERRIES.

THERE are some excellent dessert Cherries which extend the season so considerably that they are worth a note on that account. In the Southern Counties these late varieties do well on a north

wall, but in the North they well repay a west or even east wall if in a somewhat sheltered situation. I have found much better results from trees that have room for extension of main shoots or branches, there being less gumming and decay, and it is surprising what a large space the trees will cover in a short time once the roots have taken hold of the soil.

The Cherry on walls requires much moisture, especially in light land on gravel; but much can be done to assist the trees by liberal mulchings, so that when moisture is given it is conserved. The trees also frequently suffer from black fly if at all dry at the roots, and this pest is difficult to dislodge when the fruits are ripe; it then cripples the wood for another year.

My note more concerns the best late varieties than cultural details, and, though the latter must not be overlooked at this season, much of the work consists in watering and cleansing. The following are splendid black varieties, and worth room in all gardens for a late supply.



SEMELE ANDROGYNA, A CURIOUS FLOWERING GREENHOUSE CLIMBER.

Black Tartarian is one of the best wall Cherries; it is of excellent quality, large and of fine flavour; it is also known under the name of Black Circassian. St. Margaret's is another very fine black variety, known in some localities as Tradescant's Black Heart. It comes in long after the usual season if grown on a cool wall. I think this variety is one of the best of the late section, as it is a good grower and rarely fails, as it blossoms late. In the North I have grown it on a north-west wall and had splendid dishes for dessert in September. Noble, a recent introduction, is also a good late fruit, but not so late as St. Margaret's. It is reddish black, large, with firm flesh and a free grower. It does well as a bush in good land. Of red or lighter-coloured fruits there is less choice. One of the best late sorts is Guigne de Winkler or Belle Agathe. It is a splendid keeping fruit, and I have had it good well into October. It is bright red, juicy and crops well on a west wall.

Of other varieties there are some good types among the Bigarreau section, the Bigarreau Noir de Guben, a variety that should not be overlooked, being a very large fruit of a bright, shining colour. It fruits freely on a wall, being in season in July in the South. Bigarreau Monstreuse de Mexel is also a very large, dark red fruit with splendid flavour; this variety with me did not do so well in the North as Napoleon, but in the South it was superb and a good bearer. Bigarreau Napoleon is doubtless one of the best and most popular of the late white Cherries, and it certainly is one of the most reliable; if only two or three late sorts are required this should be one, as it never fails. Given proper food and moisture it is a large, handsome, pale yellow, mottled fruit, firm, juicy and richly flavoured, a great bearer, and in season in August in the Southern Counties.

Governor Wood is another popular fruit of the white or pale-coloured section, and a good companion to the last named. It is sweet and richly flavoured, but a little earlier than Napoleon, and is also a great cropper and hardy. Emperor Francis is a large, rich, late red Bigarreau with splendid flavour. There are a few others that I could note, but the above are the best, and there is ample variety for a late supply from July to October. G. W. B.

A RARE CLIMBER (SEMELE ANDROGYNA).

THIS is a native of Madeira and the Canary Isles, and in the first-named island is much used for draping the pillars at the entrances to quintas, where it has a charming effect. It was introduced into this country nearly 200 years ago, and was for long known as *Ruscus androgyneus*. It is but rarely to be met with in the open in this country, but is grown in a few gardens in Devon and Cornwall. The leaves, or rather cladodes, are from 1 foot to 2 feet in length, and are furnished with from twelve to twenty pinnate sections of brightly polished green. As these droop the glossy green is well displayed, and a wall completely covered with the handsome foliage is an attractive sight. The cladodes are very tough in texture, and often remain perfectly fresh for six or seven years. Strong, well-established plants push up vigorous Asparagus-like shoots from the base, which will sometimes attain a length of 40 feet in a season. In young plants these shoots often appear as early as November, but as they become established the shoots do not appear until the spring. *Semele androgyne* is a noble climber for a large cool house. In the Temperate House at Kew there is a splendid specimen which has reached the roof, a height of over 30 feet. In the summer the plant presents an attractive appearance, since every pinnate section of the cladode bears, along its edge, clusters of small, yellowish flowers about an eighth of an inch across, some of these clusters containing as many as twelve blooms, and ten or more often being borne on one section.

THE ROSE GARDEN.

ROSE NOTES FROM SCOTLAND.

OWING doubtless to the cold, wet summer and autumn of 1907 Roses have been anything but satisfactory this season, especially in cold, late districts like the one in which these notes are penned. It is satisfactory to note, however, that some varieties seem able to thrive under all kinds of climatic conditions, and it would be well if growers would give heed to this and plant more numerous the sorts that succeed best in their own localities. The best Rose here this year has certainly been Caroline Testout, and as it is equally fine in a cold season one can hardly have too much of this grand variety. I note that it was the premier bloom in the open section at the important Dunfermline show on July 23. The climbing form is also good here on a wall facing east.

That grand Rose Marquise Lita was better this year than usual, but, curiously enough, Clara Watson, which has hitherto been our best light Rose, was very poor. Lady Ashtown gave some very good blooms, as did Killarney, and Kaiserin Augusta Victoria was better than it has ever been. Very good were Mrs. John Laing, Mavourneen and Betty. Mrs. Sharman Crawford (which never failed before), Le Progrès, Mme. Ravary, Pharisæer and Rosomane Graveureux have been very poor. Dean Hole, Prince de Bulgarie, Gustave Grünerwald, Frau Peter Lambert and Liberty gave us some fine blooms, but there seems but little vigour in the plants. M. Paul Lede we have had for the first time, and although our blooms were very limited in number, what we had were perfect in form and colouring. It is an exquisite Rose.

Captain Hayward and Ulrich Brunner were our best dark Roses, all others being very small, although colours were good. Frau Karl Druschki, La France, Margaret Dickson, Jeannie Dickson and Mme. Jules Grolez were disappointing. Quite good were Mrs. W. J. Grant, Exquisite, Gladys Harkness and Paul Neron. Climbers, both on walls and arches, have been very fine. The best are Dorothy Perkins (at its best on the 17th ult.), Mme. Isaac Pereire, Gloire de Margottin, Leucht-tern (extra fine), Climbing Caroline Testout, Climbing Mrs. W. J. Grant, W. A. Richardson and Duchess of Albany on a low wall. This latter has been magnificent. It faces east and gets no sun after midday.

Preston House, Linlithgow.

C. BLAIR.

NEW TEA ROSE PAULA.

THIS, as may be seen by the illustration, is a beautifully shaped Rose of good depth and substance of petal. In colour it somewhat resembles Mme. Hoste, and it possesses a most delightful fragrance. It is said to be a very hardy variety, and it is safe to predict a brilliant future for such a flower. This variety was shown before the Royal Horticultural Society by Messrs George Paul and Son, The Old Nurseries, Cheshunt, on the 4th ult., when it received an award of merit.

ROSE MME. SECONDE WEBER.

THIS fine novelty is in the way of Mme. Edmée Metz; it is of similar growth and mildew proof, which all will welcome. It is, perhaps, rather early to say whether it will always possess this good character, but so far I have seen no mildew upon its fine healthy foliage. The colour is a most delightful shade of rosy salmon, something of a blending of Mme. Edmée Metz and Mme. Leon Pain. The blooms are of enormous size, having large firm petals. Mme. Seconde Weber will be sure to become popular, as it possesses all the good points of a decorative Rose, except fragrance; the absence of the latter apparently is the penalty we have to pay for size

and floriferousness in our modern Roses, although I am glad to find some recent novelties are very sweet.

SWEET PEA NOTES.

IHAVE been at Shrewsbury Show this year and seen the wonderful success of Thomas Jones of Penylan, Ruabon. He exhibited in five classes and won five "firsts" with some of the best flowers seen this year. I visited his garden with a kind friend who motored me over in the middle of July and found the Peas at Penylan a mass of flower, and such flowers and such stems. He had then already been to shows and won prizes, and here he is at Shrewsbury on the 20th ult. with tip-top blooms carrying all before him. If there were a Marathon race for who could cut Sweet Peas in the best condition for the longest time, I would back "Tommy," as his friends call him, to be in at the finish. Other competitors may come and go, but, like the brook, he "goes on for ever."

The friend who motored me over was with me at Shrewsbury, and he was so impressed that he at once arranged with the champion to go over again and see if he could find out the secret. My opinion is that he will find it to be persistent and skilful attention to details during the different stages of growth. At Penylan the land, which is stiff loam with a marly subsoil, is undoubtedly a good foundation to build on. The "footings," as I think the builders term the bottom courses of brick, are carefully laid. First, there is adequate room between plant and plant and clump and clump; secondly, there is careful protection from wind and cold and the necessary watering for the young plants when they are first turned out of their pots; thirdly, there is the building up and getting a good strong plant well established before it is allowed to flower (this is done by thinning the side shoots and stopping the main stem with the skill and knowledge that are only learnt from constant attention and practice); and, fourthly, the getting to know the right strength and proper frequency with which to administer manurial nourishment.

These are matters which, alas! cannot be altogether learnt from books, but which need that hard but withal excellent master, "Mr. Practical Experience," to inculcate them. Even then there is still that undefinable something which must exist between the grower and his plants, which Thomas Jones undoubtedly has, and which we may compare with all reverence to that feeling between the Eastern shepherd and his sheep, which Our Lord seized upon



THE NEW TEA ROSE PAULA, SHOWN BY MESSRS. G. PAUL AND SON, CHESHUNT. (Natural size.)

in one of His most beautiful analogues—that something whose outward sign is loving and unremitting care. I heartily congratulate our great cultivator. Long may he continue to put before us at our shows the possibilities of what is undoubtedly the most popular flower of summer.

JOSEPH JACOB.

SWEET PEAS DROPPING THEIR BUDS.

MR. A. E. WHITAKER writes: "I was interested in your remarks re Sweet Peas dropping their buds, as I have had some experience of the trouble. As far as I can see, it is not check which causes buds to drop, but rather excessive growth. Let your correspondent test this matter by putting some Peas out in poor soil, and he will not find the buds drop. I once grew a row of Sweet Peas in ground so rich that they never bloomed at all, though they reached a height of 9 feet or 10 feet. I always expect this bud-dropping while the plants are making their first strong growth, say, up to 5 feet high, and I find that the plants are stronger and healthier afterwards. This year the excessive heat and drought in June forced the plants into bloom before they had made sufficient growth, thus threatening to ruin their constitution, but the welcome rain in early July caused all the buds to drop, and the plants made excellent growth. Last year, owing to the persistent rain, the plants went on steadily making growth and dropping buds till the end of July, and they were over 6 feet high before they bloomed. Thus it would seem that anything which causes rapid growth will also cause buds to drop. Artificial manure is a well-known cause. I also find that seeds sown in March or April are more liable to this trouble than seedlings from January or February sowings."

SWEET PEA SPENCER VARIETIES SPORTING.

I READ in your excellent paper last year an account of the pedigree of Countess Spencer Sweet Pea, and since then I have ceased to wonder at its sportive tendencies; indeed, it would be surprising if it were otherwise. Varieties were crossed and the unfixed seedlings crossed again until the poor thing hardly knew what to do; then came the marvel of the century. Is it any wonder that it takes some years to settle down again after such a mixing up? If Mr. Clapham will take a walk as far as Priesthorpe, which is only a mile away from his place, I will show him Countess Spencer without a single rogue. I have fixed the flower in the last four years.—A. E. WHITAKER, *Priesthorpe, Farsley, near Leeds.*

THE FLOWER GARDEN.

A NEWLY-MADE ROCK GARDEN IN A TOWN.

THE rock garden which is the subject of this illustration, was commenced in June of last year in a small town garden, and planted about the middle of July. The site was a piece of lawn 18 feet wide by 45 feet long, running east and west and sloping slightly to the north. The turf was taken off and the ground deeply dug preparatory to wheeling in seven or eight loads of good soil from a neighbouring field where building operations were in progress. This soil was placed in heaps like a miniature range of hills, the level ground between representing valleys. The highest of the hills was about 6 feet and the lowest 18 inches. This was allowed to settle for some weeks, and was well soaked with rain before the stones, which were obtained locally, were placed in position. As each stone was laid the soil was firmly trodden behind it to avoid subsequent settlement.

The largest of the valleys was excavated to the depth of 2 feet and the soil replaced by leaf-mould and peat, into which a trickle of water was led. This makes an excellent home for such Primulas as *rosea*, *sikkimensis*, *Munroi*, &c., fringed with *Iris Kämpferi*, *Spiraea palmata* and other moisture-loving plants. By this method of construction, every aspect is obtainable and each plant can be placed in the position which suits it best. One part facing north is completely shaded from the sun for the sake of the *Ramondias* and *Oxalis enneaphylla*, while another for the *Gentians* faces south and gets the full benefit of the sun.

Chester.

FRANCIS SKIPWITH.

THALICTRUM DIPTEROCARPUM.

THIS is a distinct, welcome and beautiful new species from China, introduced by Messrs. J. Veitch and Sons, Limited, of Chelsea, through their traveller, Mr. E. H. Wilson. The persistent

sepals are ovate, reddish violet in colour, and contrast well with the pale refined sulphur tone of the stamens. In some respects the newcomer may be likened to an improved *T. Delavayi*, but the colour is more pronounced and the flowering more abundant. The leaf character is that of a modified *T. aquilegifolium*, while the plant, as judged by the exhibited examples, is possessed of a vigorous habit of growth. Not more than 2 feet in height as shown, it is highly probable that when well established this elegant novelty will much exceed the height named. A delightful plant in every way. It was shown by Messrs. Veitch and Sons before the Royal Horticultural Society on August 18, when it received an award of merit.

TREES AND SHRUBS.

THE SPANISH BROOM.

(*SPARTIUM JUNCEUM.*)

AMONG hardy shrubs this is a well-known and old plant, for it was introduced as long ago as 1548. Although we have received innumerable beautiful shrubs since that time, the Spanish Broom is worthily entitled to still rank as one of the very finest of those that flower during the latter part of the summer and extend even into the autumn. It is too well known to need any detailed description, therefore it will suffice to point out that it forms an upright bush, composed of green Rush-like shoots, which are practically leafless. The Pea-shaped flowers are large and of a beautiful rich golden yellow tint.

According to soil and situation it will reach a height of 5 feet to 10 feet, and being somewhat spare in growth it is seen to great advantage when associated with other shrubs, which, being less in stature, are overtopped by this Broom. The roots are stout and of a deep descending nature, with very few fibres, so that, like most of the Brooms, it transplants badly. Even in dry, stony soils it will hold its own, though it does not attain the same stature as when grown under more favourable conditions.

H. P.

A BEAUTIFUL EVER-GREEN SHRUB.

(*VERONICA TRAVERSII.*)

THE *Veronica* tribe contains plants so different in size and habit that it is rather difficult for the amateur to believe that all can belong to the same family. The greater number are what are known as herbaceous plants, while one or two of a trailing habit are among the best blue-flowered rock plants our gardens possess. Shrubs are few among *Veronicas*, but the few there are have become very popular, and I think *V. Traversii*, which is in flower just now, has come more into favour than any other variety. The flowers are of a pale lilac colour, although in some districts they are almost white. It blooms very freely and is especially at home near the coast. I have noticed some very fine specimens of it in Ayrshire. It does not seem in the least particular regarding soil, as I have seen it thrive in ground which was nearly all sand, while it does equally as well with us here in ground which is of a cold, wet, clayey nature. The best time for planting is from October to the end of November.

JAMES McGRAN.

(Gardener to Sir W. H. Houldsworth, Bart.)

Coodham, Kilmarnock.



A TOWN ROCK GARDEN ONE YEAR AFTER ITS FORMATION.

THE GREENHOUSE.

GREVILLEA BANKSII.

ALTHOUGH "The Dictionary of Gardening" states that more than 160 species of Grevillea have been described, very few of them, except *G. robusta*, which is grown as a foliage plant, are ever met with in gardens. Two species (*G. rosmarinifolia* and *G. sulphurea*) are quite hardy in the favoured parts of these islands. Both as a foliage and a flowering shrub for the greenhouse *G. Banksii* merits notice. It forms a rather bold-growing shrub, whose ascending branches are clothed with pinnate leaves 6 inches to 9 inches long and nearly as much in width. The sub-divisions of the leaves are about a quarter of an inch wide and 3 inches long. When young the leaves are quite silvery on the under sides and to a lesser extent above, but when mature the upper surface loses its silvery character and the under side has it less pronounced than when young. The flowers are collected in a cone-like terminal head, which is about 4 inches in width and the same in depth when fully expanded.

As with most of the Grevilleas, the showiest portion of the inflorescence consists of the long, prominent styles, which curve in a downward direction. The colour is scarlet, tipped with yellow, the expanded mouth of the flower having the same tints. The exterior of the tube is paler and clothed with pinkish hairs. As many as fifty flowers are borne in a cluster, and they will remain fresh and bright for a considerable time. This Grevillea, in common with most members of the genus, is a native of Australia, and was introduced to this country in 1868.

H. P.

BEGONIA

KEWENSIS.

THIS exceedingly pretty Begonia was recently given an award of merit by the Royal Horticultural Society, an honour that, in my opinion at least, is well merited. It is one of the shrubby section and forms a freely-branched specimen clothed with neat leafage. The flowers are borne in clusters towards the points of the shoots, which, naturally drooping, become more so with the weight of the blossoms. They are pure white in colour and are borne in great profusion. It has undoubtedly a great future before

it as a basket plant, for which its semi-pendulous habit of growth eminently fits it. The specimen to which the award was given was shown by Messrs. Veitch, so that it will doubtless be more generally distributed before long, as up to the present the only catalogue in which I can find it is that of MM. Lemoine et Fils of Nancy. It was, I believe, as implied by the name, raised at Kew, but reference to the Kew "Hand List of Tender Dicotyledons" does not help one as to its parentage, &c., it being simply described as of garden origin.

H. P.

FREESIAS.

THESE sweetly-scented subjects are now being put into the grower's hands, and where they are required from late autumn to a late date in spring the first batch should at once be introduced to a

growing temperature. Good fibrous loam will form the staple here, while a little leaf-mould, Mushroom manure and sand may be added in sufficient quantity to give lightness and a free-rooting texture to the whole. A dusting of dissolved bones, too, should be incorporated, the pots being liberally drained and soil put in to within 1 inch of the rim. The bulbs should be fixed firmly into their respective positions and

round pond about 15 feet across, dug out of the lawn to a depth of about 5 feet, cemented and edged with bricks and surrounded by a border of peat and loam. The outer edge of this border was formed of stones cut and faced and left over from the building of the big house. The pump is at a distance of some 10 yards from the pond, and, not being a very picturesque object, is hidden by Honeysuckle trained over small poles.

The water is conveyed from the pump to the pond by the somewhat primitive plan of a wooden trough, removed when not in use, and leaden pipes beneath the lawn connect the pump with the tank. Three plants of Water Lilies (*Marliac's* tribe), white, pink and white tipped with crimson, were sunk in baskets in the pond in April, and flowered the same year, and have proved quite hardy. The border is divided into spaces, half of which are kept wet by holes in the side of the pond quite close to high water, through which the water percolates when the pond is sufficiently full. In these divisions are grown plants that require a boggy soil, such as *Primula rosea*, *Water Forget-me-nots* and *Hoop-petticoat Narcissus*. The drier divisions are filled with *Iris Kempferi* in mixed colours, about four groups.

During the summer the water is allowed to flow over the whole border in dry weather when required, and these Irises flourish exceedingly, for they require plenty of moisture without actually standing in water and a position in the full sunshine. *Primula japonica* flowers luxuriantly, bearing tier after tier of blossom for weeks at a time, very different to what it does in the mixed border hard by.

A plant of *Astilbe Davidii* and another *Astilbe* of a paler pink shade, with long racemes of blossom, last far into the autumn. The big house is now let and the manor house inhabited, and from the dining-room window of the manor house the water garden is a very charming feature, seen as it is across a Lavender hedge surmounted by Larch poles, connected at the top and covered with pink Papillon Roses, which flower from June till the frost ends their beauty. It may be thought

that not a very large number of plants have been enumerated, but a better effect is produced by masses of one flower than by many isolated specimens. A few Saxifrages are planted to cover the stones and carpet the border. A large flat stone is placed to approach the pond as a sort of step, and should be slightly raised so as to keep the water in when the border is flooded; it is also useful to step on when replenishing the water-cans, as we use this water for watering the border close by. Being exposed to the sun, it is far better for the flowers than what is drawn direct from the tank. A dovecot in the shrubbery close by is the home of some white fantail pigeons, who come down to the water to drink and fly back to sun themselves on the old stonetailed roof of the manor house.

C. ASTLEY COOPER.

Hambledon Manor, Rutland.



A NEW THALICTRUM (*T. DIPTEROCARPUM*), SHOWN BY MESSRS. J. VEITCH AND SONS, LIMITED.

(Slightly reduced.)

the final soil added, bringing it up near to the top of the rim. Usually five bulbs are put in a 4½-inch pot and nine in a 6-inch pot. Plunge the pots in ashes, but only lightly cover them, say, about half an inch.

A WATER GARDEN.

THE full pleasure of a water garden can be enjoyed with very little facility for water and in a very small space. The one I am going to describe is in front of an old manor house, till lately uninhabited, and forming only a picturesque background to rather a retired corner of a much larger garden. A tank, used to water the Rose garden, about 20 yards distant, was utilised by means of a force pump to fill a

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE WINDOW GARDEN.—The present is the proper time to pot Arum Lilies that were planted outdoors some few months ago. They should be lifted, repotted and stood in a shady corner to get established and recover from the lifting. Bulbs of the Chinese Sacred Lilies, known as Narcissus Tazetta, should be potted now; they make a pretty display in the window in midwinter and early spring. Window-boxes may be renewed at the present time by removing subjects that are past their best, placing therein dwarf early-flowering Chrysanthemums, which should make the window gay for some time to come. It may be possible that a plant or two can be lifted from the outdoor garden and planted in the window-boxes, which are much better than plants grown in pots.

Hardy Flower Garden.—Daffodils planted at the present time will do much better than those planted a month or two hence. These bulbs should never be kept out of the ground longer than can be helped. Hardy Primulas and Auriculas may be lifted, divided and replanted in their flowering quarters at once. The beauty of their display in the late spring justifies the beginner in growing these subjects freely. Hollyhocks, Delphiniums and other plants as they go out of flower should have seared flower-heads removed, as their prospects for another season's display are benefited thereby. Beds of the Lily of the Valley that are so beautiful in the early summer are benefited by a top-dressing of well-decayed manure at the present time. I make this an annual piece of work and the crowns respond in most liberal fashion with stately spikes of blossoms in the flowering season. Manure from a spent hot-bed is the best material to use for this mulching.

The Vegetable Garden.—Onions that are now nicely ripened I am lifting, and after leaving them in the open for a few days to dry off,



2.—THE SAME SHOOT PREPARED READY FOR INSERTION.



1.—SUITABLE SHOOT OF THE COMMON SWEET BAY FOR MAKING INTO A CUTTING.

they are placed indoors and carefully stored. It is a mistake to leave these in the beds when they have finished growing, as they soon spoil. Spring Cabbages may be planted now. I plant them about 1 foot apart in rows and the rows about 2 feet asunder. This timely work ensures the early development of useful Cabbages in the early summer. Crops that have finished their yield, such as Peas, Broad Beans and any other subjects should be pulled up, and where there are sticks these should be stored away in the dry, the quarters treated to a heavy dressing of manure, to be deeply dug in ready for other crops. I do not believe in leaving the ground vacant for any length of time, being rather disposed to have this turned over, that the elements may exercise their beneficial influence upon it. Mushroom beds may be made up outdoors at this time, and as this matter was dealt with fully in an illustrated article for beginners a short time since, I would direct readers to the information given therein.

Trees and Shrubs.—I am taking advantage of the present time to plant Ivies against walls or fences. Too often beginners are disposed to ignore the fact that this subject appreciates soil that has been well tilled. For this reason see that the quarters are deeply dug, and, if the soil be poor, incorporate a combination of well-rotted manure and leaf-mould. The advantage of this will be seen in the succeeding seasons.

The Greenhouse and Conservatory.—What I said regarding the Calla Lilies in the window garden section also applies to plants of this subject that may be required for the greenhouse and conservatory. Continue to pot up successive batches of Roman Hyacinths, the Paper-White Narcissus and Duc Van Thol Tulips for early flowering. Each of these subjects, when nicely rooted, do very well, and should provide an early display of their welcome blossoms. Quite a

number of subjects that were planted outdoors at midsummer, such as Salvia, Bouvardias, Solanums, Genistas, Eupatoriums, &c., may be lifted at the present time and placed in pots of suitable size. These have their value when there is little else to brighten the conservatory. After being placed in pots they should be stood in the cold frame for a short time until established, and if the weather be bright and sunny they should be shaded during this period. I water my plants in the greenhouse in the early hours of the morning at the present season, and open the ventilators as soon as the glass begins to feel the influence of the sun.

The Rose Garden.—There should be no delay in the preparation of borders for planting Roses within the next month or two. It is a good plan to have the quarters prepared early, and that the Roses may do well, we would certainly dig the ground at least two spits deeps, or, if possible, trench the same. Poor soil should be enriched with heavy dressings of manure. Light soils should have well-rotted cow manure added thereto, and soils of heavy texture would be benefited by the abundant supply of good horse manure. D. B. C.

PROPAGATION OF THE SWEET BAY, YEW AND THE COMMON LAUREL BY CUTTINGS.

THESE subjects are of interest to most lovers of the garden, and as they play such an important



3.—SHOOT OF THE COMMON YEW AS TAKEN FROM THE PLANT ON THE LEFT AND AS PREPARED READY FOR INSERTION ON THE RIGHT.

part in beautifying the surroundings of our homes there may be readers who desire to raise a batch of plants by means of cuttings.

The Sweet Bay.—Most of us have been familiar with the Bay tree from our earliest days, and know its value both as a decorative evergreen shrub as well as the usefulness of the leaves for their flavouring. The Sweet Bay, like many other evergreens, is a subject of easy culture, and may be easily increased by cuttings of shoots at this period. The shoots should be from 3 inches to 4 inches long, and similar in every respect to the illustration in Fig. 1. Here it will be noticed



4.—SHOOT OF THE COMMON LAUREL SUITABLE FOR MAKING INTO A CUTTING.

the growth is clothed with leaves from its apex to its base, and that the shoot may be encouraged to root speedily it is customary to trim off a few of the lower leaves, so that it may be possible to insert the cutting properly and that it may root satisfactorily. As an indication of what should be done with the shoot in Fig. 1, Fig. 2 is an apt illustration. The prepared cuttings should be inserted in light, sandy soil in a shaded border outdoors. It is not absolutely necessary, although it is better to acquire the use of a cold frame in order to raise plants of this useful subject, as a cutting-bed made up in a semi-shaded or shady position anywhere in the garden will answer the purpose very well. What we would do, however, in order to encourage a more speedy-rooting process is to place hand-lights over the cuttings at first, or frame-lights arranged over any rough framework; a cold frame may serve the same purpose. The cuttings should be inserted about 3 inches apart and in rows 4 inches to 6 inches asunder, so that in this way quite a large number can be accommodated in a comparatively small area. This propagation of the Sweet Bay by cuttings may take place at any time between the present and the end of October.

The Yew (Taxus baccata).—This is a common enough subject in our gardens, yet it is so very useful and ornamental that it has come to be regarded as an almost indispensable occupant of our borders, covering up unsightly quarters, and also serving the purpose of a screen against cold winds and providing sheltered quarters for many of our more tender subjects in the hardy flower garden. The Yew may be raised from cuttings quite easily in September, and readers will be wise to take advantage of the present opportunity to insert a batch of suitable cuttings. These should be made from shoots of comparatively recent growth about 3 inches in length, and are represented by growths as shown in Fig. 3. The leaves are removed from the lower portion of these shoots, so that the cutting may be inserted easily and the prospect of rooting rendered more likely thereby. These cuttings should be inserted in light sandy soil and placed under a hand-light or in a cold frame. The

cutting-bed should be made fairly firm after being properly levelled, and, say an hour or two previous to the insertion of the cuttings, the bed should be given a good watering by the aid of a fine-rosed can. The cuttings should be inserted about an inch deep about 2 inches or 3 inches apart, and in the rows 3 inches to 4 inches asunder. Always take care to press the soil firmly at the base of each cutting, otherwise the rooting process will fail to take place. Keep the cuttings rather close during the rooting process, which should not take many weeks.

The Common Laurel, so useful in covering up unsightly quarters of our garden and serviceable in so many respects, may be raised with the greatest ease by the aid of cuttings. We are quite aware that this and many other evergreens are increased by layers, but this subject is so very easily increased by the aid of cuttings that we have taken advantage of the present occasion to give a few directions respecting this matter. Fig. 4 shows a growth of comparatively recent development and in fine condition for the purpose under notice. The cuttings should be about 6 inches long and should be inserted in cold frames during September, after being prepared and made ready for this operation as illustrated in Fig. 5. Here it will be noticed the lower leaves are removed and the shoot cut through immediately below a joint. It is the practice in some establishments to cut out the leading growth, so that as the cuttings root new shoots are evolved in the axils of the leaves, and the young plants subsequently assume a more bushy and branching form. Insert the cuttings to the depth of 2 inches, more or less, and make them quite firm by pressing the soil at the base of each one. They should be 3 inches to 4 inches apart, and the rows about 9 inches asunder. It is astonishing what a number of such shoots may be propagated within a comparatively small frame, and assuming the soil is of a light and sandy nature, and this be kept fairly moist, there is no reason why the roots should not be emitted within a few weeks.

LIFTING AND STORING POTATOES.

DURING the months of September and October the work of lifting and storing Potatoes will be in full swing, so perhaps a few hints concerning this apparently simple operation will be of benefit to those who are beginners in gardening. When to lift is a question that puzzles many, and even among professionals there is considerable diversity of opinion on this point. Some growers advocate leaving the plants until the tops naturally die down and others lift them while the haulm is quite green.

A simple test is to lift a plant and examine the tubers found thereon. If the skins are set quite firm there is very little to be gained by leaving the crop longer in the soil, even if the tops are more or less green, and the Potatoes may safely be lifted at any time. The skin may easily be tested by scraping it with the thumbnail; if it peels off in a flake it is not set and the tubers are not ready for lifting, but if it refuses to peel off it may be regarded as set.

A fine dry day should always be selected for digging Potatoes, and care must be taken not to pierce the tubers with the fork. A flat-tined tool is best for the purpose, but an ordinary garden fork answers very well. It should be thrust in at the side of the plant, not between two plants, and pushed well under the stool, lifting the whole of the tubers bodily out of the soil. Any that cling to the haulm must be shaken off and the stems thrown on one side so as not to shade the Potatoes. The tubers should be allowed to remain exposed to sunshine for a few hours before picking them up, as they are thereby dried and will keep much better.

Grading is best done when collecting the crop, and any that are required for planting next spring must be specially selected and given

different treatment to those intended for eating. All diseased tubers should be burned as soon as possible, and not given to pigs.

The storing of ware and seed tubers, as stated above, will differ considerably. Those for eating must be kept in a dark, cool, but frost-proof place for the winter, and if properly dried may be placed in a thick heap. A cellar is an ideal place where one is available. The system of clamping adopted by cottagers and market growers is a good one if properly carried out. A bed of soil large enough to take the heap of Potatoes is made level and very firm, and the tubers placed thereon in a conical or ridge-shaped heap. Over these good Barley, Oat or Wheat straw is placed to a thickness of 6 inches or 9 inches, taking care to get it as straight and even as possible. It should be put on so that one end of the straw points to the top of the heap and the other to the bottom. Soil is then dug out round the heap so as to form a trench 1 foot to 15 inches wide, and banked on the straw, starting at the bottom and working upwards. Not less than a thickness of 9 inches of soil should be used, and it must be made firm as the work proceeds, leaving the outside as smooth as possible so as to ward off rain. It is a good plan to leave a little space at the top of the heap unearthed for a week or two; then any heat that is generated will escape. Of course, enough Potatoes must be left out of the clamp for the winter supply, as it is not advisable to open the clamp until the middle of February.

Those Potatoes selected for sets ought to be stored in single layers in a cool, frost-proof position and in the light if possible. On no account should they be kept in a thick heap or in a warm place, else weak growth will occur, to the detriment of the crop another season. Only the best-shaped tubers should be retained for planting, and it is necessary to see that each possesses at least one good eye or bud. It is unwise to save Potato sets for planting in the same garden for more than two consecutive years; it is far better to change the stock, buying sets if possible which have been grown in Northern counties. Many of our Southern seedsmen now have their seed Potatoes grown in the North.



5.—THE SAME SHOOT AS SHOWN IN FIG. 4 PREPARED READY FOR PLANTING.

THE TOWN GARDEN.

BULBS IN POTS.—Many as are the beautiful flowers which we can grow in our rooms and greenhouses, there is none more delightful for the town residence than those that come within the comprehensive category of Dutch bulbs. In pots, window-boxes, jars containing moss fibre without drainage, and in the garden they succeed splendidly, and there is no single home in London or any town or city in the British Isles where they will not grow, provided that the needful bulbs, soil and pots can be procured. It is to their distinct attractiveness and ease of culture that they owe much of their popularity, and it is highly improbable that they will ever fall from their present high estate. In my next two or three articles I propose to deal fairly exhaustively with the general culture of bulbs in various ways, and the suggestions which will be made will be so simple that they can be adopted by everyone who desires to do so.

PROCURING BULBS.—This is one of the most important points in the whole matter, and care in selection goes far to ensure success, whereas hunting the length and breadth of the country to find the lowest-priced—not the cheapest—bulbs often spells failure. The grower who would achieve the most gratifying success must be prepared to procure sound, heavy bulbs from a source of the highest repute, and if they cost a few more pence than others which can be had, he can rely upon it that they are far away the cheapest in the long run, for they bring certain satisfaction if correctly managed. There are several firms advertising in THE GARDEN who are so jealous of their fair name that they would not send out an inferior bulb if they knew it, and should a purchaser receive one that is partially rotten or very rough, and unduly light for its size, he need only return it to have another sent in its place. Upon this particular point there is one other thing that I should like to emphasise, and that is the importance of early purchase. The demand is always enormous and the finest bulbs go first, therefore the earlier the order is placed the more probable it is that perfect bulbs will be sent, and they can easily be stored until they are required for potting or planting.

THE SOIL.—Simplicity should be the rule in the preparation of the compost, as there is absolutely nothing to be gained by making up elaborate mixtures of numerous ingredients. The principal part of the compost ought to consist of sound, fibrous loam, of which three-parts should be used to one part of sweet, decomposed leaf-mould; to these add one-tenth part of clean, sharp sand, mix them thoroughly, and the result will be a soil that will admirably suit all the kinds usually grown in pots. This material must be turned and re-turned over and over again until the parts are thoroughly incorporated, and if it can be done two or three weeks prior to use so much the better. It is the practice of some growers to add a little concentrated plant food or natural manure to the soil, but I prefer to rely upon plain food at the outset and feed when the plants are well advanced as may be necessary. If manure is used let the quantity be very small.

THE POTS.—These will have to be of various sizes to accommodate bulbs of different kinds and in varying numbers, but generally speaking those 5 inches in diameter, inside measurement, are the most serviceable. For single bulbs of Hyacinths I prefer, however, a 4-inch pot (known generally as a small 48), as I think that the spikes are better when the roots are thus slightly restricted, and it is easy to give special food to compensate for the limited supply in such a small bulk of soil. Whatever size is used they should be clean, inside and out, as also must the crocks that form the drainage. Above the crocks should be placed a layer of rough moss or the constant watering will wash the finer particles of soil into the drainage.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

CLEANING THE HOUSES.—Give all houses as soon as possible a thorough clean out, so that they will be in order when housing time arrives. Cleanse the conservatory and fumigate. Paint all iron or open wood work with petroleum, and afterwards hose thoroughly. Oil the ventilating gear and do any repairs that may be necessary. See also that the boiler and connexions are sound.

Mignonette.—Thin out the seedlings sown last month to about three or five plants, and take out side shoots or laterals as they become large enough to handle.

Begonias of the winter-flowering section, such as Gloire de Lorraine (white and pink) and Gloire de Sceaux, should be potted on. Let the soil be rich and fairly open, and see that it is well rammed down between the ball and the pot: stake and keep neatly tied. These plants are very useful for winter and spring decoration and cannot be grown too well, but one often finds them overpotted, when the soil becomes sour before the roots have had time to permeate it. Much larger plants can be produced in small pots by judicious feeding and watering. This would also apply to many plants, especially Persian Cyclamen, Cinerarias and Primulas. Many professional as well as amateur gardeners err in doing this.

PLANTS IN FRAMES.

Pot Roses should be looked over, and if any potting is required it should be done at once. Meanwhile keep the pots plunged in ashes up to the rims. Cleanse the leaves by constant syringing. Prepare frames and pits for the reception of Violets, &c., and keep these plants well supplied with water. Pick off all long runners. Water Salvias, Bouvardias and Chrysanthemums that are to be lifted and keep the roots in a growing medium; they will make much progress in the next few weeks. Take all buds on Chrysanthemums in pots as fast as possible, and any early varieties showing colour should be put in under protection from wet. See that all bush varieties have stakes sufficient to keep them from damage by wind. Give Arums (Callas) plenty of water, as they are now making strong growth. I find that planted-out roots are the best.

HARDY FRUIT.

Watering Fruit Trees.—In this locality many Apple and Pear trees have had to be watered. The fruits are very good this season. Continue to water any that require it and net early varieties, as birds soon damage them. After the birds' attack wasps and bees become troublesome. Gather all fruits that are ready.

KITCHEN GARDEN.

Leeks.—Draw more soil up to the stems if very large specimens are wanted, but prevent the soil getting into the hearts or leaves. Those planted later and dibbled into deep holes should now have some fine soil put in and nearly filled up, as the roots will go downward for the moisture that has been supplied.

Spring Cabbage.—Prepare the soil for this important crop. These should be put on a plot that has been heavily manured previously. The Onion plot is considered by many to be the best place, and it has much to recommend it, but it must always be borne in mind that the Cabbage is on the ground for nearly a year. The latter, however, should be made ready and fit by manuring.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

HYACINTHS IN POTS.—The foundation to a successful flowering of these, as well as other spring bulbs, should be made in autumn by potting at the proper time, so that a plentiful supply of roots may form before any kind of forcing is started. September is a good month for potting Hyacinths, and those that are required for forcing should be so treated early, following with later batches. The soil best suited is loam two parts, good dry rotten manure one part (this should be passed through a sieve) and half a part of grit. I often use road scrapings obtained after a heavy storm in preference to sand, because they are coarser and tend to keep the soil open. Four-inch pots are used for one bulb, and three bulbs are put into pots 8 inches in diameter. These latter make showy specimens for the conservatory. Care should be taken to select each of the three bulbs about even in size, so that there shall not be an odd look in the spikes of blooms.

FRUITS UNDER GLASS.

Pot Trees.—The present is an excellent time for potting on any of the orchard-house trees that may need it and which have been cleared of their fruit. Trees which have reached their limit as to size of pot or other receptacle need to be carefully managed, as the balls must be slightly reduced and the roots carefully pruned in order to make room for new soil. Those which can be afforded more room will only need a slight disturbance of the soil round the outside of the ball. The crocks, too, should be removed carefully so that the ball may be placed low enough in the new pot. Cover the drainage with rough turf, cut thin, and ram the new soil in round the ball as firmly as possible. The old ball should have a good soaking of water some hours before potting takes place.

KITCHEN GARDEN.

Tomatoes.—Batches of plants bearing fruit in a very small state should now be watered with clear water only, applications of liquid manure tending to promote growth rather than hasten on the fruit. Where any old spare lights from pits or frames are at hand, these may with advantage be placed in a slanting position against the wall in order to hasten on the fruit. In exposed gardens the moulding up of any late planted winter and spring crops, especially Broccoli, must be attended to, as, independent of its steadying the stems, the soil protects them from frost.

HARDY FRUIT.

Apricots and Nectarines.—At this season Apricots especially need copious supplies of moisture at the roots, and though there has been some rain I find it has failed to reach the roots, especially where the borders are cropped. The trees in many cases are making free growth, needing ample supplies of moisture. I find the more robust the trees the less danger there is of branches dying off. The Apricot does best when the roots are near the surface, hence the need of moisture in dry seasons. A mulch at this time is of great value, as it retains the moisture given and promotes root action.

FLOWER GARDEN.

Michaelmas Daisies.—These plants should be thoroughly mulched and watered during dry weather, and neatly tied to strong stakes as the growth is made. Care must be taken not to bunch them up too tightly, or much of their beauty will be lost; the shoots should be looped up just sufficiently to keep them from being broken down by wind and rain, thus allowing the habit of each variety to develop, and in most cases they are very beautiful.

T. B. FIELD.

(Gardener to the Baroness Berners.)
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ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

September-sown Sweet Peas (J. F. A.).—Unless your soil is exceedingly heavy and cold, September is too early for sowing, as the probabilities are that the plants will grow rapidly and rankly and will be too sappy to withstand the rigours of the winter. If the soil is of medium texture the end of October will be quite early enough to sow, and to ensure hardness the position must be open so that they will get unlimited air, and about the middle of December the soil should be drawn up to the plants on each side of the row to a height of about 4 inches. The twiggy sticks will also answer as a slight protection. You will have to thread or otherwise protect the young plants efficiently or birds will do as much harm as frosts.

Large-flowered white Gladiolus (Constant Reader, Wynberg).—Kelway's White is a large-flowered Gladiolus, and a very good one it is. You will find that it is rather expensive at present.

Failure of Romneya Coulteri (Miss S. R.).—It is not possible to say what is the direct cause of Romneya Coulteri dying off without seeing the plant and conditions under which it is growing. This plant wants a warm, sunny position, deep loamy soil, with perfect drainage.

Name of Delphinium (E. M. M.).—We think that the name of the Delphinium is *Ustane*, but as there are such a vast number of florists' varieties in cultivation it is impossible to say positively without a large collection being available for comparison. Florists' flowers should be sent to a nurseryman who makes a speciality of the particular class of which the name is required. It is hardly and would succeed in Oxfordshire.

Water Lily leaves for inspection (J. S.).—The leaves of your Water Lilies are attacked by the caterpillars of the moth *Hydrocampa nymphaeata*, an insect which measures rather more than 1 inch across the open wings, which are of a pale brown colour with white blotches. The caterpillars are now becoming chrysalides. If the tank is not too large, it would be worth while to examine the leaves and destroy the chrysalides or caterpillars which are under the patches of leaves; as the latter are green and the under sides of the leaves reddish brown they are easily seen. The moths emerge in June or July, and may often be found flying about over the water. They lay their eggs on the leaves, and the caterpillars are a year old before they are full grown. It should be quite possible to catch the moths in a butterfly net, but I do not see how you could very well kill the caterpillars with an insecticide.—G. S. S.

TREES AND SHRUBS.

Tree leaf-soil (Susan).—Lime leaves, though of less substance than Oak leaves, still result, when fully decayed, in producing good leaf-mould. But as you have Oak, Horse Chestnut and Willow leaves to mix with the Lime leaves, you should find the whole when fully decayed produce excellent soil. Hard leaves, such as those of Holly and Laurel, are not desirable, but those are shed chiefly in the spring. As you collect leaves spread them out to form a bed 4 feet in width, adding layer on layer as collected, also casting house slops, water and soot over each layer. When a well-trodden body some 3 feet in height has been formed, slight fermentation follows, and decay is all the more rapid. If the heap be turned in January and more water, if the material be dry, cast over it in the turning and liberal dustings of soot to

kill insects added, in about nine months capital soil is formed. For mixing with potting loam, however, the leaf-soil should have lain fully a year.

Willow leaves falling (Mrs. Cuff).—Without seeing the tree itself it is difficult to say what is the direct cause of the leaves falling. It is most probable that the trunk of the tree is infested with scale, which would suck the sap and have such an effect. The trunk should be dressed in spring with a paraffin and soft soap emulsion to kill the scale.

Trees to shut out view (Teesdale).—Either the White or the Canadian Poplar, or, if you prefer it, the two planted alternately, would make a quick-growing screen, but both are of course deciduous, hence they are only effective during the summer months. Trees from 10 feet to 12 feet high may be safely planted provided they have been regularly transplanted and are well rooted. The best time for carrying out the operation is in October or November. For an evergreen screen one of the best subjects you can plant is the Austrian Pine, but its rate of growth is slower than the Poplars. Plants of this not exceeding 6 feet in height will give more satisfaction than taller ones. The Douglas Fir is another good screen tree.

Planting a Yew hedge (Yew Hedge).—In the first place, the ground must be thoroughly prepared for the reception of the Yews by being trenched about 3 feet wide and 2 feet deep. In trenching, too, the subsoil must be well broken up. Some well-decayed manure should be mixed with the lower half of the dug soil, but not with the subsoil. The ground being thus prepared, the planting is the next consideration. Good, bushy, well-rooted plants about 4 feet in height are the best, and they should be obtained from a reliable source, where regular transplanting every two years is carried out. The planting is best done during the month of October or the first half of November. The distance apart at which the plants are put will depend upon their size, but they should be sufficiently near each other for the side branches to interlace a little, and at the same time undue overcrowding must be especially avoided. After the hedge is planted it will not require clipping until the second year, though any shoots that show signs of straggling may be shortened back. After the second year it may be trimmed annually in May, being just looked over in September for any very long shoots. The common English Yew is the best for the purpose, and when established a growth of 6 inches may be reasonably anticipated. A top-dressing of short well-decayed manure every three years will be helpful.

ROSE GARDEN.

Roses in cold frame (Amateur).—We certainly think you could grow some good Roses in a frame 6 feet by 3 feet with a depth at back of 3½ feet sloping to 2 feet in front. The main thing is to prepare the soil well. Dig it deeply, and add some fresh loam if the staple soil be not very good. About a barrowful of good manure should be incorporated, also an 8-inch potful of half-inch bones. You must see that the drainage is good, if not add 4 inches or 5 inches of broken pots, bricks or clinkers to the bottom. Plant the Roses early in autumn and keep the lights off until February if weather permits, then prune the plants. Bring them on as naturally as possible, merely covering with the lights when frosts threaten; but as soon as new growths appear then you must see that these do not become injured. It may be necessary to cover the lights with thick mats if we get sharp frosts in March.

Rose for examination (G. S. L.).—You have evidently a Rose that is not W. A. Richardson. The leaf looks uncommonly like that of a monthly Rose, but we cannot be certain. Could you send us a piece of the growth with bud or bloom? We should discard such a poor specimen and plant a vigorous tree during the coming autumn. Roses are now so cheap that it never pays to have poor enfeebled plants about.

Rose plants mildewed (A. H. P.).—This troublesome fungus will undoubtedly survive the winter, and if the plants were badly infested before leaving the nursery, the spores would fall to the ground from the infested branches and reappear in the plants the following spring. It must not be forgotten that certain localities favour mildew more than others, and if one's plants were free one year, the Roses in the hedgerows might disseminate the fungus another season. Much depends upon climatic conditions. When foliage is soft it is more liable to attack. Certain varieties of Roses, by reason of the structure of their foliage, are more susceptible to mildew than others. Thus we have Killarney very prone to it, whereas *Mme. Edmée Metz*, which has a sort of glazed leaf, is entirely free. If plants are sprayed with sulphuric acid when received, this would prevent the dissemination of the spores. They should be sprayed for three days in succession, using the sulphuric acid at the rate of one part of acid to a thousand parts of water. No Effic is also a valuable preparation for combating mildew.

MISCELLANEOUS.

Cultivating a small garden (M. E. D.).—A garden only 13 rods in area would be of no use whatever to conduct French or, indeed, any description of market gardening. Were it eight times the area, it might be made to serve some market uses. French gardening is very costly, and can be made to pay only in the hands of a thorough expert. So far as it has been in use in England, while glowing accounts have been written about the profits, no experienced gardener believes them. As to your Strawberry bed, if it is three or four years old it would be better to clear off the plants and get the ground ready for Cabbage plants in October; but by all means lift the strongest of the runners first and plant them out on fresh, deeply-dug and well-manured soil. If strong and well rooted they will carry some fruit next year. At this time of year, as crops are cleared off, the ground should be trenched 2 feet deep and well manured ready to receive early Potatoes, Peas, Cauliflowers, Dwarf French Beans, Lettuces, Carrots, Radishes, Tomatoes or similar crops in the early spring.

Names of plants.—*Kate P.*—*Pisum elatius*.—Colonel F., *Killmacan*.—*Althaea officinalis*.—*Mrs. W. A.*—*Pisum elatius* ("Mummy" Pea). It is a native of the Mediterranean region, and so called on account of seeds having been found in the Egyptian tombs with the mummies. It is highly probable that the Peas are first placed in the tombs by the guides, to be sold to tourists.—*A. L. Ford*.—*Picea orientalis*.—*E. K. Baker*.—*Schizanthus pinnatus*; *Sedum prealtum*.—*R. H., Salop*.
1. *Saponaria officinalis flore-pleno*; 2. *Humulus Lupulus (Hop)*; 3. *Helianthus humboldtianus*; 4. *H. corymbosum*.—*Miss Wells*.—*Celsia Arcturus*.—*A. W. P., Dublin*.—Your Roses are: 1. *Francisca Kruger*; 2. *Mme. Lambert*; 3. *Dr. Grill*; 4. *Freiherr von Maréchal*; 5. *Tom Wood*; 6. *Mme. Pierre Cochet*; 7. *Climbing Cramoie Supérieure*.—*H. W.*—Your Roses are: 1. *Victor Verdier*; 2. *Perle d'Or*; 3. *Gloire de Margottin*; 4. *Princesse de Sagan*; 5. *Mme. Chedane Guinoisseau*; 6. *Anna Olivier*; 7. *Abel Carrière*; 8. *Baroness Rothschild*; 9. *Crown Prince*; 10. *Dr. Sewell*.—*J. E. M. F.*—*Alyssum incanum*.—*W. E. P.*—The Peas inside the edible Pea-pods are gruel-eaten and the pods over-ripe, making it quite impossible to identify the variety. If you will send a younger sample with some of the haulm on which it is growing we will endeavour to name it. The blue Sweet Pea was rather withered. It seems of a pleasing shade of blue and worth perpetuating. Sweet Peas have been sporting very freely this year and yours may be a sport, or it may have been a chance seed of a blue variety that had got in with the others. In any case, we would save the seed and see what will come of it next year.—*E. S.*—1. *Cunrussus pisifera var. plumosa aurea*; 2. *Taxus baccata*; 3. *Cupressus lawsoniana var. erecta viridis*; 4. *Cassinia fulvida*; 5. *Cupressus pisifera*; 6. *Thuja dolabrata*.—*Wm Gregory*.—4. *Heamanthus Katherinae*; 9. *Dracena godsseifiana*; 12. *Cyrtipedium Sedenit*; 13. *Cyrtipedium sp.*; 14. *C. villosum*; 15. *Oncidium phymatocum*; 16. *Cattleya Loddigesii var.*; 17. *Cattleya Harrisonii*. The other numbers were all garden forms of the Croton.

Names of fruit.—*Wm. Mathews*.—The shape and colour of an Apple varies so much under different conditions of growth. For instance, the same variety grown in Glamorganshire placed side by side with those grown in Kent would often be hard to recognise as the same sort. Moreover, your fruits in the majority of cases have not finished their growth. However, we have named the majority of them. Send the two Pears again when fully grown, when we shall be glad to name them for you. 1. *James Grieve*; 2. *Red Juneating*; 3. *Stirling Castle* (deformed fruit); 4. possibly a local variety; 5. *Bramley's Seedling*; 6. *Hawthornden*; 7. *Tower of Glamis*; 8. not known, possibly a local variety; 9 and 11, not known; 10, *The Queen*; 12, deformed, possibly a local variety; 13, *Lane's Prince Albert*; 14, not known, small and unripe; 15, *Beauty of Kent*; 16, *Golden Spire*.—*E. Harden*.—*Ecklinville Seedling*.—*A. Ince*.—The large cooking Apple is, we think, a small sample of *Duchess of Oldenburg*; the small dessert variety is *Golden Harvey*.—*X. Z., Raspberry*.—It is quite impossible for us or anyone else to name a Raspberry from a description such as you furnish. If you will send fruits, carefully packed, we will endeavour to name it for you.—*A. E. Speer*.—1. *Pear-good's Nonsuch*; 2. *Cumberland Favorite*; 3. *Newton Wonder*; 4 and 8, *Cox's Orange Pippin*; 5, *King of the Pippins*; 6 and 7, *Claygate Pearmain*; 9, *Stamford Pippin*.

SOCIETIES.

KIRKCALDY FLORAL AND HORTICULTURAL.

The annual show of this society, the thirty-first since its establishment, was opened in the grounds of Raith, the seat of Mr. R. C. Munro-Ferguson, M.P., on the 21st ult. The show was an exceptionally good one, particularly in the section for pot plants, where the entries were seventy in excess of those of last year and the quality of the 570 exhibited was higher than ever before. In the cut bloom classes there was also an increase of about 100 entries. Vegetables were also finer than usual, and the classes for nurserymen brought out many fine exhibits. The winner of the Nairn challenge cup for the most successful exhibitor in the vegetable section was Mr. Alex. Grierson, who had sixty-five points, having won no fewer than eighteen first prizes. The principal prizewinners were too numerous to detail, but in the nurserymen's classes they were Messrs. D. and W. Croll, Dundee; Messrs. James Cocker and Sons, Aberdeen; and Messrs Morgan and Simpson, Monkie.

ROYAL HORTICULTURAL SOCIETY.

At the fortnightly meeting held on the 1st inst. there was a good exhibition, but visitors were comparatively scarce. Fruit was well shown by several of our leading growers, and Dahlias formed a bright and prominent feature. Hardy flowers in general were also shown in profusion, the whole making an exhibition of more than ordinary interest.

ORCHID COMMITTEE.

Present: Mr. Harry J. Veitch (chairman), Messrs. James O'Brien, H. Little, W. Boxall, Stuart H. Low, A. A. McBean, Walter Cobb, J. Charlesworth, W. P. Bound, F. J. Thorne, W. H. White, H. A. Tracey, Gurney Wilson, J. Forster Acock, F. J. Hanbury, W. Bolton and de B. Crawshaw.

Messrs. Stanley and Co., Southgate, London, N., exhibited four plants of interest. These were *Cynoches chlorochilum splendens*, with a large, curiously-shaped green flower, sweetly scented, two plants of *Cattleya Mioncia* and a fine specimen of *Cypripedium A. de Lairese*.

From H. S. Goodson, Esq., Fairlawn, Putney (gardener, Mr. G. E. Day), came a pretty little collection, consisting chiefly of *Cattleyas*, *Odontoglossums*, *Cypripediums* and *Miltonias*, the whole being well flowered and staged in excellent form. Silver Flora medal.

The group from Messrs. J. W. Moore, Limited, Rawdon, Leeds, was a most interesting one, many rarely-seen plants being included. *Masdevallia macrura*, *Cypripedium Andromeda*, *Cattleya Aclandiae*, *Bulbophyllum godseffianum* and *Coleogyne corrugata* were a few of the most interesting. Silver Banksian medal.

Messrs. Sander and Sons of St. Albans had a pretty little collection of well-grown plants. Some good specimens of *Vanda cœrulea* occupied the centre, the blue flowers being most attractive. *Cattleyas*, *Brasso-Cattleyas*, *Cypripediums* and several others of botanical interest were also included, the whole being exceedingly good. Silver Flora medal.

Messrs. Charlesworth and Co., Heaton, Bradford, put up a small group of very fine plants. *Houlletia antiguensis*, *Brasso-Cattleya Heatonense*, *Sophrone-Lelio-Cattleya Marathon*, *Cattleya Iris* and *C. Rhoda* being some of the most noticeable. Silver Flora medal.

FRUIT AND VEGETABLE COMMITTEE.

Present: Mr. George Bunyard (chairman), Messrs. J. Cheal, George Woodward, Alex. Dean, E. Beckett, John Basham, James Vert, J. Davis, H. Parr, H. Markham, A. R. Allan, John Lyne, G. Reynolds, J. Jaques, J. McIndoe, John Harrison, Owen Thomass, W. Poupard and A. H. Pearson.

Messrs. Cannell and Sons, Swanley, Kent, staged a really superb collection of hardy fruits, these comprising small Apple trees in pots, grown entirely in the open, Plums and Apples, gathered and shown on dishes and in baskets, Raspberries and the Strawberry-Raspberry. The Apples and Plums were particularly well finished and all the best varieties in season were represented. Silver Knightian medal.

An interesting exhibit of Grape Madresfeld Court came from Waldorf Astor, Esq., Cliveden Gardens, Taplow, Bucks (gardener, Mr. W. Camm). This consisted of six medium-sized but remarkably well finished bunches, the produce of a single Vine grown in half a paraffin tub. The berries were of good size and shape, and were evidently the result of very intelligent cultivation. Silver Banksian medal.

Messrs. George Bunyard and Co., Royal Nurseries, Maidstone, put up a remarkably fine group of orchard house trees in pots with dishes of hardy fruits now in season. The trees comprised Plums, Pears, Apples and Peaches all to the finest possible condition, and high-class Peaches, Plums, Nuts, Apples, Pears and Nectarines were included in the gathered fruit, the arrangement of the whole being of a most pleasing character. Gold medal.

From the King's Acre Nurseries, Limited, came a beautiful collection of fruit trees in pots, a fan-trained Peach tree of the variety Sea Eagle attracting many visitors. It was carrying an enormous crop of good-sized and well-coloured fruits. Apples, Plums, Grapes, Figs and Pears all added to the interest of this very fine collection. Silver-gilt Hogg medal.

Messrs. John Peed and Son, West Norwood, London, S.E., were exhibiting a good collection of Apples, Pears and Plums on dishes, these being of very good size and moderately well finished. All the best varieties were included, the colour of some being very good. Silver Banksian medal.

Leopold de Rothschild, Esq., Guomersbury Park, Acton, W. (gardener, Mr. G. Reynolds), staged a very fine lot of Pine-apple Queen, and also some excellent dishes of Peaches, Nectarines and Jefferson Plum. The whole of the fruits were in the very pink of condition, and reflected much credit on those responsible for their culture. Silver Hogg medal.

FLORAL COMMITTEE.

Present: Mr. W. Marshall (chairman), Messrs. C. T. Drucry, H. B. May, J. Walker, J. Green, J. Hudson, G. Keuthe, Charles Blick, W. Howe, J. Douglas, J. T. Bennett-Poë, R. W. Wallace, W. T. Ware, W. Bain, G. Gordon, A. Turner, H. J. Jones, Charles E. Pearson, W. Cuthbertson, W. P. Thomson, E. H. Jenkins and W. J. James.

Messrs. Kelway and Sons, Langport, had a particularly fine display of *Gladioli*, the collection occupying one of the long tables. It was noticeable that the spikes were much finer than on a former occasion and the flowers more richly coloured, both of which are the obvious outcome of the more genial weather conditions. In a large grouping we take the following as among the best: *Felicity*, creamy white and yellow; Mrs. J. M. Skittery, buff yellow; *Leader*,

rosy buff and primrose; and *Happy Match*, scarlet and yellow. Silver-gilt Banksian medal.

Messrs. Baker, Limited, Wolverhampton, had a nice lot of Dahlias, of which the new Peony-flowered varieties were the chief. These were in many beautiful and distinct shades of colour, while their handsome flowers appealed to a large number. Cactus and other forms of the Dahlia were also largely shown. Silver Banksian medal.

Mr. Amos Perry, Hardy Plant Farm, Enfield, had a very showy group of perennials in the cut state, of which *Papaver Mrs. Perry* (a lovely salmon), a beautiful array of *Delphiniums* and *Pyrethrums* from a second flowering, *Asclepias tuberosa*, *Liatrix pycnostachya*, *Stokesia cyanea precox*, a fine lot of hybrid *Pentstemons* and other plants were most noticeable. A central grouping of *Lilies* included all the forms of *L. auratum*. Silver-gilt Flora medal.

Messrs. H. B. May and Sons, Edmonton, staged a very fine lot of Tree Carnations in small pots, groups of two or three dozen plants of each variety being shown in excellent flower. *Elizabeth*, scarlet; *Mrs. Brooks*, white; *Coronation*, cerise pink; *Enchantress*, Mrs. Lawson, Mrs. Burnett, Britannia, White Perfection, Fair Maid and others were extra good. Silver Flora medal.

Messrs. R. Wallace and Co., Kilnfield Gardens, Colchester, had a lovely lot of the new hybrid *Montbretias* raised at Westwick, the value of which it is not possible to over-estimate. Some of the gems of the group were *Hereward*, clear yellow; *Lady Hamilton*, orange yellow, a very lovely flower and strong grower; *Ernest Davison*, red orange; *Lord Nelson*, a dark-stemmed variety with orange-red flowers; *Klug Edmund*, deep chrome with orange; *St. Butolph*, clear yellow, a refined flower; *Prometheus*, the giant of the race, dark-stemmed and reddish orange crimson-centred flowers, a really grand plant. Messrs. Wallace also displayed hardy plants in variety, *Phloxes*, *Lilies* and *Gladioli*. Silver-gilt Flora medal.

Messrs. William Bull and Sons staged miscellaneous greenhouse plants in variety.

Messrs. Jarman and Co., Chard, had a most delightful gathering of *Sweet Sultans* in white, mauve, soft and deep yellow and other shades.

Messrs. T. S. Ware, Limited, Feltham, put up a showy group of hardy flowers and alpine, the former including *Lilies*, *Asters* and a large assortment of seasonal things. *Aster Beauty of Colwall* is the new double mauve-flowered variety, and it is interesting to see it quite fixed and good. Silver Banksian medal.

Messrs. Wells and Co., Merstham, filled a long table with a fully representative collection of early-flowering *Chrysanthemums* interspersed with a few *Michaelmas Daisies*. This firm also had *Pentstemons* of a very fine strain, and a select lot of *Phloxes*. Silver Flora medal.

Messrs. James Veitch and Sons, Limited, Chelsea, staged a group of interesting plants such as *Andromeda arborea*, *Rubus bambusarum*, *Aconitum hemsleyanum* (the climbing *Aconite*), *Magnolia parviflora* (white with crimson anthers), the handsome red-fruited *Viburnum rhytidophyllum*, some very handsome specimens of *Buddleias* and other plants. This firm also had a large exhibit of *Asters*, *Sweet Peas* and a great variety of other annuals, also a select set of ornamental Gourds. Silver Flora medal.

Messrs. J. Cheal and Sons, Crawley, had a few cut shrubs and fruiting examples of the Siberian Crab and others.

Messrs. Watkins and Simpson, Covent Garden, displayed a variety of *Asters*, a very distinct one being the white-flowered *Unicum*.

Messrs. Hugh Low and Co., Enfield, had *Erica tubæformis* (a very beautiful Cape Heath), *Clianthus Dampieri* and *Chironia ixifera*, the latter studded with pink flowers.

Messrs. Barr and Sons, Covent Garden, had a group of hardy flowers, in which *Lillies*, the white *Agapanthus* and many good annuals were displayed.

Messrs. Carter Page and Co., London Wall, filled the end table of the hall with *Cactus Dahlias*, the very representative gathering being displayed in a bold arrangement throughout. Gold medal.

OBITUARY.

MR. WILLIAM MITCHELL.

THIS talented gardener passed away on Saturday, the 22nd ult., after months of suffering from a painful malady. He had occupied the position of head-gardener at Chilworth Manor, Romsey, for over twenty-five years, first under Mrs. Fleming, and in later years under the only son, J. Willis Fleming, Esq., J.P. Mr. Mitchell's ability as a fruit grower, especially of Grapes, is well known to readers of THE GARDEN, he having had many successes at the London, Shrewsbury and principal provincial shows. That he was greatly valued and esteemed by his employer was evinced by that gentleman's solicitude for him during his illness, providing for him the very best advice and all that skill could suggest to mitigate his sufferings. The funeral took place on the 26th ult. at Chilworth Church, the body being enclosed in a polished Oak coffin, and was attended by the widow, the only surviving son, and many relatives and friends, the latter including representatives of the Southampton Royal Horticultural Society, the Romsey Horticultural

Society and gardener friends from all parts of the county; in fact, the *cortège* was so numerous that the church was barely large enough to hold them. Mr. and Mrs. J. W. Fleming attended the service, which was fully choral, and also at the grave-side.

MR. GEORGE BETHELL.

THE death took place at his residence, The Firs, South Woodford, on the 27th ult. of Mr. George Bethell, who for many years took an active part in the horticultural world, being a Fellow of the Royal Horticultural Society and for thirty-eight years a subscriber to the Gardeners' Royal Benevolent Institution. The deceased was in his seventy-sixth year.

"Country Life" for September 5 contains, among other articles, "Parnham House" (second article); "In the Garden"; "The Parliamentary Journals of Ireland" (illustrated), by Sir Edward Sullivan; "Wild Country Life"; "Goat Farming and Goat Keeping" (illustrated).

Pea Quite Content.—The true and original Pea Quite Content, as sent out by Messrs. James Carter and Co., is a maincrop variety, height 6 feet, foliage and pod deep green, pod 7 inches to 7½ inches long, hanging mostly in pairs, and is quite distinct from all other Peas. We are requested to make this statement, as we are given to understand that a Pea, which has not all the claims of Carter's Quite Content, has been widely distributed this season by others, either by accident or design, thereby causing much correspondence and annoyance to the growers and Messrs. Carter alike. Messrs. Carter's Quite Content was distributed this season in their sealed packets, and has each year been carefully re-selected.

Reading Horticultural Society.—The report of this interesting exhibition is unavoidably held over until next week.

TRADE NOTES.

THE GAYTON RAKE.

We have recently had an opportunity of seeing and testing this most useful tool, and find it of the greatest help in the garden. For stirring the top soil between plants of all descriptions it is most suitable, the prongs being rounded so as not to injure any small roots with which they may come into contact. The tool is strongly made, and may be had either with or without the good ash handle, which is obtainable in two lengths. The rake is made by Messrs. Norton and Co., High Street, Cheltenham, from whom all particulars can be obtained.

ESTABLISHED FOR 100 YEARS.

MESSRS. J. WEEKS AND CO. of Fernshaw Road, King's Road, Chelsea, inform us that on the 14th inst. they will open new offices at 72, Victoria Street, S.W. As manufacturers of all descriptions of horticultural buildings, and makers of every kind of hot-water heating apparatus, they are the oldest established firm in the trade. Founded in 1808 they have carried on business at Chelsea for exactly 100 years, and their trade connexion and reputation for good work extends throughout Great Britain, Ireland, the Colonies and the Continent of Europe. Weeks's "Duplex" Upright Tubular Boilers have been supplied for heating glass houses in almost every garden of note throughout the kingdom, also a great number of public buildings, churches, schools, &c., including such well-known buildings as the South Kensington Museum, Canterbury Cathedral, Netley Hospital, &c. Under new management the business has been brought thoroughly up to date.

SCHEDULES RECEIVED.

North Middlesex Dahlia and Horticultural Society. Exhibition at Alexandra Palace on the 10th and 11th inst. Hon. secretary, Mr. J. H. Crossley, Clarendon Road, Hornsey.
London Dahlia Union. Exhibition, September 10 and 11, at the Royal Botanic Gardens, Regent's Park, N.W. Hon. secretary, Mr. E. F. Hawes, at above address.

QUESTION.

ROWAN TREE BERRIES AND THEIR USE.—I have a fair number of Mountain Ash or Rowan Tree (*Pyrus aucuparia*) berries nearly ripe. There is a common prejudice that they are poisonous, but I am of opinion this is not so. I shall be much obliged if you will advise me as to this, and also, if you can, give me a recipe for preserving or pickling the fruit.—W. HORSFALL VINT, *Willow Field, Idle, Bradford, Yorks.*

* * * The Yearly Subscription to THE GARDEN is: Inland, 6s. 6d.; Foreign, 8s. 9d.

THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

PHOTOGRAPHIC COMPETITION FOR OUR READERS

WE frequently receive photographs from our readers of some pretty spot or corner in their gardens, and it has occurred to us that it would be interesting if prizes were offered for the best examples sent in. We therefore offer a first prize of two guineas for the best photograph of a reader's garden, and a second prize of one guinea. Each photograph must be accompanied by a written description of the garden. Photographs must be sent addressed to "The Editor, 20, Tavistock Street, Covent Garden, London, W.C.," on or before October 31, and the envelope or wrapper must be marked on the outside "Photographic Competition," and accompanied by a coupon, which appears in the advertisement pages. Each photograph must have the sender's name and address plainly written on the back. Rejected photographs will be returned if stamps are enclosed for postage. The Editor reserves the right to use any photograph and description that does not win a prize, and his decision must be regarded as final.

AUTUMN - FLOWERING ROSES.

(First Prize Essay.)

ROSARIANS were never placed under a greater obligation to the raisers of Roses than when they introduced the race of modern autumn-flowering sorts. True, the old Chinas and Bourbons, together with the so-called Hybrid Perpetuals and the hardier Teas, had done their best to brighten our gardens as the days shortened and the summer flowers departed. But at its best the display was only a feeble effort compared with the glories of June and July, and more calculated to emphasise its own poverty by giving the occasional bloom in contrast with its former abundance.

It was the advent of the race of Hybrid Teas, and the introduction of freer-blooming and more vigorous Teas, that has made a September show of the National Rose Society, instead of the dream of an enthusiast, a glorious reality. Personally, I believe I find a keener enjoyment in my Rose garden in the autumn of the year than in the garish days of summer. The blooms open more slowly, are deeper in colour, richer in perfume and of more lasting properties than those that unfold their petals to the hot bleaching suns of summer.

CULTIVATION.

It will be readily understood that if a plant is called upon to give a succession of blooms over a lengthy period it must be lovingly tended and

liberally treated. Deep cultivation of the soil is one of the first and most important requirements. If the roots cannot find a cool and moist run during the drought and heat of summer they cannot sustain the strain of continuous flowering, therefore dig deeply and incorporate plenty of rich farmyard manure with the bottom spit. A little artificial in the shape of quarter-inch bones or bone-meal is also a great help.

Another important point to be observed is to remove all spent blooms as speedily as possible, and in cutting them to take a fair length of the flowering stem, but at the same time taking care not to cut low enough to start the basal buds into growth. These lower buds are those from which the shoots for next year will emanate, and it is most desirable to have the early-formed and well-ripened wood to prune back to than that grown later in the year, hence the need for exercising judgment and care in cutting the blooms. Constant stirring of the surface of the Rose bed is also an immense aid to healthy and vigorous growth. It not only aerates the soil, but prevents evaporation, and thus conserves the moisture, a most desirable thing, especially so in a hot, dry summer such as we have just passed through. It is also advisable to give a liberal top-dressing of well-decayed farmyard manure in the spring, immediately after pruning. This may be lightly forked in, taking care not to disturb the roots when so doing. When time cannot be spared for almost daily hosing between the plants (using a Sproughton hoe for preference) the manure may remain on the surface all the summer, making an effectual mulch and supplying nourishment to the roots after each shower of rain. This may be supplemented with applications of liquid animal or artificial manure at intervals during the season, for the former using that from sheep, horse or cow, the last-named being most suitable for light soils. Soot water is also most beneficial, heightening the colour of both foliage and flower, while Tonk's Manure or Clay's Fertilizer used at the rate of one ounce to the gallon, or sulphate of ammonia at the rate of half an ounce per gallon of water acts as a capital stimulant. These applications should only be made when the soil is thoroughly moist, and not oftener than once a week or fortnight. We now come to the most important question of

THE BEST VARIETIES

to be grown to provide a really good autumnal display. Varieties have increased so rapidly of recent years that it is needful to exercise a wise discrimination in making a selection. I have therefore endeavoured in the following list to include only those sorts that from practical experience I have found to give the best results, and which are, in my opinion, the pick of their colour for freedom of blooming and habit of growth. First, as to

Climbing Roses. In this class there is still plenty of scope for the art of the hybridiser, and a fortune awaits the lucky man who first introduces a perpetual-flowering Dorothy Perkins, Lady Gay or Hiawatha and, shall we say, our old friend Crimson Rambler. Up to the present the best autumn bloomers are: Gräns an Teplitz, bright crimson, sweetly perfumed (a semi-climber, also good as a bush or standard). Alister Stella

Gray, pale yellow. Gloire de Dijon, buff or salmon yellow; will thrive and bloom almost anywhere. Rêve d'Or, buff yellow; blooms freely in the autumn on established plants and when growth is not unduly restricted. Climbing Aimée Vibert, pure white. Climbing Mrs. W. J. Grant, imperial pink; a grand variety. Climbing Caroline Testout, salmon pink; as sterling a variety as the dwarf form from which it sprouted. Bardou Job, glowing crimson, very lovely colour; but only a moderate climber, semi-double. Longworth Rambler, light crimson. Mme. Alfred Carrière, white with yellow base; very hardy. Trier, creamy white; the best autumn-flowering climbing Poly-antha. When we come to the question of Roses most suitable for bedding, continuity of blooming is of paramount importance. A good selection of dwarf habit would be: Marquise de Salisbury, bright crimson. Ecarlate, scarlet; a magnificent new variety. Mme. Pernet-Ducher, canary yellow. Cecile Brunner, blush, shaded pale pink; one of the best bedding Polyanthas. Mrs. W. Cutbush, bright pink, flowering in clusters. Baby Dorothy, somewhat similar in colour to the well-known Dorothy Perkins, of which it is a dwarf form; of perpetual-flowering properties. Camoens, an old favourite of glowing crimson colour, yellow at base of petal. Mme. Jules Grolez, bright China rose. G. Nabonnand, pale flesh, shaded rose; one of the very best, but of taller growth than the preceding. Warrior, blood red, opening to scarlet-crimson; a new variety of sterling merit.

To make a selection of the best dozen or so for general garden purposes is no easy matter out of the number now on the market. The following, however, would be sure to please, and being very vigorous would thrive in almost any garden:

Hybrid Perpetuals.—Frau Karl Druschki, pure white. Hugh Dickson, crimson, shaded scarlet. Mrs. John Laing, rosy pink.

Hybrid Teas.—Caroline Testout, light salmon pink. Mrs. W. J. Grant, bright rosy pink. J. B. Clark, deep scarlet, shaded dark crimson; blooms well in autumn if lightly pruned. La Tosca, salmon blush. Mme. Abel Chatenay, carmine rose, shaded salmon. Mme. Ravary, beautiful orange yellow. Lyon Rose, shrimp pink at edge of petals, centre of flower intense coral red, shaded chrome yellow; one of the best Roses ever introduced. Florence Pemberton, creamy white, tinted pink. Killarney, flesh, shaded white, flushed pale pink; a beautiful variety but addicted to mildew. Countess of Gosford, clear salmon pink, base of petals suffused saffron yellow. Betty, coppery yellow, overspread with golden rose. Joseph Hill, pale salmon pink, shaded yellow, outside of petals coppery yellow. C. J. Graham, dazzling orange crimson. Dean Hole, silvery carmine, shaded salmon.

Teas.—Marie van Houtte, lemon yellow, edged with rose. Maman Cochet, deep flesh, outer petals suffused light rose. White Maman Cochet, the white, or, more correctly, creamy white form of above. Mme. Jules Gravereaux, buff white, shaded peach or yellow; splendid for pegging down, or makes a good climber. Mme. Constant Soupert, dark golden yellow, tinted peach pink; fine. Mme. Hoste, lemon yellow. Lady Roberts, rich apricot, base of petals coppery red, edges shaded orange.

Mildew and thrips are often troublesome in late summer and autumn. For the former I find nothing better than Mo-Effic, used according to the directions, and for the latter (which is a pest in dry weather) syringing. W. B. PRICE.

FORTHCOMING EVENT.

September 17.—Autumn Rose Show, 1—6 p.m. Royal Horticultural Society's tickets admit. Royal Horticultural Hall, Vincent Square, Westminster.

PRIZES FOR READERS.

AUGUST COMPETITION.—AWARDS.

In this competition the prizes were offered for the best essays on "The Best Roses for Autumn Flowering." This proved a most interesting competition, and we received a large number of essays that were both practical and interesting. After most careful consideration the adjudicators have allotted the prizes as follow:

First prize of four guineas to B. W. Price, Trelawney, Podsmend Road, Gloucester.

Second prize of two guineas to Walter Bentley, Field End, Eastcote, Middlesex.

Third prize of one guinea to C. W. Caulfield, Bridgen House, Park Crescent, Erith.

Fourth prize of half-a-guinea to Arthur W. Pauton, B.A., Greenmount, Clontarf, County Dublin.

The essays from the following are highly commended: John J. Burton, A. D. Cooper, Thomas Alexander, Miss J. M. Hopkinson, R. M. Munro, Edwin Howes, W. P. Wood and A. M. Durling.

Many of the competitors treated the subject in a too complete manner; that is, they went through the whole routine of cultivation from sprouting onwards. The competition was designed to show what could be done in the way of summer cultivation to induce an autumnal display. Many competitors appeared to have drawn their replies too glaringly from the books on the Rose published by various authors rather than from their own experience.

NOTES OF THE WEEK.

Nurserymen and seedmen's conference.—The Horticultural Trades' Association of Great Britain and Ireland has just completed its annual congress, the meeting taking place this year in London. The gathering was a record one as regards numbers, over 100 leading members of the nursery and seed trades attending from all parts of the United Kingdom. The three days allotted were devoted to excursions round London, and the evenings to business meetings and the discussion of topics of trade interest. Among the nurseries visited were those of Messrs. Hugh Low and Co., Enfield; Paul and Son, Chesham; W. Paul and Son, Waltham Cross; Thomas Rochford and Son, Limited, Turnford; and James Veitch and Son, Limited, Coombe Wood. The generous hospitality shown by the proprietors to the visitors added much to the pleasure of the outing, which was marred only by the miserable weather experienced the last day.

The Royal Horticultural Society and a colour chart.—The council of the Royal Horticultural Society have long felt the need of a chart for the international standardisation of colours, but the huge expense of producing it has hitherto deterred them from issuing it. Not long since a most admirable chart, containing more than 1,450 shades of colour between white and black, was published in France at the instance of the French Chrysanthemum Society, the price in England being £1 ls. net, and by it it is now possible to recognise or describe to a friend or purchaser at a distance the precise colour of any possible flower. The cost of this chart has been somewhat prohibitive in the past, but by undertaking to be responsible for the disposal of a large number, the society is now in a position to offer this chart to its Fellows at the reduced cost of 14s. 6d., for which price it can be obtained at the society's offices, Vincent Square, Westminster, or it can be sent free by post for 15s.; but in all cases a cheque or postal order must be sent beforehand.

Prizes for bulbs grown in moss fibre.—Mr. Robert Sydenham has offered, and the council of the Royal Horticultural Society have accepted, the following prizes to be competed

for on March 9, 1909. N.B.—For bulbs grown in moss fibre or similar material (not earth) and without drainage. (a) Six single Hyacinths, in separate vases, not to exceed 6 inches in diameter, to be selected from any of the following twelve varieties: Balfour, General Vetter, Grand Lilas, Grand Maître, Innocence, Isabella, Jaques, Johan, Koh-i-noor, King of the Blues, La Grandesse and Roi des Belges. Prizes, 25s., 21s., 15s., 10s., 7s. 6d. (b) Six vases of Tulips, in vases not to exceed 7 inches, but no restriction as to the number of bulbs in a vase, to be selected from the following varieties: Duchesse de Parma, Dusart, Pabiola, Joost Van Vondel, Keizerskroon, M. Trésor, Prince of Austria, Rose Gris de Lin, Thomas Moore, Van de Neer, Vermilion Brilliant and White Pottebakker. Prizes, 25s., 21s., 15s., 10s., 7s. 6d. (c) Six vases of Narcissi, in vases not to exceed 7 inches in diameter, but no restriction as to the number of bulbs in a vase, to be selected from the following varieties: Barri conspicuus, Campernelle rugulosus, C. J. Backhouse, Emperor, Frank Miles, Lulworth, Leonie, Mme. de Graaff, Phyllis, Sir Watkin, Victoria and Waterwitch. Prizes, 25s., 21s., 15s., 10s., 7s. 6d.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Royal Horticultural Society's classification of Daffodils.—The little book just published containing a classified list of Daffodil names drawn up by a committee appointed by the Royal Horticultural Society, contains the names of some 2,200 Daffodils, most of which are classified. The old order of classification into Magni, Medio and Parvi-Coronati, with their subdivisions, is all changed, and we now have: 1, Long trumpets; 2, short trumpets; 3, large cups; 4, small cups; 5, flat cups; 6, doubles; 7, bunch-flowered. The long trumpets are, of course, the old Magni; then comes a new class called short trumpets, and I must say it gave me rather a shock to see such varieties as Lady Margaret Boscawen and White Queen classed as trumpets. To call White Queen a trumpet, even a short trumpet, seems to upset all one's ideas about classification. There are large cups and small cups, but there is no separate class for the Poeticus, so they will be shown in the same class as other small cups, such as the Burbidgei. This seems a great pity, and is sure to make judging difficult. Then comes the flat cups. Why flat cups? Surely a cup if it were flat should be called something else! The doubles, Class 6, should be easy, including such flowers as Argent, and, presumably, all flowers with any pretensions to doubling. The double bunch-flowered varieties, such as Jonquilla flore-pleo, come under this class. Last of all come the bunch-flowered, Class 7, and in this are included Biflorus, Tridymus, Jonquilla, Tazetta, Odorus and the new Poetaz varieties. Triandrus, too, comes under this class, so it includes, one would suppose, every variety which habitually throws more than one flower on each stem. We may expect to see some curious exhibits in Class 7. The new list will be indispensable to exhibitors at shows where the classification has been adopted, and as the Midland Daffodil Society has adopted it, we may expect other societies to follow suit. I must say it seems most complete. I even see the name of one of my seedlings, one flower, once shown, but too good for this wicked world. When I came to list S 24, otherwise Olwen, what had been a bulb was a bulb no more. (Curiously enough it was the only one that had rotted off out of some eighty seedlings marked for lifting.) To show the necessity for a recognised classification I give one instance of the state things had got to: An exhibitor is disqualified after being awarded first in a class for Parvi, because his exhibit contained flowers one thirty-second of an inch too long in

the cup, according to measurements which he had no means of knowing were those accepted as authoritative, these flowers being undoubtedly Parvi, according to the definition given in Bourne's "Book of the Daffodil" and in "The Narcissus: Its History and Culture," by Burbidge and Baker, the leading authorities on the subject. The exhibit placed first and other exhibits in the show contained flowers which, according to the same measurements, were open to disqualification, but were evidently not subjected to the measure test. When things had got to this state it was high time for something to be done, and I am sure we all welcome the attempt to evolve order out of what was fast becoming a hopeless chaos, but at the same time I think the classification could have been made according to the old groups, so familiar to all of us and universally understood and accepted.—W. A. WATTS.

Lilium auratum in a back garden.—I am sending a few particulars *re* the accompanying photograph of *Lilium auratum*, which I think you will agree is rather a fine one, especially as it was grown in a small back garden measuring 16 feet by 40 feet. The plant has had twenty-two blooms, some of which had been cut when the photograph was taken. The buds were 5½ inches long. Last year it was grown in a pot, and when it had done flowering was planted out in the ground, where it has been ever since. We attribute the quantity and size of the blooms to the fact that last year we only allowed three buds to open. While admitting it is nothing out of the way for house culture, we think it is good for a small back garden.—J. JAMES, *Enfield Wash.*

NEW PLANTS.

Ilex Perryi.—A new and distinct species of Holly from China. The plant exhibited was little more than 2 feet in height, bushy, compact and forming a perfect pyramid. The leaves are small, glossy green, and quite unlike any other species known to cultivators. We think very highly of the new-comer, which should prove of great value in the garden. Shown by Messrs. James Veitch and Sons, Limited, Chelsea. First-class certificate.

Gladiolus Golden Measure.—A valuable addition to the yellow-flowered section, and a good and vigorous variety withal. Award of merit.

Gladiolus White Cloud.—The large and handsome flowers of this variety are of an ivory white tone and well disposed in a compactly-formed spike. Award of merit. Both were shown by Messrs. Kelway and Son, Langport.

Dahlia Marathon.—A Cactus variety with a flower of unusual size, well formed and coloured a rosy fawn. The base of the florets is yellow and the tips of a golden hue. Shown by Messrs. J. Stredwick and Son, St. Leonards. Award of merit.

Dahlia Tom Jones.—A show variety. This type of Dahlia still appeals strongly to the florist. The variety is a very attractive one, the florets being edged and suffused rose-pink on a creamy yellow ground. Shown by Mr. S. Mortimer, Farnham, Surrey. Award of merit.

Tritonia (Montbretia) Norrie.—A showy and good novelty, dwarf growing and free flowering, with much-branched and dark-coloured stems. The colour is yellow, much stained with reddish orange. Award of merit.

Tritonia (Montbretia) Hereward.—Another novelty of sterling merit, with palest orange-coloured, widely-opened flowers 3 inches across; free and late in flowering. Award of merit. Both were shown by Major Petre, Westwick, Norwich (gardener, Mr. Davison).

Kniphofia R. Wilson Kerr.—A tall-growing and handsome variety with attenuated inflorescences of reddish scarlet flowers. From Messrs. R. W. Wallace and Co., Colchester. Award of merit.

Phlox General Von Lassberg.—If we regard this from the standpoint of purity and size of

flower individually, we say at once that it is the finest pure white herbaceous Phlox we have seen. The variety attains to 3 feet high, and when well grown should prove a grand addition. Award of merit.

Phlox Violet.—The name here given is suggestive of the colour of this showy and distinct sort, which is the deepest we have yet seen. Award of merit. Both were exhibited by Messrs. Gunn and Sons, Olton.

Gladiolus primulinus hybrids.—A charming new and beautiful race, with somewhat small spikes of hooded flowers, which are singularly novel and artistic-looking in their present form. There are varying shades of yellow, primrose and rose and pink, and these are occasionally combined in one flower. Shown by Messrs. R. W. Wallace and Co., Colchester. Award of merit.

Pteris aquilina Nicholsonii.—An elegant-looking variety of the well-known Bracken hailing from New Zealand, and probably only hardy in the open in the more favoured parts of Britain. The variety is very distinct from the typical form

Trevor Lawrence, Bart., Burford, Dorking (gardener, Mr. White). Award of merit.

Cattleya Rhoda.—This is one of the prettiest Cattleyas we have seen for a long time, and a mere description cannot do it justice. The sepals are lanceolate, long, and of a rich crimson apricot colour. The petals are ovate-lanceolate, partly twisted, and of a somewhat lighter colour than the sepals. In addition they have a distinct edging of delicate primrose colouring. The labellum is very curiously shaped; it is nearly flat and extends abruptly about two-thirds up from the base, thus forming a reniform sort of fan. At the base, in what would ordinarily be the throat, the colour is a mixture of very rich yellow and crimson, but on the broader portion it is rich carmine, daintily edged with pale primrose. Shown by Messrs. Charlesworth and Co., Heaton, Bradford. Award of merit.

Brasso-Cattleya Mme. Charles Maron, Sander's variety.—This is a large flower with a long and unwieldy name, which it does not deserve, as the bloom itself is very refined. The long, narrow



A GOOD CLUMP OF THE GOLDEN-RAYED LILY (*LILIAM AURATUM*) GROWN IN A SMALL BACK GARDEN.

we know so well. Exhibited by Messrs. H. B. May and Sons, Edmonton. Award of merit.

Sophr.-Lobio-Cattleya Dane superba.—This is a very pretty Orchid of a mixed parentage, no less than three genera being employed in its production. In form the flower is midway between a *Lælia* and a *Cattleya*, the sepals and petals being a lovely mixture of dull purple and apricot. The labellum is of medium size, with a bright purple edge and a very rich lemon-coloured throat, the whole making a very handsome flower. Shown by Lieutenant-Colonel Holford, C.I.E., C.V.O., Westonbirt, Tetbury, Gloucester (gardener, Mr. H. G. Alexander). Award of merit.

Catasetum russellianum.—A curious addition to this interesting family of Orchids. The flowers are borne rather closely on a pendulous raceme and are of medium size. In colour they are a greenish white, with thin green venation over the whole flower. The plant exhibited was in a 3-inch pot, and carried one raceme composed of twelve fully-developed flowers. Shown by Sir

sepals are bluntly pointed and somewhat reflexed at the edges, the sepals being very much broader and slightly crenated. The labellum is quite characteristic of the family, it being very large, broad and highly fimbriated. The colour of the whole flower, with the exception of the throat of the labellum and at the extreme base of the segments, which are primrose, is bright lilac purple. Shown by Messrs. Sander and Son, St. Albans. First-class certificate.

Lobio-Cattleya Elva St. Vincent.—A very pretty flower of rich yet refined colouring. The sepals and petals are of the usual bright rosy mauve colouring, but the labellum is most distinct. As the ground colour is very deep rich purple, this being relieved by two large dots of pale and deep yellow hues situated at each side of the entrance to the throat, these give the flower a most striking appearance. Shown by H. S. Goodson, Esq., Fairlawn, Putney. Award of merit.

All the above were shown before the Royal Horticultural Society on the 1st inst., when the awards were made.

TREES AND SHRUBS.

FLOWERING SHRUBS IN JULY.

(Continued from page 409.)

CYTISUS nigricans is one of the most showy of the whole family, in addition to the success with which it can be transplanted. It makes a well-shaped, round-headed bush and produces a very large number of flower-spikes, each in turn carrying fully 100 bright yellow flowers; in fact, on some spikes I have counted almost 200 blossoms. This shrub is very seldom met with, but attracts universal attention when seen at its best, and only needs to have the flower-stems removed when they are over to keep it shapely.

The Genistas are closely allied to the Cytisus, and all have yellow flowers. One of the most striking is *G. ætensis*, which makes a tall, elegant specimen with very slender, pendulous branches, and flowers freely in a young state. *G. tinctoria* has upright stems about 2½ feet in height, and makes a good subject for planting in a mass on account of its even growth. It is often improved and invigorated by being cut clean to the ground. For the front of the shrubbery there are several very ornamental sorts, especially noticeable being *G. sagittalis*, *G. pilosa*, *G. prostrata* and *G. cinerea*. Perhaps the most showy of all summer-flowering shrubs with yellow flowers is *Spartium junceum*, which deserves a place in all gardens. In addition to the fine display produced in the open, it is also most useful for all kinds of cut-flower work. It will thrive in almost any soil, even of the poorest description, and only requires the Rush-like growths cut back after flowering. To prolong the flowering season, however, it is a good plan to prune back one specimen into the old wood annually.

Another highly ornamental member of the Leguminosæ is *Hedysarum multijugum*, from Southern Mongolia, which is perfectly hardy, but the shoots die back and a profusion of young growth is made, which carries numerous racemes of rosy purple flowers. It looks extremely pretty if the slender stems are tied up to a neat stake.

The Hypericum family comprises many pretty yellow-flowered shrubs, and a selection of the best should always be included. They are all of small or medium-sized growth, neat in appearance and require little attention. *H. androsæmum* is one of the largest growers, and the flowers are succeeded by showy black fruits. *H. inodorum*, *H. elatum*, *H. hookerianum* and *H. prolificum* all make good-sized bushes, which make new stems freely and are improved by having the older ones removed when this appears necessary. The smaller-growing Hypericums are exceptionally pretty and vary much in appearance. *H. aureum*, *H. galioides*, *H. kalmianum*, *H. densiflorum* and *H. Coris* are among the best. *H. moserianum tricolor* is one of the most pleasing of all variegated shrubs, being a charming combination of green, yellow and red. It is a small grower and should be given a well-drained position.

Hardy Fuchsias are common in the warmer parts of the country, but their cultivation might well be extended, for, though they die back to the ground annually, this need be no deterrent. We have grown beds of them for many years, and a very charming display they make if one has room, otherwise single specimens in the shrubbery are very ornamental. I believe there are now some thirty or forty hardy varieties, but can only speak of those which have proved a success with us. *F. Riccartonii*, one of the oldest, is a delightful shrub, and probably the hardest of all, *F. macrostemma*, has long, slender, red blossoms produced with great freedom on pendulous branches. *F. Thomsonii* and *F. corallina* should also be included. A. E. T.

(To be continued.)

THE FRUIT GARDEN.

THE ROOT-PRUNING OF FRUIT TREES.

IN the culture of hardy fruits there is no operation capable of producing such good results as root-pruning when the task is intelligently and properly carried out, but where the work is performed in a haphazard manner much more harm than good is frequently done. At the outset it may be as well to briefly consider what root-pruning is and for what purpose it is adopted. The operation itself merely consists of shortening back all large, straight roots which have a tendency to go downwards in the soil, but the object of the work will need more explanation. It frequently happens that when young fruit trees have been planted a year or two they commence to grow at a tremendous rate, shoots several feet long being produced in one season. This may at first seem very satisfactory, but when the owner looks year after year in vain for flowers and the subsequent fruit he is inclined to think, and rightly so, that something is wrong. What is happening in such a case is that the tree is devoting the whole of its energies to the formation of wood, and no fruit is the result. It is in such instances that root-pruning is required, the idea being to give the tree a check and thus induce it to form less wood and more flowers.

The best time to carry out the work is the end of September, and it does not matter in the least whether the leaves have fallen from the tree at that date or not. In the case of trees of manageable size, say, those which have been planted three years, it frequently happens that lifting them and replanting them immediately will suffice, the breaking of a certain number of roots in the operation being a sufficient check. With older and better established specimens, however, the above system will not answer, and more elaborate methods have to be adopted. The general practice is to measure a half-circle round the stem of the tree and some distance away. The distance will vary according to the size of the specimen being dealt with, but a good general rule is to make the line one-third the distance from the stem as the tree is high. Thus if a tree is 9 feet high the half-circle line should be made 3 feet from the stem, or in similar proportion. The idea of only going half-way round the tree at one operation is that this will probably prove sufficient to bring the tree into bearing; if not, the other half is done two years hence.

A trench 12 inches to 18 inches wide is next taken out to a depth of 1 foot or more so as to reach all the large roots, these being severed close to the inner side of the trench. A sharp knife must be employed, and the cut should be made from below in an upward yet sloping outwards direction. When 12 inches or 18 inches down it is a good plan to tunnel under the mass of soil and roots towards the bole of the tree, severing all large roots encountered in the course of the work. This tunnelling is probably of more benefit than anything else, as the roots found thus are usually those which take a straight downward course.

To fill up the trench will be the next task, and this requires some care. Where it is easily procured good fibrous loam of a rather heavy character is best, and if Plum, Cherry or other stone fruit trees are being dealt with, the addition of some old mortar, or lime in some other form, will be highly beneficial. The tunnel under the ball of soil and roots must first be filled in, taking care not to leave any hollow spaces and making the new soil firm, then fill in the trench, and make this firm also, so that the new roots which penetrate shall have an opportunity of becoming fibrous.

Many amateurs, and even some professionals, expect to see a good crop of flowers and fruits

the spring and summer following the root-pruning and as a result of the work. This is quite impossible, because any flowers to open next spring are already formed in the bud, hence it is obvious that the operation can have no influence over the crop the summer following the autumn in which the work was carried out. Growth should, however, be less vigorous, and a tree root-pruned in the autumn of this year should, as a result, produce flowers and fruits in 1910.

A NEW EARLY DESSERT APPLE.

(FELTHAM BEAUTY.)

A GOOD new early dessert Apple is sure of a hearty welcome, as we have none too many which can be included among the very early varieties. Feltham Beauty is stated to be the result of a cross between Mr. Gladstone and Cox's Orange Pippin, two excellent parents as all hardy fruit growers will know. The fruits as shown were rather larger than the average of either of the parents, the colour being deep yellow heavily striped red. The flesh is yellow, moderately firm and crisp, and of a pleasing brisk flavour. Evidently the fruits are in season immediately Mr. Gladstone is over, thus partaking more of this parent than of Cox's Orange Pippin, so far as period of ripening is concerned. The tree is said to possess a vigorous, erect habit, and the variety will, we think, be largely grown in a few years hence. The fruits were shown by Messrs. J. Veitch and Sons, Limited, Chelsea, before the Royal Horticultural Society on the 18th ult., and received an award of merit.

THE KITCHEN GARDEN.

SUTTON'S EVERGREEN DWARF BEAN.

HAVING grown this excellent Bean for the past three seasons, I am most favourably impressed with it, and consider the variety to be one of the very best that can be grown. The habit of the plant is very dwarf, and the pods are produced abundantly; and if these are gathered as fast as they are ready, the plants will continue to bear during an exceptionally long period. Sown on the same date as the well-known Canadian Wonder, pods were gathered five days before those from the latter variety were ready. I have not personally any experience with this Bean for forcing, but am told by friends who have tried it that it is one of the best for this purpose, making a good succession to that well-known and excellent Bean Sutton's Forcing. Pods of the Evergreen Bean are perhaps hardly large enough from the exhibitor's point of view, but for home consumption, especially for growers with small gardens, it would be difficult to beat, if, indeed, it can be equalled.

Munden Gardens, Watford.

C. RUSE.

PARSLEY FOR WINTER USE.

MANY persons fail to grow Parsley satisfactorily during the winter months. It is generally rather scarce at that time, and so nice clean leaves are highly appreciated. But Parsley will not always grow freely in some soils; the young seedlings canker and die. In quite another part of the garden the plants will often thrive well, so it is a good plan to transplant some of the best seedlings to various quarters in the same garden during the month of September. A few rows of plants should be in partial shade, while others are in the open; then if one batch fails to grow the other might succeed. The young seedlings should be lifted with the aid of a trowel or hand-fork from different parts of the rows without disturbing the roots of those left. AVON.

COLOURED PLATE.

PLATE 1356.

THREE INTERESTING DAFFODILS.

LORD ROBERTS.—This handsome trumpet Daffodil was raised in the Surbiton nurseries of Messrs. Barr and Sons a few years ago, and was the result of a cross between Weardale Perfection and Monarch. The flowers are of enormous size when well grown, with a broad, massive perianth and a noble trumpet. The colour is golden yellow. The plant makes a strong, vigorous growth and attains a height of 23 inches. First-class certificates were awarded to this flower in 1901 by the Royal Horticultural Society, the Midland Daffodil Society and the Cornwall Daffodil Society. At Plymouth in 1905 it also received a first-class certificate.

Calpurnia.—This is another new seedling Daffodil which was raised in 1903 at Surbiton, and has been very much admired wherever exhibited. The flower has a white campanulate perianth and a long, straight trumpet of a soft primrose shade; it is a beautiful flower.

Loveliness.—This is a seedling raised from the well-known Daffodil Mme. de Graaff, and after Peter Barr was one of the first new seedlings exhibited of the solid white trumpet Daffodils. The flower is of remarkable beauty, having a bold, stiff, snowy white perianth, broad and smooth, and a very elegant white trumpet expanding at the mouth. At the Midland Daffodil Society in 1903 it was given an award of merit, and again at Truro in 1906.

THE ROSE GARDEN.

NEW ROSES.

A LETTER just to hand from a reader of THE GARDEN asks that the notes I have contributed to your column dealing with newer Roses for some years past should be published forthwith, giving as his reason for the request that most Rose amateurs order their plants in October, and thus could have the benefit of my experience when so doing. "Had you written before October last year, I would not have ordered some plants that I did and would have ordered other plants that I did not." As there is much force in his remarks I comply with pleasure with his request. At the same time, I must point out that my notes on these new Roses are simply the result of my growing them, often for only twelve months, in my garden, and it does not necessarily follow that because a particular Rose has done well or badly with me it will behave in a precisely similar fashion

somewhere else, possibly 100 miles away, with a different soil, atmosphere, aspect and all the other "matters and things" that affect for good or evil a Rose plant.

It is curious how much seems to depend on these "matters and things." How often one comes across examples of a Rose that does well in your garden, yet positively refuses to grow at all in the garden of a friend whom you know to be possibly a better Rose grower than yourself! I could give many instances, but one will suffice; Betty, for instance. Now I have had Betty in my garden ever since she was obtainable—some three or four years—and, be the reason what it may, I can always grow Betty well. Perhaps it is because I have always spoken well of her that she treats me so kindly; but there are not many Roses that flower like Betty. I cut five good blooms of this Rose from two plants last Christmas Day, and two more flowers subsequently opened on New Year's Day. Those two identical plants were in flower again before June 1, or five months later. I cut a flower in May, so that only left February, March and April out of the whole twelve months that I did not have a

record one. And a record one it has turned out, although not quite in the direction I anticipated. I never remember having so many flowers, such grand colour and perfect shape, but so short lived, here to-day and gone to-morrow would give the majority too long a life, it was more often a case of fine before seven gone before eleven. The season was a curious one in many respects, promising at one time to be very late; the powerful sun of the last week in June turned it into a very early one, and the majority of the flowers, especially those varieties with three or four rows of petals, never had a chance to grow, all of which will have to be borne in mind in consulting Mr. Mawley's analysis, which we all look forward to in October, for Roses like Killarney, Captain Hayward and Betty never had an opportunity, one was afraid to stage them, and so they were left at home. Apart from the exhibition point of view, it must be a good many years since we had such a tremendous quantity of flowers. The aftermath or mid-season has suffered in consequence and so will our autumn display; but the grand rain which is coming down steadily while I write

will help considerably. With me the season has been entirely satisfactory—I have never had better flowers. The plants have made wonderful growth notwithstanding a rather bad attack of mildew, and the new Roses have had an exceptional opportunity to show us what they can do. Some of the old favourites for that matter have taken a new lease of life, practically as well as figuratively, and many a Rose that was marked for the bonfire or the churchyard or a neighbour's



A NEW EARLY DESSERT APPLE, FELTHAM BEAUTY, SHOWN BY MESSRS. J. VEITCH AND SONS, LIMITED. (Slightly reduced.)

flower off Betty. This I consider a record for Roses growing out of doors. I admit that, practically, January and May should be added; but (last year only, mind!) I did, as a matter of fact, have flowers on these particular plants of Betty for nine months out of the twelve. My plants are flourishing, 3 feet high and as much through; yet I came across, in a garden of a friend, some miserable plants, and on enquiring what they were I was told, "That's what I wanted to show you! That's your friend Betty! No earthly use!" I told him to burn them and have another try, and he did; but the result was not very much better. Yet he can grow Roses better than I can.

I cannot grow Mildred Grant, yet it apparently is not a difficult Rose to grow, judging from the number one sees exhibited. I have never perhaps grown it in sufficient numbers; it is evidently a Rose that you must grow by the dozen or the score, and I have no room for luxury of that kind. No, we all have a Rose or Roses that do well with us, be it a Betty, a Bessie or a Mildred, and equally we have Roses that do not do well, so that a word in season on this point will not, I hope, be thought out of place.

Talking about the season reminds me that last time I wrote was on the "Prospects of the Rose Season of 1908," and writing in early June I ventured to prophesy that the season would be a

garden has been saved that fate by its performance in 1908.

Purley.

HERBERT E. MOLYNEUX.

(To be continued.)

PRUNING RAMBLER ROSES.

Now that the majority of the rambles have passed out of flower no time should be lost before the pruning is completed. Attention to this matter promotes tidiness, and also by removing the old flowering wood light and air is admitted to the young shoots, thereby producing a condition favourable to the thorough ripening of the wood, and consequently a good crop of flowers the ensuing season. C. RUSE.

ROSE BARONNE PISTON DE ST. CYR.

THERE is something extremely dainty about this charming monthly Rose. It is the nearest approach to a mauve that we have. The lovely clear colouring is most pleasing, and the semi-double blossoms so elegantly borne upon erect tall growths are very attractive. The inner petals are of that delicate flesh pink that we usually associate with sea shells. These monthly Roses are invaluable to our gardens of the present day, many of them being as beautiful as the Tea Roses, a class to which they are related. P.

THE FLOWER GARDEN.

DAFFODIL NOTES.

OVERCROWDING IN POTS.

IN my notes on the best Daffodils to grow in pots I forgot to mention one important item which is worth consideration at planting time if we wish to get the most pleasing results in the spring. It is the question of overcrowding. I used to think that the more flowers I could get a pot to produce the better, and that a regular solid mass of colour was the acme of perfection. It may be if we only consider the floriferousness of individual bulbs or the care required in flowering a tightly packed pot, but if we look upon graceful effect as the main point to aim at we must seriously consider the above question.

The charm of a pot of Daffodils does not consist in making it look as much like a hedgehog as possible, but in so regulating matters that each individual plant can grow in a proper upright way and show the beautiful outlines of its flowers. Not that I like a skinnny-looking pot; far from it. It is as bad to have too few as too many. We want the happy mean where the desired colour effect is gained without the obliteration of the outlines of the several blooms.

DAFFODILS FOR BEDS AND THEIR ARRANGEMENT.

In considering what varieties are best suited for planting in beds a good rule to follow is large varieties for large beds and small for small. I would also advocate only one variety in a bed; a mass of anything is always attractive. They know how to garden at Glasnevin Botanical Gardens, Dublin, and here I found when visiting them this spring that one variety in a bed was

living mass of coloured gold. Golden Spur comes next in depth of colour, then Golden Bell, Glory of Leiden, Emperor and P. R. Barr. For small beds the early Tenby (*obvallaris*) and the rich yellow Santa Maria are splendid subjects. One bit of advice I would give in respect of planting in beds, and that is, plant thickly. The object of a bed is to give a grand solid mass of colour, and whenever I see a poor and badly covered one I feel that its life has been a signal failure.

WHAT TO PLANT IN BORDERS.

If I were asked what might be planted in borders, I would reply, "Any sort"; but if I were asked what I should plant, then I would have to think, for I would want diversity, succession, freedom, constitution and attractiveness to be combined, as far as possible, in my selection. In borders we have only Hobson's choice, for we must all plant in clumps more or less. Individuality appears when it comes to settling their size and arrangement. Personally, I like largish groups of about nine or ten large trumpets, and about a dozen or even more, if the flower is small, of the other types. Then as to arrangement; in a mixed herbaceous border I should have as many sorts as possible, the variety being much more interesting than more clumps of a fewer number. When, however, the border is long and narrow, the conditions are changed, and alternate clumps of good contrast are very charming. For this I would suggest such combinations as Duchess of Westminster and P. R. Barr; Emperor and Empress; Mme. Graaff and Leonie; Flora Wilson and J. B. M. Camm; Barri conspicuus and Citron; and Klondyke and Louise (*Poetaz*).

For clumps in mixed borders I would start with the following, or, if I could not get them all at once, I would go on adding more until I had them. They combine pretty well all the

P. R. Barr, Seagull, Sir Watkin, Stella superba, Vanessa, Waterwitch and White Lady.

If I wanted to add a few more they would certainly include Cassandra, Duke of Bedford, Dorothy Wemyss, Brigadier, Castile, Golden Bell, Gloria Mundi, Lady Margaret Boscawen, Firebrand, Mrs. Betteridge, Torch, Ariadne and Weardale Perfection. The two lists together contain fifty varieties, and form a collection of good reliable sorts of, on the whole, a medium price.

JOSEPH JACOB.

THE ADONIS.

THE Adonis form a small group of Ranunculus-like herbs with finely divided leafage and glossy bright yellow flowers; they found much favour in old-time gardens, and one often meets with cheery-looking clumps of the native *A. vernalis* in old-established herbaceous borders in association with *Fraxinella*, *Thyme*, *Hepatica*, *Aconite*, *Goat's Rue* and *Celandine*, these having slowly but steadily spread themselves beyond their allotted places till everything of a weaker constitution gave way before their aggressive roots. The Adonis, if old-fashioned, are none the less charming, and their dainty growths, studded with bright flowers, find many admirers in this age. If we are content to leave them to grow at their own limited pace, and carefully avoid disturbing them when rearranging the border, they will not fail to give a good return in plenty of flowers of surprising richness when seen in the mass. There are about six of them, and all will grow in any good garden soil in a sunny position. If the soil is inclined to be damp they will like it so much the better. Planting should be done in autumn, and it is preferable to plant strong seedlings than fragments of old clumps. Most of these plants produce seeds plentifully, and they germinate well if sown in a damp corner and lightly covered; a similar site to that one would choose for *Primula* seedlings is best. The finest Adonis is a new comer

A. amurensis, a strong and free-growing plant, 1 foot to 3 feet high, somewhat variable in its leafage and in the colour tint of its flowers. The stems are stout and thickly clothed with elegant leaves, sometimes slightly tasselled but generally flat and fan-like, and there are numerous branches, each of which bears a bright yellow flower, 2 inches across, like a giant Buttercup, but with about twenty petals that are tinted with a warm bronze shade on the outer surfaces. There are semi-double forms and others whose flowers are much paler and without the external bronze colouring, and one hears of many other forms that have been grown in Japan for ages, but which appear to be quite unknown here. It often pushes its first flowers in the new year, and these will expand if the weather is open or await a more favourable opportunity. It is a native of China.

A. pyrenaica is an older plant of vigorous and distinct growth. It has pale green leaves which resemble curled Parsley at the base of the stems, and they decrease in size until they become mere mossy tufts about the inflorescence. The stems branch freely when strong, grow 2 feet high, and bear fine, rich yellow, glistening flowers 2 inches to 3 inches across the expanded petals. It seems better adapted for planting on the rock garden than in the border; the roots prefer a stony medium, thoroughly well drained, or the plants will discolour and decay at the collar. It flowers in early summer.

A. vernalis, the common Ox-eye, is a well-known border plant. It makes thickets of flexible stems which do not branch freely, clothed with finely-cut, tasselled leaves and bearing a single flower at the top of each coloured a deep yellow, the surfaces glistening, the petals numerous and 2 inches across. There are several varieties not generally separated, of several shades of yellow, and the tint of silvery yellow seen in the flowers of *Ranunculus Ficaria*



A CHARMING POOL IN THE REV. T. S. LINDSAY'S GARDEN.

the rule. A glorious mass of Golden Spur in a large oval bed is famous and attracts visitors every spring. Yes, these deep yellow selfs are the beddera *par excellence* of all Daffodils. How I wish maximus was the free bloomer that Golden Bell is! It would have no rival, and the tears that Linnæus shed over the golden Goræe of English hillsides would have their counterpart in me in the intoxicating pleasure of looking on that

five points I enumerated above: Agnes Barr, Albatross, Autocrat, Barri conspicuus, Beauty, Blackwell, Comus, Citron, Crown Prince, Campanelle Jonquils, Duchess of Westminster, Elvira, Emperor, Empress, Eyebright, Flora Wilson, Frank Miles, Glory of Leiden, Grandee, Homer, J. B. M. Camm, Klondyke (*Poetaz*), Leonie, Lucifer, Lulworth, Mabel Cowan, Mme. de Graaff, Minnie Hume, Mrs. W. T. Ware, Ornatus,

is represented in one rare form, and there are several forms with a multiplicity of petals. It averages a little above 1 foot in height in most gardens.

A. wolgensis is a rare plant with slender stems clothed with bright green Parsley-like leaves, bearing on every one of its branches a rich yellow flower $1\frac{1}{2}$ inches across the petals. It much resembles *A. vernalis* as regards its flowers; in fact, several forms of *vernalis* are scarcely distinguishable from it. Its leafage is quite distinct, being thinner and flatter than that of *A. pyrenaica*—more resembling Chervil.

A. walziana, the only remaining perennial plant, is a hybrid between the last-named and *A. vernalis*. It has stiffly, erect stems above 1 foot high clothed with finely-cut, tasselled foliage, coloured a pale shade of green and bearing narrow-petalled, yellow flowers that expand very fully. This and the preceding plant flower late in spring. G. B. M.

THE PENTSTEMON AS A BEDDING PLANT.

FORMAL bedding often becomes wearisome to the eye, by reason of its lack of variety and the repeated use of the same subjects year after year. This may be remedied in part by a less frequent use of Geraniums and planting more of those things which are beautiful individually as well as decorative in the mass. A packet of good seed will yield many Pentstemons that will be a joy from the opening of their first blossoms until the frosts of autumn end the display. Treated as annuals they will make a brave show, provided they are given an early start. Growing from cuttings may be desirable to preserve certain varieties, but the longest spikes and the boldest flowers are produced upon seedlings in their first year.

Early in February is a good time to sow the seed, placing it in an intermediate house or upon a gentle hot-bed. The seedlings should be pricked off about 4 inches apart to give them plenty of room to develop. When nicely rooted they may be moved to rather cooler quarters, into a greenhouse or sheltered frame. Unless the weather is very severe for the time of year, they may be placed in the open air to harden about the beginning of April. This makes room for more tender things, and if there is a bed or two that can be cleared of early-flowering bulbs, the Pentstemons may be planted out before the rush of other bedding work. It is not advisable to pinch the seedlings, for if allowed to grow naturally they will produce a magnificent spike in the centre of the plant and a number of smaller ones from the side shoots.

Seeds may be obtained in separate colours, but a mixed bed seems far more interesting, and the various shades of colour do not clash to any serious extent. The plants will often live for several years, especially when they can be left undisturbed in the autumn. To make certain of a supply of approved varieties, cuttings may be put into a cold frame in the autumn, dibbled into boxes, or, better still, into a bed of sandy soil made up in the frame to within 6 inches or 8 inches of the glass. The cuttings should be made from the tips of young shoots about 3 inches or 4 inches long which have not developed flower-buds. They will root very easily and go through the winter without artificial heat; but a covering of mats or straw will be a safeguard in very severe weather. Damp, not cold, is the great winter enemy of the Pentstemon.

By reason of its height—about 24 inches—the Pentstemon is not to be recommended for small beds. To produce a good effect, a round bed for its accommodation should not be less than 10 feet in diameter, and one of any other shape should be proportionately large. It will not take many plants to fill a bed, for the seedlings may be given a space of 15 inches with advantage. Golden Feather or the dwarf white Antirrhinum make a good edging for the bed. Spare plants put into the kitchen garden or herbaceous borders

yield a good supply of long, graceful spikes for house decoration. THOMAS H. WORLD.

AN IRISH RECTORY GARDEN.

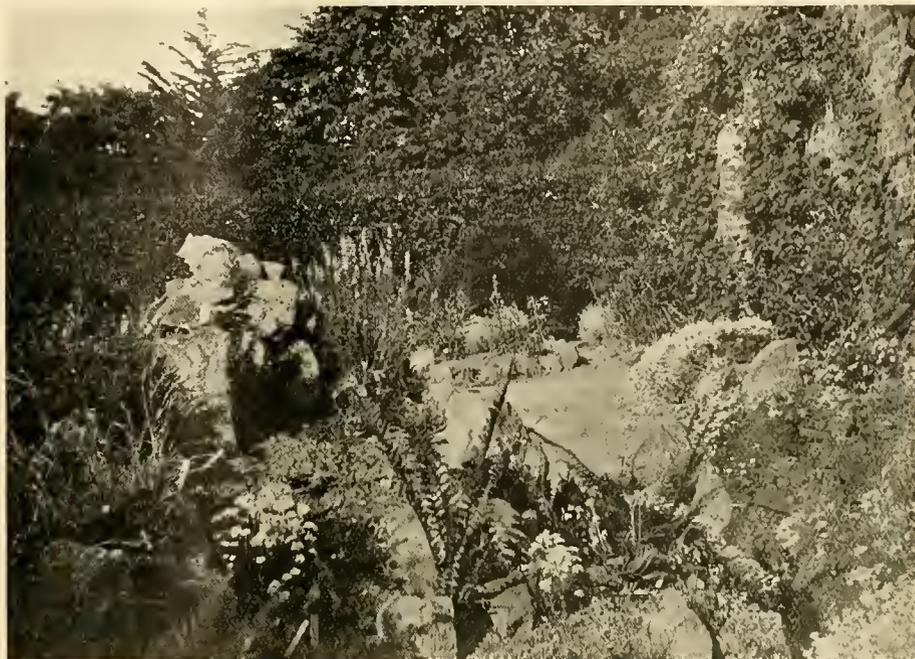
I SEND you a couple of photographs of my garden which you may think worthy of your pages. One represents a portion of the alpine valley which I dug out in a winding line, one side being rockwork, the other lined with turf bricks, in the interstices of which many Saxifrages and Ferns

difference. There's a Daisy: I would give you some Violets." T. S. LINDSAY, B.D. Malahide, County Dublin.

SWEET PEA NOTES.

BUD-DROPPING IN SWEET PEAS.

I THINK I can give your correspondents "J. M." and "J. H." a hint from my own experience this season. During the June drought I noticed that



A PORTION OF THE "ALPINE VALLEY" IN THE REV. T. S. LINDSAY'S GARDEN.

find a congenial home. At the end is a circular nook filled with *Ramondia pyrenaica*, which I dug out of the precipitous cliffs near St. Sauveur in the Pyrenees some years ago, and here they are quite happy. In May and June this alpine valley is a very pretty sight.

The other picture is of a pond which I scooped out and lined with concrete. Round the edge is a circle of sunken tubs to retain moisture, in which grow *Rodgersia*, varieties of *Osmunda*, *Ourisia coccinea*, *Kämpferi* Irises and other moisture-loving plants. In the pond are *Nymphæas*, and around are banks covered with luxuriant *wichuraiana* Roses, such as *Hiawatha* and *Minnehaha*.

There is nothing exceptionally rare or fine in my garden, but that does not hinder it from giving me pleasure, nor have I anything in great abundance; but I have a very good variety. On one side of a brick gate tower between two gardens I have fixed in terra-cotta lettering the inscription *Deus primum hortum fecit*, from Lord Bacon's "God Almighty planted the first garden." On the other side is *Deus incrementum dat*, from 1 Corinthians iii., 6. On another pillar is George Herbert's verse adapted addressed to my successors:

If thou dost find
A garden to thy mind,
Without thy cost,
Serve thou the more
God and the poor;
Thy labour is not lost,

while on others I have inscribed Ophelia's words: "There's Rosemary, that's for remembrance; pray you, love, remember; and there is Pansies, that's for thoughts. There's Fennel for you, and Columbines: There's Rue for you; and here's some for me. We may call it herb of grace o' Sundays; you may wear your Rue with a

many plants in one of my rows of Sweet Peas were dropping their buds. Instead of watering them I dug down carefully with a hand-fork near some of the worst plants and found the soil about the roots quite moist enough, but at the same time I saw that some roots were injured by contact with farmyard manure. My reason for proceeding on these lines was the fact that the next row was growing away quite healthily, and as far as I could observe had not dropped a single bud. The healthy row had been treated to a somewhat different method of manuring, the surface soil having been removed, leaving a deep trench, in which the manure was placed and then well dug into the second layer of soil before the upper layer was returned to its place, whereas the manure for the other row was dug in less deeply, thus leaving it in such a position that the roots worked among it too early, with consequent injury to them and resultant failure of flower development. However, the whole row soon resumed a healthy appearance and has since produced a mass of bloom without the aid of the watering-can; in fact, I am not aware that either row has been watered since the plants were 1 foot high, and I am convinced that many promising rows of Sweet Pea plants that would otherwise have yielded an abundance of bloom have been ruined by injudicious watering. I am also of opinion that the application of too much manure, manure wrongly applied, not sufficiently decayed, applied too late—before Christmas is better than after—and soil not properly worked are among the chief causes of failure to produce satisfactory results in Sweet Pea growing. How your correspondents above referred to have failed I leave to their own decision after a review of their methods in the light of the above-mentioned conclusions.

Hawsham, Lincoln.

W. BOOTH.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE HARDY FLOWER GARDEN.—The planting of Daffodils must go on apace, and clumps of the double and single forms should be planted forthwith at intervals in the border, where annuals have ceased flowering and where the ground can be prepared for the planting. Dutch bulbs of all kinds should be dealt with as opportunity offers. Wallflowers may be planted in their flowering quarters forthwith. It is well to get these nicely established before the hard weather sets in. In the same way we should be disposed to plant Sweet Williams, Canterbury Bells and other biennials which make such a good display in the early summer. Never crowd these plants, but anticipate the space they will require when they are in bloom and dispose the plants accordingly.

Roses.—The present is an excellent time to remove weak shoots from dwarf Roses, thus concentrating the energies of the roots on the strong ones that are retained which are to bear flowers next season. At the same time it is wise to cut away unsightly old growths that are of little or no use to the plant and spoil its beauty. Roses may still be propagated by cuttings outdoors, and we would refer the reader to an illustrated article that recently appeared in these columns for information thereon.

Vegetable Garden.—Weeds are developing at an alarming pace just now, and if the well-being of the various crops is to be promoted the weeds must be kept under and the hoe frequently used for this purpose. On no account must weeds be allowed to seed, otherwise considerable trouble will be perpetuated in this way. Sowings of Spinach for spring gathering may still be made. I am just putting in my last batch, although it is somewhat late for this work. Onions that have



1.—A CHARACTERISTIC SPRAY OF FUCHSIA RICCARTONI, SHOWING ITS BRANCHING GROWTH.

ripened should be lifted without delay, as the moister weather we are likely to experience will seriously impair the prospects of keeping them through the winter.

Hardy Fruit Garden.—As soon as Apples and Pears are ripe they should be gathered and stored away in a cool room, where they will keep satisfactorily during the recognised keeping period. One of the best Plums for the beginner is the well-known Victoria, as it comes into bearing early and fruits so freely. Unfruitful trees that have been making rank growth for some time I am lifting during the present month, and to ensure satisfactory fruiting in the future the roots are being pruned at the same time. I am making up my last bed of Strawberries.

Chrysanthemums.—Hardy early-flowering Chrysanthemums are fast coming into flower; but unless their growths be securely staked and tied there is a risk of many shoots being irreparably damaged. As the first blooms get past their best it is a good plan to remove them at once, so that the buds surrounding them may produce flowers for successional displays, and thus make the beds and borders bright and pleasing. Plants of exhibition varieties, the buds of which are showing colour, I am removing under cover at once. I have always found that the plants left out after the florets are showing colour suffer in consequence of exposure to heavy dews and rains that invariably fall at this period. It is wise to shade the plants when under glass for a time. Abundance of air must be admitted to the greenhouse, and on no account should the doors or ventilators be closed. Those growers who have not yet prepared their glass structures for the reception of these plants should do this at once. Faulty glass roofs should be made secure by painting the rafters, in this way filling up pin-holes and other points where rain comes through. See that the hot-water apparatus is in

good order and the hinges and supports to ventilators are in working trim. Always maintain the buds of these plants in an upright position, and the flowers will then open evenly and be of good form.

The Window Garden.—Aspidistras, Palms and Indianrubber Plants that always make the window interesting in the winter months will require less water from this time. All that is needed is to keep the soil just moist, and once or twice a week should meet their demands quite satisfactorily. Fuchsias and other plants that are going out of flower may be stored in a spare room from which frost can be excluded. Here they winter very well, provided the plants are kept dry at the roots during the whole of the period. Hyacinths should be placed in glasses and stood in a darkened cupboard or in any position answering the same purpose until rooted. They will make a welcome display in the succeeding spring. Early-flowering bulbs such as Roman Hyacinths, Freesias, Paper White Narcissi and double and single Van Sion should be potted up freely for window gardening purposes. D. B. C.

INCREASING THE HARDY FUCHSIAS.

THERE are few plants in the hardy flower garden that are of more value than the hardy Fuchsias, of which we have several very excellent sorts, and for all gardens where they can find ample accommodation they may be recommended for providing a display over many months. They are more or less shrubby plants, and most of them are hardy enough to pass through the winter of the United Kingdom unscathed. In the more Southern Counties of England they are extensively grown as shrubs, also for making an interesting hedge, and one often meets with them on either side of the cottage doorways of humble workers in the South.

An ideal position for these plants is, of course, a southern aspect, and if grown under the base



2.—A SPRAY OF FUCHSIA CORALLINA, SHOWING THE STRONG CHARACTER OF THE GROWTH.



3.—SHOOTS DETACHED FROM OLD PLANTS AND SUITABLE FOR MAKING INTO CUTTINGS.



4.—THE SAME SHOOTS MADE INTO CUTTINGS AND READY FOR INSERTION. NOTE THE FLOWER-BUDS AND LOWER LEAVES REMOVED AND THE STEM CUT THROUGH BENEATH A JOINT.

of a sunny wall or in any sheltered position they undoubtedly give a more than ample return for the trouble taken with them in the first instance.

They are all too seldom seen in our hardy flower garden, and it is because of this fact that we hope to induce beginners in gardening to take up their culture, with which we know they will be more than pleased. Even in the coldest districts many of the hardy Fuschias, if cut down by the frosts, will spring up again and grow away vigorously; in fact, they may almost be placed among the best of our hardy plants. At the recent show for readers of THE GARDEN pretty bunches were set up by some of the exhibitors, and, in comparison with many other hardy flowers, they were seen to advantage.

Fig. 1 represents *Fuchsia Riccartoni*. This is one of the prettiest of the hardy sorts, and grows well without any protection in the coldest quarters as well as in the northernmost gardens of the United Kingdom. It possesses a compact and twiggy habit of growth, as the illustration aptly portrays, and throughout the summer months bears in profusion bright red blossoms of a most effective kind. We can recommend this variety as being one of the very best; this is one of the first that should be acquired by those who desire to take this subject in hand. We have seen whole beds of this beautiful variety where they have been grouped for effect, and from all quarters, whether viewed close at hand or from a distance, they make a most effective display.

Fig. 2 represents another hardy variety, but quite distinct in the character of its growth. This is known as *Fuchsia corallina*. It is a very beautiful plant of more slender growth, and rather taller than the others. Its habit also is not so erect as that of some of the other forms, but on account of its distinctiveness and the larger size of its freely-developed blossoms, which are of a showy red colour, it is well to grow this in conjunction with the variety already mentioned. It is a vigorous grower, as the shoot in Fig. 2 aptly portrays. Other varieties which may be mentioned as deserving of notice are: *F. corymbiflora*, scarlet; *F. globosa*, purplish red

and violet; *F. gracilis*, scarlet and purple; and *F. macrostemma*, scarlet.

These plants are increased very readily, and this is a matter of considerable interest to those who desire to raise a batch of their own plants. Cuttings may be procured from any well-known hardy plantsman, who does not, as a rule, charge very much for them. Fig. 3 gives a good indication of the sort of shoots to detach from the old plants. This is shown in the hope that some readers may have a plant in their own garden or may acquire a few pieces from a friend. The period of propagation is either in the spring or autumn, but as there is at the present time such an abundant supply of suitable shoots on every old plant, the present opportunity should be taken to insert cuttings as soon as they are prepared.

Fig. 4 represents cuttings after they are prepared. Here it will be observed the lower leaves have been removed, and the shoot cut through with a sharp knife immediately below a joint, and all shoots on which buds have developed have the latter removed, in which case they are ready for insertion in sandy soil.

The cuttings prepared in the manner we have suggested should be inserted in a cold frame at this season, where they will root readily enough, but where accommodation of this kind is not available, a few cuttings may be inserted round the edge of a 5-inch pot, where the cuttings will root readily enough, and this within a few weeks. Suitable soil should comprise loam, leaf-mould and sand in equal proportions, and if these be well mixed after passing the ingredients through a sieve with a half-inch mesh, the cuttings may be inserted with a sure prospect of a successful rooting process. It is important to remember, however, that the soil should be pressed firmly at the base of each one, otherwise the cuttings may what is known as "hang," which means they will be suspended between the surface and the bottom of the hole made for its reception, and this will have the effect of causing the cutting to decay and fail.

Fig. 5 shows a number of cuttings inserted in a 5-inch pot, and these may be placed under a hand-light or bell-glass, or the pot may be placed in a cold frame and kept close during the rooting process. The soil must, of course, be moistened as soon as the cuttings are inserted, and if suitable conditions are made to prevail it is possible no more water will be required until the cuttings are rooted. Subsequently they may be potted up singly in small pots, and, if exposed to the open on fine days to properly harden off, should be placed in their flowering quarters on the first favourable occasion in the late spring or early summer, where they will grow very rapidly and make quite large and beautiful specimens by the autumn.

TREATMENT OF PEACH TREES.

VERY often the trees are neglected after the fruits are gathered; they do not appear so attractive as when laden with the luscious fruit, and the watering-can is not used as much. But I am quite sure that the neglect is not wilful: it is brought about through ignorance of the consequences of neglecting to water the border and thin out the shoots. If the beginner fully realised how much the future welfare of the trees depended upon the keeping of the soil moist during

the autumn there would be no lack of water. But there is a happy medium. It would not do to over-water the border, so we should closely examine the soil at quite 1 foot below the surface and keep it moist there as well as on the top. Surface sprinklings are not of much service; a really thorough watering should take place when it is attempted, then wait so many days again and once more saturate the soil right down to the lowest roots. This treatment, combined with plenty of fresh air, will prevent bud-dropping in the new year when the sap becomes active again. Trees that are bearing ripening fruit should also be watered if the soil at the roots is really dry. It is a mistake to keep the soil excessively dry at such a period. Of course, I am here referring to trees grown under glass. Those in the open air receive rain-water at all seasons and stages of the growth of the fruit, and with benefit, too. It is advisable to keep the ventilators open both night and day while the fruits are maturing, and after they are gathered the ventilators should be opened to their widest extent, so that a regular current of fresh air may pass through the house. The air tends to ripen the young wood. Cutting out surplus shoots also does good at this season, as then more air, light and sunshine can reach those branches retained for fruit-bearing next year. But in doing this early pruning, care should be taken to avoid cutting away too many shoots growing near the base of the stronger branches. Leave the young shoots about 4 inches apart. Thoroughly syringe the foliage occasionally. Avon.

COLLECTING WINDFALL APPLES.

ALL Apples which fall from the trees before they are properly ready are regarded as windfalls, yet it is safe to say that 80 per cent. of such fruits do not owe their premature detachment from the tree to the wind, but rather to the larvæ of the Codlin moth. These larvæ are the result of eggs laid in the top ends of the fruits in late spring or early summer, and when they hatch out in the form of maggots commence to eat tunnels in the fruits, with the result that the latter fall from the tree before they are ripe. Shortly after the fruits have fallen the maggots emerge from the Apples, change into pupæ, and in this condition pass the winter in loose soil, bark or rubbish beneath the trees, changing again to moths in the spring and thus completing the life cycle.

Much can be done at the present time towards stamping out this pest by promptly collecting all Apples as they fall and using them in some way so as to destroy the larvæ contained therein. Such fruits are useless for keeping purposes, and it is far better, if they cannot be otherwise employed, to give them to pigs than to leave them lying under the trees until the larvæ have escaped.



5.—CUTTINGS INSERTED AROUND THE SIDES OF A 5-INCH POT. THEY MAY ALSO BE DIBBLED IN SOIL IN A COLD FRAME.

THE TOWN GARDEN.

BULBS IN POTS.—POTTING.—This is an operation to which sufficient importance is not attached by some amateurs. They may procure the finest possible bulbs, use clean, perfectly-prepared pots and then prejudice their prospects of success by carelessness in the actual potting. The great thing to guard against is not to get the soil too hard beneath the bulb. Of course, rooting will be much more satisfactory in a firm than in a loose medium, but if the firming is carried too far the result will be that the roots will not penetrate the soil readily and the bulb will be forced up out of place, and failure will be the ultimate result. As a rule, if the pot is filled to within about 1 inch of the rim with loose soil and the bottom is tapped sharply once or twice on the bench the compost will settle down to the right depth and solidity, and the bulb can be placed in position and surrounded with soil, so that the apex just protrudes through the surface. Immediately upon the completion of potting, and prior to the pots being plunged, the soil should be nicely moistened through a rosed water-pot. The number of bulbs put in each pot will vary according to the kind and the size of the bulbs, but it is never wise to crowd them unduly, as the leaves and flowers then come weak.

PLUNGING THE POTS.—This is an exceedingly important part of the business. If we kept the pots in full light and watered them as the soil became dry, leaves would be produced very quickly indeed, but roots would be practically non-existent, with the natural result that the flower-spike would not develop, and the operation would have to be written down as a failure. If, on the other hand, the pots are plunged in suitable beds, or, if this is not convenient, are placed in a dark, cool cupboard, roots will be produced in advance of top-growth, and progress throughout will be entirely satisfactory. The best material of which to form a plunging-bed is Cocoanut fibre refuse, and it is preferable to have it out of doors in some such position that it is easy to cover it with sacking or other material that will throw off heavy rains. In the event of Cocoanut fibre refuse not being available ashes can be requisitioned for the purpose, but there is occasionally a something in them which prejudicially affects the growing point of the plant and sometimes quite ruins the spikes. Failing either of these systems being convenient, success will accrue upon placing the pots in a dark cupboard, where one can gain access to them for watering, which will demand more attention than when a plunging-bed is at command. It is impossible to say definitely for how long the pots should remain in the dark, but usually a period of six weeks answers admirably. The grower must exercise his own judgment upon this point, withdrawing them when it is certain that root-growth is good and some advance has been made in the tops. In the case of Hyacinths the top should be about the same size as a Filbert nut when they are brought into the light.

AFTER TREATMENT.—The period immediately after the plants have been brought out of the dark is rather a critical one, for in the desire to bring the process forward one may easily do wrong. In no circumstances must they come directly into full light. When the pots are taken out the growing point will be pale yellow in colour and the action of strong light on this will be unfavourable; therefore, for the first few days cover plants and pots with three or four thicknesses of newspaper, withdrawing them one at a time until after a week or so the last one will be removed, by which time the growth will be hard, green and not at all likely to suffer. It will also be necessary to attend to the watering with the utmost care. The soil must never be allowed to become as dry as dust. It is not wise to commence the use of liquid manure until the flowers themselves are well up in the sheath.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

FLOWER GARDEN.

MAKE good any cuttings which may have failed. It is not too late to put in cuttings now, but they should have the shelter of frames. Violas and Pansies may be easily struck in quantity. Take the cuttings from young growths and dibble them in a shaded border which has been prepared by adding a little leaf-soil and sand. If a large quantity be required, they may be put in with a spade. Keep the plants that are being grown for spring decorations free from weeds, and water whenever they appear to be suffering from drought. This applies to Stocks, Wallflowers, Pansies, Lunaria, Canterbury Bells and Forget-me-nots.

Carnations.—Dig or trench the ground that is to be filled with these plants. A good layer of cow manure should be put in the bottom of each bed or border, and then let the soil lay up rough till required for planting. The positions for these plants must be varied so that they do not all bloom at the same time.

KITCHEN GARDEN.

Potatoes of all kinds may soon be lifted. Keep all varieties true to name, and select those for table use and place them in the dark. Then choose those for seed and leave them in an exposed position for a few days. Potatoes do well and keep perfectly in cool, dry sheds with some mats or straw thrown over them, or they do equally well in clamps when they cannot be given shed room.

Carrots.—Take up and store early varieties in sand or ashes outside or in cool sheds. Continue to thin those sown to stand the winter.

Radishes.—Sow seeds of these to draw late. They make a nice addition to salads.

Cucumbers.—Prepare the house to accommodate these by giving it a thorough clean. Make a small hot-bed over the pipes with fresh material, and then place on the soil, which should also be fresh and consist of good fibrous loam with a little leaf-soil and decayed manure. Plant as soon as the soil gets nice and warm, and keep the night temperature not lower than 65°.

PLANTS UNDER GLASS.

Bulbs for forcing.—Continue to pot up Tulips and Hyacinths of the early types. Roman Hyacinths are most useful for supplying plenty of cut flowers, and also for conservatory and house decoration. When potted place them in the open under a wall, stand the pots close together and put over them some screened coal ashes to the depth of 6 inches or 8 inches.

Gloxinias.—As these cease to flower place the pots in a dry position, reduce the moisture gradually and when the foliage has gone lay them on their sides in a protected position.

FRUIT UNDER GLASS.

Vinerias that have been cleared may now be kept well syringed and the laterals cut back. If any insects abound some good insecticide should be used in the water when syringing. A little fire heat must now be kept on all late houses at night, and Muscats not quite finished may be kept up to 70°; but all ripe Grapes must have a low temperature, just enough to keep them dry. If wasps prevail lose no time in tacking on wasp-proof netting. This is much better than putting the Grapes in muslin bags, as in the latter process the bloom becomes damaged and one cannot see to cut out bad berries as they appear.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

SCHIZANTHUS.—Those who wish to have a bright display of flowers in the greenhouse or conservatory during the early summer months should not overlook the Schizanthus. *S. wisetonensis* is a well-known compact strain, and excellent for pot culture. *S. pinnatus candidissimus* is pure white, and is also an excellent pot plant for greenhouse decoration. To have these at their best seed should be sown now in 6-inch pots filled with a sandy mixture, of which the bulk is composed of good loam with a fair addition of decayed manure. Sow several seeds in each pot, and as the seedlings develop thin down gradually to from three to four plants in each pot. The best place for the seed-pots is a cold frame, and later on as winter approaches they should be moved to a shelf near the glass in a greenhouse or cool vinery, the coolest treatment being the best.

CHRYSANTHEMUMS.

If not already done, the buds should now be taken. As fast as these form in the points of the shoots they must be examined, and if found of good form, devoid of any irregularity or blemish, they should be taken. This phrase is a common one among cultivators, but to the inexperienced it may be misleading. It really means removing all side shoots so as to concentrate the energy of the whole plant into the swelling of the flower-buds. If the removal of the shoots is deferred for a few days longer than is necessary, they appear to rob the bud of its power of development to such an extent that it seems to lack power to swell to its normal size, and consequently receives a check.

FRUIT UNDER GLASS.

Figs in pots.—Those that were forced early and have since been top-dressed or repotted should now be placed outdoors in a sheltered sunny position. The object of this is to thoroughly mature the young wood. If the top-dressing or repotting of the trees has not been attended to, it should be done before the foliage falls and root action has become inactive.

Melons.—Plants bearing fruit nearing maturity must now be carefully watered, giving enough only to keep the soil moist. At the same time guard against permitting it to become dry, for if the plants are allowed to suffer and their foliage flag the flavour of the fruit will be impaired.

KITCHEN GARDEN.

Leeks and Celery.—Both are now growing rapidly and need attention in the way of removing weeds and earthing. Before this is done make sure that they are thoroughly moist at the roots. The appearance of the ground is sometimes misleading, as it looks sufficiently moist, but on examining the soil a few inches below the surface it may be found quite dry. Work the Dutch hoe rather deeply between the rows of Leeks to loosen the soil a little, then draw it carefully up to the necks of the plants, repeating the operation as the plants grow. In moulding up the Celery plants let the soil be broken up finely early in the day with the spade, and mould up the Celery in the afternoon, when both plants and soil are thoroughly dry. Before this is done with late batches give the plants a good soaking of liquid manure. Failing liquid manure or soot, guano may be used.

FLOWER GARDEN.

Pentstemons and Choice Antirrhinums.—Now is the time to propagate these. Choose cuttings from the bases of the plants. These do well inserted in light soil in a cool pit or frame, shaded from bright sun and kept fairly close by placing lights over them until callused, but once rooting has commenced expose them fully during favourable weather.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

BOOKS.

Kew Gardens.*—The title of this volume is somewhat misleading, as although the twenty-four excellent coloured illustrations are all of views relating to the famous gardens, the greater part of the letterpress is devoted to a history of Kew as a parish, including, of course, a history of the gardens. Such a history is, undoubtedly, of considerable interest, and the author adopts a pleasant and entertaining style in which to record it. The chapter devoted to "Visiting the Gardens" is of a very meagre character, and might well have been improved and much extended. For the visitor who has a lazy hour or two to spend in the gardens this chapter might suffice as a guide, but to the real plant lover it is useless. The general get-up of the book and the coloured plates are admirable, and as a history of Kew the volume is of value.

The Perfect Garden.†—Among gardening books the volume now under notice will, we think, rank as one of the most interesting, unique and instructive that have been published for some years. In addition to providing a mass of instructive, useful and practical matter, the author has adopted a high literary style such as we seldom find in books relating to horticulture, thus proving that a combination of the two is quite possible when in the hands of a skilful writer. Flowers, fruits and vegetables, both outdoor and under glass, are dealt with in a highly interesting manner, the chapters on "The Cost of Gardening," "How to Learn Gardening," "Colour for All Seasons," "When and How to Make the Fruit Garden" and "A Complete Kitchen Garden" being particularly good. In addition to excellent letterpress, six charming coloured illustrations, twenty-four half-tone plates and nineteen plans are given, while the binding is suitable to adorn any bookshelf. An excellent, cheap and reliable work.

London Parks and Gardens.‡—The author of this handsome new work is already well known as the Hon. Alicia Amherst, whose "History of Gardening in England" published a few years ago at once established her fame as a student of the literary and historical aspects of horticulture. In the work now under notice it is abundantly evident that the researches necessary for her former work have materially helped in the compilation of "London Parks and Gardens," a work not only full of horticultural matter relating to the open spaces of our great metropolis, but replete with many details of historical and literary interest concerning our parks not to be found elsewhere. The volume is one of the most attractive in binding, printing and illustrating that have emanated from the press in recent years. It is tastefully bound and gilt-lettered, and in size is a large octavo. Thirty-five illustrations in colour from drawings by Lady Victoria Manners adorn its pages, and we notice that the book is rightly furnished with an excellent index. We should exceed our scope if we were to attempt to review in detail the contents of the 376 pages, all of them brimful of interest and written in a style that commands the reader's attention. The most we can attempt is to give just a superficial outline of the subject headings, which are as follow, viz., Hyde Park, St. James's and Green Parks, Regent's Park, Greenwich Park, Municipal Parks, South London Parks, Commons and Open Spaces, Squares, Burial Grounds, Inns of Court, Historical Gardens, Private Gardens, &c. There is a list useful for those interested in town gardening of the trees and shrubs grown in Hyde Park and Kensington Gardens, and also examples of

* "Kew Gardens." Painted by T. Mower Martin, R.C.A., described by A. R. Hope Moncrieff. London: Messrs. Adam and Charles Black, Soho Square, W.

† "The Perfect Garden," how to keep it beautiful and fruitful. By Walter P. Wright. Price 6s. net. London: Grant Richards, 7, Carlton Street, S.W.

‡ "London Parks and Gardens." By the Hon. Mrs. Evelyn Cecil. (Arch. Constable and Co., London.)

planting flower-beds in Hyde Park in 1905-6. Some of the full-paged illustrations in colour are very attractive. We call our readers' attention especially to Crocuses in Early Spring, St. James's Park, Spring in Regent's Park, The Inner Temple Garden, Herbaceous Border, Lambeth Palace, Chelsea Physic Garden, &c.—C. H. P.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

AUTUMN ROSES FROM HORSHAM, SUSSEX.

Mr. W. A. Cook, The Gardens, Leonardslee, Horsham, Sussex, sends good flowers of some of our best Roses for autumn flowering. Among others, we specially noticed G. Nabonnand, Grand Duc Adolphe Luxembourg, Climbing Niphetos, La France, Fellenberg, Mme. Laurette Messimy, Commandant Felix Faure, Etoile de France, Gloire Lyonnaise, Corallina, Antoine Rivoire, Merveille de Lyon, Charles Wood, Eugène Résal and Alfred Colomb. Naturally these flowers do not possess the same depth or substance as those produced in the summer, but the colour and fragrance are most welcome in these shortening days.

FLOWERING AND ORNAMENTAL FOLIAGE SHRUBS FROM DUNS.

Dr. McWatt of Morelands, Duns, N.B., sends excellent sprays of various hardy shrubs. Among others we noted the handsome Spanish Broom (*Spartium junceum*), *Cytisus capitatus*, *C. nigricans*, *Hypericum moserianum*, *H. m. tricolor*, *Escallonia rubra*, *Ceanothus Gloire de Versailles*, *Buddleia variabilis veitchiana* with inflorescences 15 inches long, *Spiraea japonica* Anthony Waterer, *S. j. ruberrima* and *Cornus alba* *Spathii* with its beautiful golden and green foliage. Many of these are flowering several weeks later than they do with us, and consequently are all the more welcome.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Sweet Peas diseased (J. N. H. G.).

The portions of plants sent are affected by the mysterious disease commonly known as "streak." What it is or how it is caused does not appear to be known, but once it attacks the plant nothing can be done, except to pull up the

affected specimen and burn it. Usually a fungus named *Botrytis cineria* is found on affected plants, but this is probably a result of the "streak" rather than the cause.

Birds attacking Sweet Peas (*E. S. P.*).—We cannot say why the birds are attacking the Sweet Peas, and the meagre details and the crushed blooms furnished do not help us at all. We have never experienced any trouble in this direction. It may be that the birds are after aphides, traces of which we found on the mangled flowers sent. We cannot suggest any remedy unless fuller particulars regarding position, parts of the plants attacked and the presence or absence of other green plants in the garden.

Caterpillars on Romneya Coulteri (*G. B. Savely*).—The caterpillars you found on your *Romneya Coulteri* are those of a moth belonging to the family Geometridæ, and are commonly known by the name of loopers, on account of their hunching their backs into a loop when they walk. The caterpillars are so young that I cannot be certain to what species they belong, but they very much resemble those of the winter moth in appearance and habits. Spray the plant with a solution of arsenate of lead or paraffin emulsion.—G. S. S.

Rock garden (*Miss E. M.*).—It is somewhat difficult to advise in such a case without fuller knowledge of the surroundings, and much will also depend upon what phase of a rock garden you have in mind. If the trees you refer to are quite near the site there would be a possible danger from the roots of the Elms entering the soil and thus greatly impoverishing it. In this way the chances of success are not great. Cannot you give us a few more particulars, and we will do our best to help you. At the same time we think a little expert advice on the spot would be much the best.

Lilium speciosum (*E. M. S.*).—If all the Lilliums are like the one sent for our inspection, it is clear that the bulbs have been attacked by fungus at their bases, and this precluding them from the further producing of main roots exhaustion is the natural result. The bulbs were in all probability imported roots, and the method of preparing these for shipment from Japan, coupled with the long period of confinement in air-tight cases, are chiefly responsible for the trouble. The bulbs in the first year were obviously assisted to the flowering stage by the production of so large a number of stem-roots, the bulbs meanwhile making no basal roots, hence the failure.

Lawn extension (*D. Vandery*).—Sowing seeds, we think, would prove the most satisfactory in the end. If sown from the middle to the end of September, the lawn could be used towards the middle of the next summer, provided, of course, the grass had grown well and that it had been rolled, mown and properly cared for in the meantime. The ground should be dug up as soon as available, leaving it exposed to the sun, in order that the grass and all weeds may be killed. To help to this end the ground should be rolled and harrowed or forked over occasionally. Before the seed is sown the ground should be dug as deep as the gravel bottom will allow, adding 2 inches of new soil and a fair dressing of rotten manure. The surface should be lightly rolled and afterwards raked over before the seed is sown, choosing a dry and perfectly still day to carry out this work. The seed should be sown broadcast by hand at the rate of four bushels to the acre. No clover should be included. The seeds should be rolled in as soon as sown with a fairly heavy roller, in order to fix them firmly in the soil and to prevent the wind blowing them about. They must be protected from birds until they have made about 1 inch of growth, when they will be safe from further depredation. The best way of protecting them is to hire two boys at about 6s. per week, one to go on duty at daylight until mid-day and the other from mid-day to dark. The grass had better not be cut until spring, and then on the first occasion with the scythe and not too low. The seed will require protection for a fortnight or three weeks.

ROSE GARDEN.

Roses blighted (*S. Krinks*).—Your plants are affected with one of the worst enemies of the Rose, mildew. This fungus is very prevalent just now, owing to the changeable temperatures we have experienced. Mildew can be considerably checked, if not really cured, if the plants are sprayed as soon as the slightest appearance of mildew is manifest. A very good wash to spray with is a solution of Lifebouy soap. Take half a bar and dissolve it in three gallons of soft water, then spray every two or three days, using a fine sprayer for the purpose.

Roses with green centres (*M. S. W.*).—Probably your soil is too rich for Roses. This will often cause the malformed, green-centred buds such as you send. But this year there is much complaint of this malformation, and we consider it arises from cold winds and spring frosts, which chill the embryo flower-buds. Try the plan of pruning your plants later, say, the

end of March, and cut back rather more severely. The variety we believe to be Mme. Isaac Pereire, and, strangely, this sort is much given to produce its buds of the first crop like this. The latter blooms are seldom deformed.

Training weeping Roses (R. W. A.).—If the Roses you planted last autumn were of the wichuraiana tribe, they will form drooping heads naturally, but if of the multiflora group, such as Crimson Rambler, Aglaia and Blush Rambler, it will be necessary to tie down their growths for the first year or two. We usually prune the latter tribe rather closely the first season in March, but where this was not done the best plan is to remove any old shoots not wanted at once and the young growths which have come mainly from the crown of the head may be tied over. The best method of doing this is to attach a piece of tarred twine to the end of the shoots, then how them over umbrella fashion and secure the string to the stem of the tree. Where the young growths are not numerous some of the old shoots may be so tied over. The shortening back of any laterals we defer until March. The pruning of the wichuraiana group merely consists in removing some growths when overcrowded and shortening back laterals in March. These Roses are apt to droop in a very crowded fashion, and in order to avoid this some growers place a hoop beneath the growths to keep them outward. This may be done according to taste. The Ayrshire and evergreen Roses should be treated the same as the wichuraiana group.

Rose-growing for the working man (Frank S.).—We can assure you that such enthusiasm as yours will enable you to overcome many obstacles. Do not be downhearted because certain books recommend things out of your reach, for you can make your own insecticides and fertilisers in a very inexpensive manner, and as to the knowledge how to prune and cultivate, study these columns carefully and you cannot fail to learn much that will be useful. As to the time taken up for the necessary work, we have known enthusiastic men take a lantern and do their pruning when they had no time by day. Just follow our hints week by week and make notes for future guidance. If possible, make the acquaintance of a clever amateur or gardener and watch him do the work. Gardeners are a very sociable set of men and are always willing to impart of their experience if approached in the right manner. Some of the medal Roses have been grown in gravel pits before now, so do not despair because you are near a quarry. Try and gather some soil from the hedgerows or surface soil anywhere close by and mix this with any of the sewage material you have that is not too fresh. About five or six parts of such soil to one part of the sewage should make good material. Throw this all together in a heap and keep it stirred over now and then. This heap could be collected during the summer and would be in readiness by October, when you should plant. Each position where you propose to plant a Rose should be excavated out to a depth of 2 feet if you can, more if possible. Break up the bottom so that water can drain away, then fill the holes with the prepared compost. Holes about 18 inches wide each way would do. Tread the soil in firmly and plant about two weeks afterwards. A bag of bone-meal would only cost you a few shillings. This is a splendid manure. Give each plant a large handful each spring and hoe it well into the soil. The labour spent on making the positions will be well repaid. A little tact on your part in securing the help of some carman to collect such soil as we advise should enable you to obtain it without much difficulty. We can recommend the following for the various positions you name. Six good ramblers for your pergola would be: Crimson Rambler, Dorothy Perkins, Hiawatha, Blush Rambler, Gardenia and Alberic Barbier; six bush to grow between the ramblers: Caroline Testout, Ulrich Brunner, Marie van Houtte, Parisaer, Mme. Ravary and La France; climber for arbour to make a dense cover: Felicite Perpetue; six standard Roses: Grüss an Teplitz, Mrs. John Laing, William Allen Richardson, Gloire de Dijon, Cheshunt Hybrid and Conrad F. Meyer; six drooping Roses for arches: Lady Gay, Rubin, Waltham Bride, Mme. Alfred Carriere, Reve d'Or and Aglaia.

FRUIT GARDEN.

Grapes mouldy and splitting (A. K. M.).—The reason for the splitting of the Madresfield Court Grape and the succeeding mould on the berries is that the Vines have been grown in too damp and close an atmosphere. Give more air day and night, and until the mischief is stopped provide a fair amount of heat in the hot-water pipes in order to create a greater buoyancy and circulation of the air; also keep this Vine rather drier at the roots. This will arrest the splitting, and by keeping a little artificial heat in the pipes until the Grapes are all cut, and by cutting away all bad berries, you ought not to be troubled in this way again. No doubt the Sweetwater Grapes are suffering from the same cause. The dew-like drops on the Black Hamburgs would indicate that the Vine is more or less infested with mealy bug, a most undesirable pest.

Peaches shrivelling (J. S.).—Judging at various shows this year, we have come across many otherwise fine

dishes of Nectarines which were marred in the same way as our correspondent complains of. Red spider is sometimes responsible for the shrivelling of the skin and the absence of colour in Nectarines, and so is bright, hot sun shining on the young fruit while it is wet, and we should be inclined to think that the latter agent has been the cause in this instance.

Gooseberries and Red and White Currants denuded of leaves by caterpillars (A. P. J. S.).—Try Abol. The soot and lime is a good stimulating mixture for promoting growth in the trees.

Pruning Apple, Pear and Cherry trees (Apple, Brockley).—We presume that the Apple, Pear and Cherry trees in your garden are in bush or pyramid form, not standards. Each tree will have a certain number of main branches or limbs radiating from the main stem or trunk of the tree. From each of these branches will emanate a large number of side shoots of this year's growth. These side shoots should be cut back at once, or as soon as possible, to within six leaves of their base, and the leading shoot at the end of the main branches should not be shortened at all. This is what is called summer pruning. We presume the Cherries are sweet dessert ones and not Morellos, as the latter have to be pruned differently. The effect of this summer pruning will be that the growth left on the trees will be exposed to more light and air, and the buds for next year's fruiting will be better developed and ripened. Winter pruning afterwards will consist in cutting those side shoots still shorter; in fact, to within three buds of their junction with the main branch, meaning their base. The leading shoots on the main branches which have so far not been cut at all may now be shortened by one-third their length. This process of pruning should be repeated every year.

KITCHEN GARDEN.

Peas and soil for examination (Mack).—From what you say it would appear that plants of all kinds die in the soil, and this indicates that the soil itself is at fault, either containing something which should not be there or lacking something which should. A test of the soil shows that there is very little lime present, and it would be well to see whether a dressing of lime put on in the autumn would improve matters. If not, it would be well to have a complete analysis of the soil made, so as to ascertain whether any substance was present in the soil that should not be there.

Killing the Asparagus beetle (Hon. Miss P.).—As regards your Asparagus beds, I can only suggest that you should dig in a good dressing of gas-lime or Vaporite where the plants grew and allow the soil to have a complete fallow for some months and to make fresh beds as far from the old ones as possible. The grubs of the Asparagus beetle which have been feeding on the grass will become chrysalides when full grown in small cocoons in the ground. When the beetles emerge in the spring they feed on the young shoots, so that it is desirable to kill the grubs or chrysalides as soon as possible. In case any escape the effects of the dressing, the further the new beds are from the old ones the less chance the beetles have of reaching them. If any of the grubs are now feeding on the grass out it down and burn it as it lies.—G. S. S.

Tomato leaves gone wrong (Novice).—We have closely examined the leaves and cannot trace any disease or even insect pests, but the leaves are very thin and lack substance. We think they have been grown in a very warm place, and, being thin, have got scorched, which accounts for the minute spot. The specimen sent was very small and young, and a thorough examination was difficult. If you had sent a few details as to the soil, culture and other matters, it would have helped us greatly. Kindly say if the plants are in pots or planted out and your treatment, and what food given, if any.

Onions attacked by caterpillars (W. Labram).—We advise you to cut away the tops of the badly-affected plants and burn them, and then spray the plants with the following solution: Dissolve 1oz. of sulphide of potassium in a quart of hot water, then add enough water to make from two to three gallons. This will destroy the minute pest or larva, or you may get the better-known Bordeaux Mixture and spray with this late in the day, and early the next morning spray with clear water, but you will find the sulphide of potassium most effective, cheap and reliable. By cutting away some of the worst or most affected plants, of course you arrest growth, and if the plants are not had you could try the remedy advised first; but the Onion growth should now be well advanced so that you would not lose much, and you would gain in the end. When the crop is cleared give the land a rest till spring. Grow the Onions as far away as possible another season, but if you use lime this autumn freely you will get rid of the pest, or a thin dressing of

fine gas lime on the surface later on and deeply dug in early in the year will clear the soil.

Diseased Tomato leaves (W. M.).—Your Tomato plants are suffering from a bad attack of a disease similar in every respect to the Potato disease. It is generally caused by the crippling of the roots of the plants by the application in too strong a dose of some concentrated manure, or by too much water at the roots in late winter and early spring, combined with cold draughts of wind. There is no cure for it. The best thing to do is to try to help the plants to finish their crops by careful watering, ample ventilation day and night, with slight warmth in the hot-water pipes during cold weather. Root out and burn the plants as soon as the crop is gathered; turn out the soil and burn this also if you can. Do not grow Tomatoes in the same house again for at least twelve months.

MISCELLANEOUS.

Preserving Scarlet Runner Beans and Marrows (H. C.).—Please see the Prize Essay article in THE GARDEN, August 15.

Sulphate of potash (A. S.).—An ounce of this chemical manure may be dissolved in a gallon of water and so used. A good way to make liquid manure is to dissolve 1lb. of the sulphate in 20 gallons of water in a large tub, adding also in a coarse bag a peck of good soot and a few ounces of sulphate of ammonia.

Judging cottage gardens and allotments (Reader).—The Royal Horticultural Society have no rules or regulations relating to this matter. You cannot do better than send a stamped addressed envelope to Mr. A. Dean, 62, Richmond Road, Kingston-on-Thames, one of the Surrey county judges, who will, no doubt, readily furnish you with the practice prevalent in Surrey, where many hundreds of such things are judged yearly.

Fish manure (T. C.).—We know of no book which deals with the manufacture of fish manure or, as commonly called, guano. To publish such a book would be practically giving away the secrets of the trade. However, what is done apparently is that refuse fish to be so utilised must be thoroughly dried, so that flesh and bone will grind up into a coarse powder. Usually also is added to it some finely-crushed kaint or other potassic manure, and the combination is known as fish potash guano. It is a really valuable manure, especially when used as a dressing of half a ton to the acre, for corn and root crops. Such a dressing follows on a previous one of farmyard manure. Any fish manure dressing should be speedily buried in the soil, as its strong smell attracts dogs and cats. After the dried matter has been ground it should be run through a screen with an inch mesh, to remove any portions of bone too large and which may be better for further grinding.

Working a small holding (Novice).—An area of land from six to eight acres is practically a small holding. If you could obtain fairly good land on lease at, say, £3 per acre per year, your rent would, of course, be £18 or £24. To that you would have to add probably £4 per year for rates. If the site was within an easy distance of a railway station, you could get manure from London and carted on to the land for about 6s. to 7s. per ton, and you would need at least 25 tons per acre to grow vegetables and Strawberries. If the land had hitherto only been ploughed, you would have to spend at least £2 per acre to have it deeply dug, and without deep working and liberal manuring the crops would be poor. From £5 to £6 would have to be spent for seeds, and from £5 to £10 for Potatoes to plant. Labour to generally crop and cultivate would be a formidable item. Then, with ever so good crops, the question of how to dispose of them would be of great importance. Not only should a good market be fairly near, but it should be one where there is a fair average demand for such produce. Baskets and getting to market necessitate expense. Generally, therefore, the outlay is considerable and the risk material. A really good, honest, practical foreman would be a great help, especially as you are quite ignorant of gardening, and this is very unfortunate. Your prospects of success, as you see, depend on so many things. If we advised you to do all that is in mind, we might seriously mislead you. Circumstances and general conditions, especially with luck to get good land cheap in a favourable place, might help towards success; but, on the other hand, they may result in failure. It is too serious a matter for us to accept further responsibility than so far has been incurred.

Names of fruit.—Miss Parr.—1, Emperor Alexander; 2, Sugarloaf; 3, Schoolmaster; 4, Improved Keswick Codlin; 5, Gascoyne's Scarlet; 7, Worcester Pearmain; 8, Potts' Seedling; 9, Dumelow's Seedling, syn. Wellington; 10, Devonshire Quarrenden.—Apple Brockley.—1, is in too unripe and undeveloped condition for us to distinguish it. Please send a specimen again when nearly ripe. 2, the red one, is Worcester Pearmain.—H. H.—We think your fruits are Nectarine Pineapple, Peach Stirling Castle and Apple Lord Derby. The specimens were too poor to name with certainty.

Names of plants.—Surrin.—1, Achillea Ptarmica flore-pleno; 2, Armetia maritima; 3, Sedum spectabile; 4, Solidago canadensis.—W. G. A.—Euphorbia Lathyris (the Capar Spurge). It is not edible.—Rhayatt.—The crushed specimen sent appears to be Salvia splendens, but we cannot name it with certainty.—M. Farrant.—Campanula primulefolia; Gilia capitata.—A. L. Ford.—Pinus Strobus.—C. R. G.—Clematis Viticella rubra.—S. M. S. Moncrieff.—Colutea arborescens.—E. Ballard.—Rhus glabra.



SOME OF THE NEWER DAFFODILS
(LORD ROBERTS, LOVELINESS, CALPURNIA).

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

PHOTOGRAPHIC COMPETITION FOR OUR READERS.

WE frequently receive photographs from our readers of some pretty spot or corner in their gardens, and it has occurred to us that it would be interesting if prizes were offered for the best examples sent in. We therefore offer a first prize of two guineas for the best photograph of a reader's garden, and a second prize of one guinea. Each photograph must be accompanied by a written description of the garden. Photographs must be sent addressed to "The Editor, 20, Tavistock Street, Covent Garden, London, W.C.," on or before October 31, and the envelope or wrapper must be marked on the outside "Photographic Competition," and accompanied by a coupon, which appears in the advertisement pages. Each photograph must have the sender's name and address plainly written on the back. Rejected photographs will be returned if stamps are enclosed for postage. The Editor reserves the right to use any photograph and description that does not win a prize, and his decision must be regarded as final.

THE NEW CLASSIFICATION OF DAFFODILS

SOMETHING new seems to have a fascination for most people. Lovers of the Narcissus tribe have for many years been talking of species, varieties, classes, divisions and sub-divisions of their favourite flower. The only persons or firm who have taken the trouble to create a published stud-book are Messrs. Barr. Mr. Peter Barr, working from Parkinson downward, made use of the knowledge collected by Messrs. Salisbury, Haworth, Herbert, Baker, Burbidge and others, and founded the catalogue, which, published by Messrs. Barr and Sons, forms the most complete catalogue which exists of the Narcissus tribe.

There are, however, some people who object to the dog Latin descriptions of plants which are useful to all European nations, and who want everything described in vulgar English, often using words in their own sense of what they mean and not necessarily in the correct sense. The few Latin words used in the above-mentioned catalogue are easy to understand, and those who have been for years accustomed to their use will be sorry to lose them.

There is no reason, however, why the new classification adopted, or manufactured, by the Royal Horticultural Society should be accepted generally, nor need it be taken up by local societies for the regulation of their prize schedules in such a hurry as the Midland Daffodil Society seems to have been. It appears to many

that the old classification should be held to as regards the species, and that cross-breeds between species should form a class of garden hybrids, which might be distinguished by arbitrary divisions. Thus one might have the Pseudo-Narcissus in all its varieties forming the Magni-Coronati section, and all flowers obtained by cross-fertilisation from the members of this section. Then the Narcissus would, with its varieties, form the Parvi-Coronati section, with all flowers obtained by crosses between parents of this section. This would leave the Medio-Coronati for garden hybrids, flowers obtained by hybridisation of Magni-Coronati, and Parvi-Coronati, or by cross-fertilisation of flowers belonging to this section.

The Tazettas or Polyanthus Narcissus would form a class for themselves with all their hybrids. The smell of these flowers, though loved by the Oriental, is not a favourite in England, and as a rule the race does not love the climate. If we look at the unfinished state of the classified list of Daffodil names, we cannot help feeling dismayed at the power left for next season in the hands of the judges at various shows of the Narcissus tribe. There are just 2,200 names in the catalogue and of these 790 are unclassified. One would think it would have been wiser if committees had allowed the new classification to have been completed before adopting it. Many who do not know the ways and customs of the Royal Horticultural Society would expect that a radical change of this sort ought to be carried, not only by the whole Narcissus committee, but also by a vote of the members at the annual meeting.

A DAFFODIL LOVER.

THIS list of names officially appeared about the third week in August, and is an eloquent tribute to the popularity of the flower and the marvellous results that have been attained by the labours of hybridisers. It is a long step from Herbert to Engleheart, and could the former see the creations of his distinguished follower he would rub his eyes with amazement. The classification is intended only for show purposes, and it is to be hoped that it will be always considered in this aspect. The divisions are purely arbitrary, as it was felt that any other system was quite out of the question, and English names have been adopted. These are as follow: 1, Long trumpets; 2, short trumpets; 3, large cups; 4, small cups; 5, flat cups; 6, doubles; 7, bunch-flowered. At present this classification has been adopted by the Devon, Brecon and Midland (Birmingham) societies for their 1909 schedules. Another year, if it is taken up at all generally, various sub-divisions

will be indicated in a second edition. Thus what are called pure Poets will be marked, and bicolor, white and yellow trumpets indicated. The main thing that will make it so useful, if not indispensable, is that every flower is placed in one or the other of the above classes. Naturally, there are mistakes in the present issue; but even with these mistakes it cannot fail to be of the greatest benefit to harassed exhibitors and doubtful judges.

JOSEPH JACOB.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

October 7 and 8.—National Chrysanthemum Society's early autumn exhibition, Crystal Palace.

Our Rose number.—We hope to publish a Rose number on October 10. A coloured plate of the Rose Joseph Lowe will be given, and the number will have illustrated articles and notes from the leading rosarians.

Another flower show for our readers.—As the flower show which was held for readers of THE GARDEN in the Royal Horticultural Society's Hall, Vincent Square, Westminster, on July 29 last, was such a splendid success, the publishers have decided to hold a similar exhibition again next summer, which, we feel sure, our readers will do all they possibly can to make an even greater success. The date and place of the show will be announced later, and the schedule will appear in our pages in due course. Any suggestions made by readers at an early date regarding the classes will receive careful consideration. Such an exhibition will, we think, do much to encourage and foster the high class culture of flowers, fruits and vegetables among those who weekly peruse these pages.

Conference on the spraying of fruit trees.—With the hearty concurrence of the National Fruit Growers' Federation, the Royal Horticultural Society are organising a conference on spraying on the second day of their annual exhibition of British-grown fruit at their hall in Vincent Square, Westminster. The conference will be warmly welcomed by fruit growers as a means of obtaining and disseminating the latest expert information on this very practical subject. The following is the programme proposed: October 16, 1908—11 a.m. to 1 p.m., Colonel Ward, M.P., in the chair, papers by Mr. George Masee, V.M.H., and Mr. H. F. Getting, F.R.H.S.; 2.30 p.m. to 4.30 p.m., Colonel Long, M.P., in the chair, papers by Professor F. V. Theobald, M.A., and Mr. G. Hammond, F.R.H.S. Discussion invited. Seats will be reserved for anyone making application before October 9.—W. WILKS, *Secretary*.

National Chrysanthemum Society.—Three exhibitions are arranged to be held under the auspices of the above society during the coming season, as usual at the Crystal Palace. The early autumn exhibition is fixed for October 7 and 8, the great autumn competition is to be held on November 4, 5 and 6 and the early winter show on December 2 and 3. As usual, some very handsome prizes are being offered, and doubtless the displays will be well up to the average. Copies of the schedule and full particulars can be obtained from the general secretary, Mr. R. A. Witty, St. James's Villa, Swain's Lane, Highgate, N.

British Gardeners' Association and Kew gardeners.—The Journal of the above association for September contains an interesting report by the sub-committee appointed to meet the committee of the Richmond branch to consider the alleged grievances of the gardeners at Kew. We are pleased to observe that the report is temperate in tone and that the matter has been dealt with in a reasonable and business-like manner. It is suggested, among other things, that work in the glass houses

should cease at 5 p.m., instead of 6 p.m., in the summer months, that the courses of lectures be rearranged so as to deal with science as applied to horticulture rather than with botany, and, what is more important, an examination be held on the subjects at the end of the session. In the past no real examination has been held, and this has undoubtedly led to much dissatisfaction. A third point worth the earnest consideration of the authorities is the suggestion that a special building or hostel be erected for the young gardeners, so that the necessity for living in lodgings of a more or less inferior character be obviated. In regard to wages, it is suggested that every young gardener should be paid 21s. per week for the first six months, after which, if he has proved satisfactory, he be recommended for an increase of pay. The report is signed by two present and three past Kew gardeners.

Bulbs grown in fibre.—As our readers are well aware, Mr. Robert Sydenham of Birmingham has long advocated the growing of certain bulbous plants in fibre, and a most interesting exhibition of Hyacinths, Tulips and Daffodils grown in this way is promised for March 9 next, when the prizes offered by Mr. Sydenham will be competed for. The lists of varieties with the prizes was given in our issue for last week.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Rose Augustine Guinoisseau sporting.—I have had a similar experience to Mr. A. L. Wigan with regard to this Rose. I planted it about eight years ago, and for the last five years it has borne splendid blooms of La France, side by side with those of Augustine Guinoisseau. Seeing the Rose mentioned in THE GARDEN as one that does well on its own roots, I started some cuttings from that part of the bush still true to name. These have produced fine strong plants, which flower freely and show no signs of sporting. Mr. Wigan might find it worth while to try this plan.—J. A. DOUGLAS, *Balbriggan, County Dublin*.

A warning about auction bulb sales.—I have just received my *Irish Gardening* for September. In an article on "Current Topics," by Mr. Peter Brook, occurs the following passage: "Residents in Fermanagh had an experience this spring through an auction of Dutch bulbs held at Enniskillen last September, when Mme. de Graaff was put up and sold at 3s. per dozen, but which on flowering turned out to be Grandis. Mme. Plemp sold at full commercial value, but the contents turned out to be Princeps. Glory of Leiden produced Emperor." Exactly the same thing happened in my local town (Whitchurch, Salop), as a few friends of mine and myself know to our cost, only there was nothing so good as Emperor in any lots that I saw flower. I strongly warn readers against these local auctions of bulbs.—JOSEPH JACOB.

Pruning wichuraiana Roses.—As wichuraiana Roses have not been generally grown for long, it occurs to me that my experience as to pruning may be of interest to others and may elicit notes from other growers. I have for some years pruned my ramblers very severely in August or immediately after the flowers had begun to fade, but was doubtful whether the wichuraianas would make sufficient growth of new wood to allow the same treatment. I have just been over my plants, which consist of 7-foot standards of the following sorts: Lady Gay, Dorothy Perkins, Alberic Barbier, Paul Transon, René Andre, Elise Robichon, Débutante, Hiawatha, Leontine Geronis and climbing plants of Dorothy Perkins. I find that they allow of the whole of the old flowered wood being removed, and at present have long growths of new wood,

which by the time the frost checks the growth will be almost too long. On the tall standards I find that it is a good plan to tie small stones to the ends of the long growths, so as to induce a weeping habit and yet free from stiffness engendered by tying. From an experience now of four years I cannot too strongly recommend all lovers of effect in the garden to go in for wichuraianas on tall standards at least 7 feet. I hope to get some 10-foot standards this autumn to bud. Within two years from budding you get a most lovely effect, and by having a variety of kinds such as mentioned above the flowering season is extended for a long time.—C. L. A., *Staffordshire*.

Fruit trees at the Franco-British Exhibition.—It would be a great mistake for anyone to believe that training fruit trees is a pure fancy or an ornamental system. It is, on the contrary, absolutely useful, even indispensable in many cases, for several reasons. First of all, by the mere fact of training and pruning we take away all branches or parts of branches which are not useful, so that the good buds may receive more sap, be better fed, and thus able to bear larger fruit. That, however, is not all. The real aim of training a tree is to give it a form which will render it suitable for cultivation under special conditions. Just a word to say that a special form should be used to temper the inclemency of the weather. Everyone knows there is no possibility of obtaining every sort of fruit anywhere; but, nevertheless, it is true we can obtain results which were considered quite impossible to get hitherto. The following example will help readers to understand my meaning: Suppose in a very cold country where it is almost impossible to grow fruit in the open and one wishes to eat an Apple or a Peach, what is to be done? Buy them in the market, of course; but those we gather ourselves are better. Well, then, I choose a wall facing south and plant there the trees chosen. During the winter the wall protects them, and, if necessary, I further protect them with a covering. If, on the contrary, the country is too hot, instead of planting on the south side we do it on the north, west or east, according to the temperature. Trained trees are very useful in every part of the world, even where the climate allows growing in the open, as by using different situations we get different periods of maturity; besides, by methodical and scientific training and pruning, we get fruits exactly where we want them; that is to say, in the most suitable places, and so obtain sweeter and larger fruit. The best forms for wall trees are palmette with oblique branches, several storied, and palmette verrier or palmette with horizontal vertical branches. Another good shape of tree is what we call horizontal cordon, one or two sides; this small form is very productive and does not take much space.—C. VATERE, *108, Godolphin Road, Shepherd's Bush, W.*

Rowan berry jelly.—In answer to the question about Rowan berries in THE GARDEN of the 5th inst., I write to say that we are in the habit of making Rowan berry jelly to eat with roast mutton, hare and kipper herrings. Soak berries in cold water for forty-eight hours. Then take the berries out and boil with enough water to prevent burning, until the berries are soft. Squeeze through a jelly bag and allow 1lb. of sugar to 1lb. of juice and pulp and boil up together till ready to stiffen or pot. It is a darker colour than Red Currant jelly, and, being rather bitter, much nicer with meat.—M. H. MARSHALL, *Lochmalony, Cupar-Fife, N.B.*

—In answer to Mr. Horsfall Vint's question in THE GARDEN of the 5th inst. as to the use of Rowan tree berries, I wish to say they make a delicious jelly; the berries when ripe are boiled till soft in a small quantity of water, then strained through a bag made of cheese cloth, sugar added and boiled with the strained juice till clear and stiff enough to set. Some people put Apple with the berries.—E. H. C.

The use of Rowan berries.—In answer to a query in THE GARDEN for the 5th inst. as to Rowan berries being poisonous or not, I can assure your correspondent that they are not. Rowan jelly is used in Scotland with game, the same as Currant jelly is with mutton, &c. The following is a recipe for Rowan jelly: Gather the berries when they are almost ripe, wash them and put in a preserving-pan with sufficient water to cover them. Boil till soft and strain the liquid through a bag. Allow 1lb. of loaf sugar to every pint of juice and boil the latter with the sugar for half-an-hour, skimming carefully. Apple juice added to the Rowans is a decided improvement. To every pint of Rowan juice allow a pint of Apple juice, adding sugar to the latter—1lb. to a pint.—H. INGLIS.

Fruit Bottling.—Referring to the first prize essay on "Bottling Fruits and Vegetables," in your issue of the 15th ult., I have no experience in the latter, but I am somewhat at variance with the author in fruit bottling. We have for several years used the bottles of Messrs. C. Lunn and Co. of Kirkburton. We gather the fruit as stated in the essay, when not too ripe, fill the bottles, shaking them as filled, then pour in sufficient cold water to fill the bottles to within half an inch of the rim (top), put on the glass top with its rubber ring, turn the wire clip round and the contents are secure. The bottles are then placed in a suitable receptacle, putting a few split canes on the bottom first, also a few between the bottles to keep them apart; the receptacle is then filled up with cold water, so that the stoppers are quite an inch below the surface, and the receptacle placed on a fire (we prefer a gas stove, as the heat is more easy of regulation) and gradually heated up to 160° Fahr. At this temperature the gas is turned out and the receptacle and contents allowed to get quite cold, then the bottles are taken out, wiped and put away in a dark cupboard. We do not use a particle of sugar, for I believe this often sets up fermentation; anyhow, barring perhaps one bottle a year bursting, which generally takes the form of the bottom coming clean off as it is removed from the receptacle, we keep such fruits as green Gooseberries, Currants, Raspberries, Plums and Greengages for over a year, and their flavour in no way deteriorates. The same bottles do year after year, but I prefer to have new rubber rings every time.—D. HILL, *Herga, Watford.*

I have read with much interest the articles on "Fruit Bottling" in THE GARDEN, and am surprised no one has mentioned Messrs. Fowler and Lee's method, so I enclose one of their advertisements. Their method is very simple and the results perfect. We have used it for ten years, preserving over 1cwt. of various fruits every year, and have never had a bottle become poor. The fruit is preserved without sugar in its own juice or with a little water, and never boiled. The colour and flavour are perfect after twelve months. We also bottle Tomato purée for soups and various other things. I have tried various methods, but none were as simple and effective as this.—(Mrs.) A. R. PHILLIPS.

Gooseberry mildew in Essex.—In the interests of fruit growers throughout Essex it is expedient that the greatest possible publicity should be given to the fact that, after extensive ravages in many of the Eastern Counties, the American Gooseberry mildew has at length appeared in our county. A Gooseberry Mildew Order will be issued by the Board of Agriculture as a natural corollary, and growers should see that every effort is put forward to ensure the efficient working of the order on their part. The mildew, as its name implies, is a native of America, and was unknown in Great Britain till 1900, when it was found in two Irish counties; by 1907 it had spread to no fewer than twenty-one counties. In respect to the damage done by the disease, Dr. Pethybridge says: "As regards Ireland, it is no extreme view of the

case to state that the losses have been in many cases most serious, and unless the disease is checked we are threatened with nothing less, practically, than the total loss of the profitable cultivation of the Gooseberry as a bush fruit." What is true of Ireland is true, also, of Essex. I will gladly give any help to Essex fruit growers who care to write me on the subject.—C. A. BALAND, B.A., F.L.S. (Biologist to the Essex Education Committee), *Chelmsford.*

Layering Carnations.—Referring to my note on "Layering Carnations," page 397, Mr. A. Childs, on page 419, states that he does not quite agree with me when recommending an upward cut of about 1 inch through the stem, his reason being that the long tongue thus formed is apt to snap off when the layers are lifted for planting out. Personally, I have never experienced this difficulty, although I admit there is the risk if the plants are not carefully handled, especially if the soil adhering to the roots is of a heavy and close nature, but I advise a light, sandy soil to be prepared for use when layering Carnations. Mr. Childs admits "the layers will



A LOVER OF DAFFODILS AND TULIP :
MR. WILLIAM BAYLOR HARTLAND.

root just as well from a long tongue." Now I have frequently noticed when taking up rooted layers that, in cases where a short tongue had been prepared, the roots were not so abundant as those produced from a longer tongue; therefore, I think, all things considered, the latter should have the preference. I quite agree with Mr. Childs that, when a large quantity of plants are to be handled by one man, it is necessary to lose no time when a suitable day for planting comes round; but, at the same time, the more one has to handle the more proficient he becomes in the work, and the risk of the damage mentioned should be reduced to a minimum.—C. RUSE, *Munden Gardens, Watford.*

A remarkable crop of Peas.—I notice Miss E. Bradley's account of a remarkable crop of the Pea Duke of Albany in your issue for the 29th ult., and would inform her that the attributes do not lie in "thin sowings and hoeings" so much as in the vital words "our garden has only been in cultivation four months." There we have the solution of her record crop. Any newly-turned-up soil does and will continue

to yield good crops for three or four years, as it contains all the chemical ingredients for building up good crops of Peas, without resorting so much to nitrogenous manures.—B. LOCKWOOD, *Lindley.*

WORKERS AMONG THE FLOWERS.

WILLIAM BAYLOR HARTLAND.

THE name of Hartland has long been connected with horticulture in Southern Ireland. The first Hartland in Ireland was one Richard, who came over from Kew and in 1774 settled at Mallow, where he established a flourishing nursery garden called Bellevue, along with two others in different parts of the country. At his death Bellevue passed to the father of the subject of my present notes. Here he was born in 1836. The Cork business was started by two of Mr. Hartland's uncles in 1810, and it is this same business that is being carried on to day by himself and two of his sons. As recently as the middle of August this new partnership came into being. Let us hope that it will be the means of rejuvenating the old business, and that a fourth generation may in due time have the same success that filled the Patrick Street shop with customers in the best days of the old firm's life. So much for the dry facts of history and finance. They do not assimilate with William Baylor Hartland at all. He is, and he always has been, an enthusiast and an idealist, and in this latter spirit he would write history and in the former look on life. Nature has exacted from him her price, and once more the saying of the Old Book has come true, "Whatsoever a man soweth, that shall he also reap."

For some reason or another our friend was attracted to the Daffodil when the efforts of Herbert, Leeds and Backhouse were beginning to be appreciated by that pioneer band of devotees, Peter Barr, Wolley-Dod, Rawson, Nelson, Brockbank, Burbidge, Masters, Baker and (as a young stripling not, as it were, yet out of his teens) Engleheart.

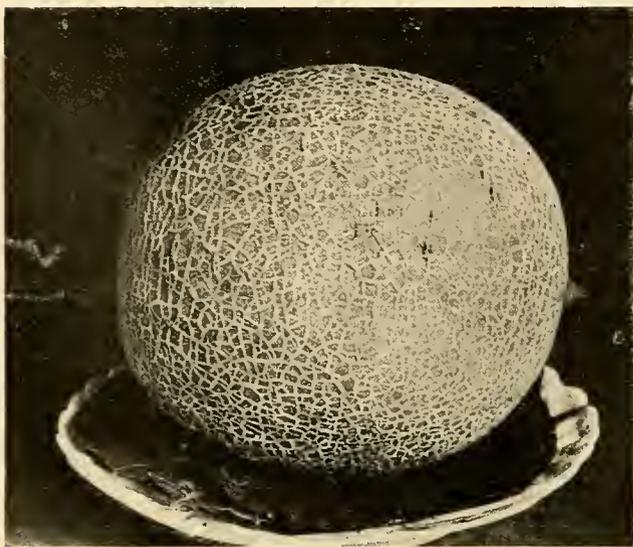
"Worthy of a Hartland's researches" is a phrase that occurs as a casual remark in one of the late F. W. Burlidge's letters written in 1885. It is as the diligent explorer of the gardens of old Ireland, as the great collector of the many lovely forms that but for him might for ever have been lost, that history will register his name. But his sympathies were not limited to one flower only. True to his genius as collector he has accomplished, along with those great enthusiasts of Glasnevin—Burbidge and Moore—a proportionately greater work for an even more famous flower, and found many of the lost ones of the tribe of Tulips, and by careful nursing and cultivating restored them to the gardens of the world.

Mr. Hartland is a widely-read man. You have only to get one of his very original catalogues to feel this, or, better still, buy his "Wayside Ireland," in which he has recorded his experiences and thoughts as he toured through Connemara and Achill Island in 1894. He is full, too, of human feeling, as this same book discloses. He has long seen the importance of agriculture for a prosperous Ireland, and twenty and more years ago urged the growing of early Potatoes in suitable spots, and was the first to institute prizes for cottage gardens in the Emerald Isle. He is proud of his country—witness his gift of Shamrock seed to sow on the graves of the Irish soldiers who fell in South Africa, an action which surely has done much to popularise the wearing of the green on St. Patrick's Day. And now, as "Baylor Hartland Redivivus," may he long live on in his old home at Ard Cairn, where I am sure he will always have a truly Irish welcome ready for his friends.
JOSEPH JACOB.

THE FRUIT GARDEN.

SOME GOOD MELONS.

OF late years some splendid Melons have been introduced, and some of the new seedlings are noted for their compact growth and free setting, a point that amateurs should not overlook, as I have frequently heard the remark that it was a difficult matter to set the fruit, and amateurs in consequence have given up their culture. It is only fair to add that a great deal depends upon culture; if the roots get too much food at the start the results are disappointing. The variety illustrated, Superlative, is a very fine fruit, of good shape and beautifully netted, as the illustration shows. It is of good quality and a very free setter.



A WELL-NETTED FRUIT OF MELON SUPERLATIVE.

In this note I do not intend to name a large number of varieties; indeed, with so many to select from this would be difficult, and any good varieties omitted are merely left out on account of space, so that my readers will, I trust, pardon the omission, as often growers of these fruits have their own favourites, which they do well to make a speciality of, as by keeping a good type true there is a great gain.

There can be no doubt whatever that during late years these fruits have been grown in greater numbers, and with small forcing houses at command the crop can be cleared so quickly that three crops can be grown where only one was grown previously. This is a great gain, and some of the later introductions are noted for their quick free growth. I have grown them as cordons and fruited them under three months; but this is a mere matter of culture, and I will briefly refer to it later. A strong point with Melons, and indeed the chief one, is, undoubtedly, flavour, and this is a difficult point, as often the fruits, even in the same house, vary greatly. A Melon which was really excellent last year may be second rate this year and *vice versa*, although given the same treatment in every way.

I have referred to pit or small house culture, and this is so well known that I do not intend to dwell on this point; but I would point out other modes which have been most reliable as regards flavour and getting the crops cleared in a given time. Pot Melons are a great success, and as regards getting good flavour it is one of the most reliable methods of culture. With pot culture there is a little more labour at one period of the

growth in the way of watering; but, on the other hand, at the finish the treatment that is most suitable can be afforded. The roots are kept in bounds, early setting is facilitated and feeding at the critical moment can be attended to. Good results are obtained with 12-inch pots, but from 12-inch to 16-inch pots give excellent returns. Many good Melon growers who have to rely on manure as the heating agency place large pots in the manure for the plants, so as to keep the roots under command. The season is now drawing to a close as regards these plants, but with pot culture I have had good fruits in November from August-sown plants.

Another mode of culture not often practised is growing the Melon as a cordon. Years ago in THE GARDEN I noted this, and it is an excellent way to get a quick crop. Very little root space is required, and the small, compact sorts are best. I had splendid crops of Blenheim Orange

grown thus; but, of course, more plants are required at the start. Grown as cordons the soil required is much less, as the plants are from 12 inches to 18 inches apart, planted in about 6 inches of soil, and one (the main) growth trained and the lateral growths closely stopped after the first fruits are secured; in fact, the growth much resembles that of a well-trained Tomato. It is surprising how rapidly the fruits will mature on these plants. In our case we did not top-dress with soil after the planting, but watered freely with liquid manure or used a good fertiliser after the fruits were set.

Invicta, Frogmore Scarlet, Sutton's A1, Best of All, Invincible, Triumph, Windsor Castle, Earl's Favourite, Syon Perfection and Beauty of Syon are all excellent varieties. Of other well-known sorts it would be difficult to omit Melons of

such good quality as Hero of Lockinge, still one of the best, and Blenheim Orange. G. W. B.

THE KITCHEN GARDEN

FRENCH BEANS IN FRAMES IN AUTUMN.

DURING the next few weeks those who have frames at liberty can get a good return by sowing a small, quick-growing French Bean therein, and even should the frames be now occupied with Melons or other plants the seeds may be sown in pots or boxes and the seedlings planted out as soon as the frames are available. The plants grown thus will prove most useful, as they will give a good crop after the latest in the open ground, and last a considerable time. I have referred to an early variety, and by this I mean a dwarf grower and one that matures quickly. Such sorts as Veitch's Early Favourite, Early Gem, a very free bearer and of splendid quality, and Sutton's Early Forcing, a very dwarf grower, are eminently suited for this work.

The culture is most simple. The frames that have grown Melons or Cucumbers should give a good return. From 4 inches to 6 inches of soil will be sufficient for the plants, and if new soil is put in the frames it may be placed in ridges in rows 12 inches apart, so that a saving is effected. I have, however, had splendid results by merely

levelling the old Cucumber or Melon soil and planting in rows 12 inches apart, as the plants soon make good roots if not kept too moist at the start. Of course, if the soil is dry it is advisable to give a thorough watering before sowing or planting, and if at all poor I advise a small quantity of some quick-acting fertiliser mixed with it to promote rapid growth. A heavy clay soil is not suitable for these plants at this late period of the year, a warm friable soil being required, but the cultivator who can sow or plant after Cucumbers or Melons will find such soil quite suitable. Plants sown for autumn supplies during September and forwarded by early closing and occasional damping overhead will give a supply from October well into November, or even later. G. WYTHES.

THE ROSE GARDEN.

THE NEWER ROSES.

IN attempting to deal with the numerous Roses that have been placed before the Rose world in recent years, one is forced to have some method of arrangement, and I propose, therefore, to take first of all those Roses that are likely to prove of some service to the Rose exhibitor, and then to deal with the remainder in the two sections of climbers and dwarfs. In order to avoid repetition, I shall limit these notes to the Roses introduced during the three years 1905, 1906 and 1907, referring your readers to your columns for such other Roses as may not here be mentioned, and to my notes of last and other years.

It is pleasing to be able to note the advance that is being made in the quality of the flowers, in their freedom of flowering, also in the not unimportant question of growth, and last but by no means least, to the great majority being more or less fragrant, some quite pronouncedly so. These facts point to the stiffening of the standard now required by the purchasing public; it is no longer simply a question of being new, pure and simple. Unless the Rose has some marked feature it has no chance of recognition, and its life, seen in the pages of the catalogues, is a very short one. I will endeavour to take them alphabetically.

Avoca (Hybrid Tea).—Sent out last year by Messrs. Alexander Dickson and Sons of Newtownards, Ireland. I have been delighted with what I have seen of this Rose; the colour is a good crimson-scarlet, the shapely long pointed buds opening out well, and it is sweetly scented. A good grower, but not so free-flowering as some of this firm's novelties. The flowers are reminiscent in shape of C. J. Grahame; that is to say, they are on the thin side, but do not open to an eye so quickly, and keep their colour well without going off into a bad purple. It is said to be especially good as a cut back, and is undoubtedly one of the best of its colour in this section, which want these scarlet Roses badly. It received the gold medal of the National Rose Society at the autumn show at Vincent Square last year, and is a better Rose than its appearance then led some to think.

Betty (Hybrid Tea, 1905).—I referred to this Rose recently; it has not been Betty's year, but some excellent flowers have been exhibited nevertheless. Its colour and the beautiful shape of the young flower will, particularly in a cool season, always make this Rose useful; but it is a garden Rose first and an exhibitor's one afterwards.

Charles J. Grahame (Hybrid Tea, 1905).—If only it had a few more petals what a flower this would be; its colour is dazzling, and a good bloom stands out in a quite startling fashion among a long bed of the newer Roses, but it was very difficult to catch it during the exhibition season this year. It has made some wonderful growth, which seems to be a feature of the scarlet

Hybrid Teas as compared with the Hybrid Perpetuals of the same colour. All exhibitors must grow it for the sake of its colour; we shall not always have such a tropical heat as this year during the last week of June and the first in July, and in a cool season C. J. Grahame will be wanted.

Countess of Annesley (Hybrid Tea, 1905).—This year the relative value from the exhibition point of view of this Rose was very little. Last year I was inclined to think its large shell petals placed it in front of the Countess of Derby, but this year the position was easily reversed. At its best a beautiful Rose with a good scent.

Countess of Derby (Hybrid Tea, 1908).—All the Roses I have mentioned so far have been the product of that home of the Rose, the Newtownards Nurseries, and this is one of the best of the many good ones that have left Messrs. Alex. Dickson's hands. Besides being useful for exhibition its free-flowering qualities make it an excellent garden Rose; it is in full flower with me as I write, notwithstanding the rain and the wind of the previous week. Again, a good Tea scent has to be noted.

Countess of Gosford (Hybrid Tea, 1906).—A rather thin but large-petalled Rose of beautiful shape that has kept well in a cool season; the colour is a blending of salmon pink and rose with a suspicion of old gold and lasts well. It comes from Messrs. McGredy and Son of Portadown, and is no doubt the forerunner of many beautiful Roses from the same source, if one may judge from the batch of new seedlings the firm exhibited at the Manchester show. It is very free flowering.

Comtesse Alexandra Kinsky (Tea, Soupert et Notting, 1905).—This is one of those Roses on the border line, not an exhibition Rose always, but occasionally good enough; creamy white with a deeper centre that is very beautiful in the bud, opening into a full flower. My plants have done well, sufficiently, at any rate, to warrant mention here and to receive a further trial. At the same time it is not such a good Rose as

Comtesse de Saxe (Tea, Soupert et Notting, 1905).—This is of very similar colouring, but better shape, that has again been quite good with me. It is perhaps a purer white than Comtesse A. Kinsky, and is undoubtedly worthy of more extended cultivation. I recommend it to all Tea growers as a good new Tea for exhibition.

David Harum (Hybrid Tea, E. G. Hill and Co., 1904).—A good Rose with reflexed petals, but not a very strong grower with me; the colour is rosy pink. The flowers open well and are occasionally good enough for the front row. It has been well shown on more than one occasion by Messrs. George Paul and Son of Cheshunt.

Dr. J. Campbell Hall (Messrs. A. Dickson and Sons, 1904).—I mention this Rose because it has been especially good with me this year. Its colour, always beautiful, has been particularly fine, recalling the superb flowers I saw of it in the nurseries at Newtownards the year it was sent out. It is not possible to accurately describe the colour—deep coral rose suffused pale pink almost to white at edge of petals. It is even better as a garden Rose than most of the exhibition varieties, as it is free flowering and the buds have such long footstalks that it need not be disabused as much as some varieties.

Dr. William Gordon (Hybrid Perpetual, William Paul and Son, 1905).—The only plant I have of this has done well; it is a good grower and the flowers look well on the plant, for a Hybrid Perpetual free-flowering, and the blooms last well, being of large size and of the old-fashioned circular shape; fragrant, bright pink in colour. It obtained an award of merit at the

moreover, a good garden Rose that can be recommended for general cultivation.

Frau Ernst Borsig (Hybrid Tea, P. Lambert, 1907).—I have seen this Rose strongly recommended to exhibitors, but I should hardly care to go as far as that; at the same time it is a very beautiful variety, robust in growth rather than vigorous, smooth wood and good broad foliage; colour rosy carmine. The best of this raiser's 1907 set.

General McArthur (Hybrid Tea, E. G. Hill and Co., 1905).—This is a good Rose of very fine colour with a strong scent; vigorous grower. The raiser, who was over in England this year and was present at the National Show in the Royal Botanic Gardens, seemed to think it was a better flower than Richmond. I have not sufficient plants to speak positively about it, but I am sure it is well worth trying. The Irish growers, who seem to patronise these American Roses more than their English *confrères*, have exhibited this Rose well on several occasions.

H. E. MOLYNEUX.
Purley.

NEW ROSE MRS.
LITTLETON
DEWHURST.

This is a white-flowered sport from the well-known Rambler Rose Lady Gay, the pink-coloured buds contrasting well with the purity of the opened blossoms. The general effect is not unlike Aimée Vibert, save for the greater display of blossoms. This variety received an award of merit on the 1st inst., when shown before the floral committee of the Royal Horticultural Society by Messrs. J. R. Pearson and Sons, Lowdham, Notts, but was accidentally omitted from the official list of awards.

NELUMBIUM
SPECIOSUM
OSIRIS.

This magnificent variety of the Lotus or Sacred Bean is a great advance on the type, the flowers being very much larger and of a deeper clear rose colour, with white at the bases of the petals. The leaves also are very large and of the most pleasing shade of green. It was shown before the Royal Horticultural Society on July 21 by Leopold de Rothschild, Esq., Gunnersbury House, Acton (gardener, when it received a first-class certificate. The flower from which the accompanying illustration was made measured 10 inches in diameter, and created a considerable amount of interest, as it is very seldom that the Nelumbiums are exhibited. Visitors to Kew, however, will be comparatively familiar with them, as the plants in the tropical Water Lily houses usually flower well each summer, the graceful, long-stemmed flowers standing well above the foliage.



THE NEW NELUMBIUM SPECIOSUM OSIRIS. (Much reduced.)

Royal Horticultural Society's Temple show last year.

Earl of Warwick (Hybrid Tea, William Paul and Son, 1904).—Pale salmon pink, deeper centre, but no vermilion in any of the flowers that I have seen, although I see it is so described in the National Rose Society's catalogue. It is distinct and has been often exhibited this year; in fact, I consider it the best exhibition Rose we have had from these raisers for some time, and it is,

Mr. J. Hudson), when it received a first-class certificate. The flower from which the accompanying illustration was made measured 10 inches in diameter, and created a considerable amount of interest, as it is very seldom that the Nelumbiums are exhibited. Visitors to Kew, however, will be comparatively familiar with them, as the plants in the tropical Water Lily houses usually flower well each summer, the graceful, long-stemmed flowers standing well above the foliage.

THE FLOWER GARDEN.

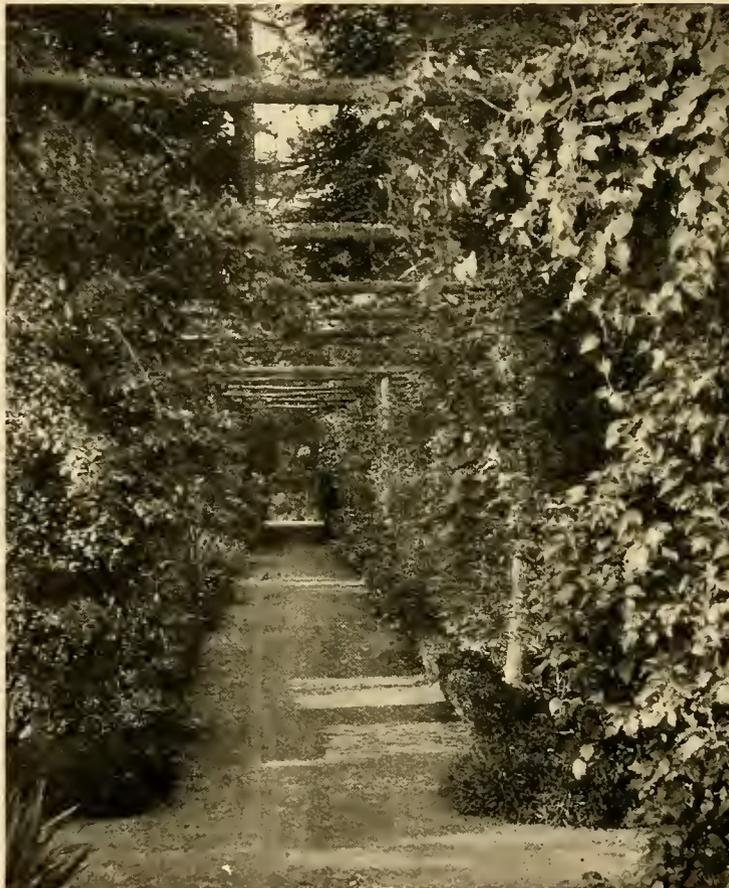
A NEWLY-FORMED PERGOLA.

A PORTION of a straight walk that was lately converted into what by a sort of courteous title we term a pergola is shown in the accompanying illustration. It was formerly spanned by iron arches, and neither I nor the plants liked them, so two years ago we commenced at the nearer end and replaced the arches by plain Oak posts 8 feet high, with connecting overhead poles also of Oak, both over the centre of the paths and along the sides. The upright posts were squared at the base and dropped into sockets of brickwork to facilitate removal and renewal when decay shall render it necessary. Half the length of the walk was completed by the spring of 1906, and the other, the further end in the illustration beyond the broad cross strip of light, in the spring of 1907. A gap is left in the centre, forming an entrance to a Rose garden on the right and to give a view of the old Enfield Market Cross, which, after its removal from the market-place, found a home there. About two-thirds of the way down on the left, as shown, a similar though narrower arrangement of posts runs at right angles to the main walk towards a pond. The right-hand poles of the walk have been mostly planted with Roses, as bordering the Rose garden, but a *Wistaria multijuga rosea* and *Clematis Ville de Lyons* share the second pole on the right. The third has *Rose Blush Rambler* on it, the fourth is devoted to *Vitis Coignetiae*, and the fifth has proved very successful, being well clad with *Rosa wichuriana Jersey Beauty* and *Clematis paniculata*; the sixth post bears the *Rose Flora*. This brings us to the space. Returning on the opposite side, on the sixth pole, is an old Rose that grew on one of the arches; I believe it is *Rêve d'Or*. The fifth is well covered with *Ercilla (Bridgesia) spicata*, a very satisfactory ever-green creeper. The fourth post is planted with *Vitis Henryi*, which has suffered rather from late spring frosts. I think it would be happier on a wall or in a less exposed position. It is a very neat grower and clings itself very readily. The third post supports *Menispermum canadense*, but one sex only, so I get no seeds. A *Lathyrus latifolia White Pearl* climbs among the *Menispermum*, and has reached almost to the top of the post and flowered very well, in spite of having been eaten to the ground by a rabbit in May.

The second post is covered by two Roses, *Queen Alexandra* and an old climbing white one, a legacy from the iron arch. The two first posts are near the bank of the New River, and the left one was beautiful for its whole length with the flowers of *Clematis montana rubens*. The right-hand one has *Clematis grata* for autumnal effect, and what I received as *Polygonum baldschuanicum* and intended for summer-flowering, but has proved to be that most rampagious of climbers, *Polygonum multiflorum*, of which I have a large species elsewhere in the garden, but never yet saw a flower. Its specific name is sadly misleading,

and I intend to remove the plant from the post ere long.

The lower end has not made so much progress, and so is not worth describing in detail. It contains, among other plants, *Akebia quinata* and *A. lobata*, the beautiful and perpetual Rambler Rose from St. Anne's, Clontarf, there called the Ashford Rose, one of the best climbers for a pole I know of, and a form of the common Bramble called *Lucretia*. Its light green leaves are not coarse, and the white flowers are freely produced and almost as good as Roses, being followed by large well-flavoured fruits. The young shoots require careful and constant tying up, but well repay a watchful gardener for such attention. A pergola well planned, planted and properly cared for will afford its owner a considerable amount of pleasure, which amply compensates for the rather heavy initial outlay. So many plants can be



A NEWLY-FORMED PERGOLA IN MR. E. A. BOWLES'S GARDEN.

grown thereon to much better advantage than in any other position. E. A. BOWLES.

ANTHERICUMS AND THEIR ALLIES.

THESE represent a pretty group of slender-growing Liliaceous plants at one time collectively known as Anthericums, and of which two types prevailed. The St. Bruno's Lily, with Lily-like white flowers of comparatively large size, and the St. Bernard's Lily, whose flowers are small and starry, yet so plentifully produced that they are valued as useful garden plants. Of these plants three only remain with the parent genus—*A. graminifolium*, *A. Liliago* and *A. ramosum*. The St. Bruno's Lily, the finest of the race, is now more correctly called *Paradisea Liliastrum*; the Plumed Lily (*A. plumosum*) is now referred to as *Bottionea thyrsothoides*; while other species of lesser importance are included with

Bulbine and *Bulbinella*, &c. The true Anthericums have slender grassy leaves, wiry much-branched stems, and their flowers are white, thin in texture, fleeting in individual duration, but produced over a long period of time. They are not showy, but light and graceful, in some cases plummy, and as garden plants they have value akin to that of *Gypsophila*, *Asters* of the multiflora type and *Gaura*. They require no particular cultivation.

A. Liliago (the St. Bernard's Lily) forms a thicket of erect slender stems, sparingly branched compared with others, fully 3 feet high when established, and every branch is studded with white starry flowers as large as a florin, the petals of which are thin and narrow. It flowers during summer. Major is a beautiful form with sparsely branching stems, and bearing flowers a little larger than the type, yet the breadth and stouter substance of petal gives them a better finish and a larger appearance, added to which the shorter pedicels render the spikes compact and more effective. *Algeriense* is a giant form wholly superior in all its parts; the flowers are massive, the leaves broader, and the entire plant suggests *Lilium thompsonianum* in its pleasing habit and distinctly showy flowers. *Arethusa*, a form of hybrid origin, is quite 3 feet high, and the flowers are above an inch across, the stems stout and erect. It has been frequently exhibited in recent years. Other forms of seedling *A. Liliago* with large flowers are frequently met with.

A. graminifolium is a loose-habited, small-flowered species, with *Gypsophila*-like growths fully 3 feet high and packed with flower-buds, a few of which open at a time. They are under half an inch across and pure white.

A. ramosum is a glorified *Liliago*. The flowers are borne freely on rigidly erect stems. It is a showy, plummy plant, and the slender spikes of white flowers are effective when used to lighten any floral arrangement.

A. (Paradisea) Liliastrum (the St. Bruno's Lily) is a well-known plant, with broad, grassy leaves and simple spikes of widely funnel-shaped snowy white flowers fully 2 inches across the petals. These are closely arranged on the stems and exceedingly effective when massed. It is a capital garden plant in fine weather, but during rains the thin petals become woefully bedraggled and unsightly. Major is a large-flowered, vigorous form 3 feet high, the flowers of which have stouter and broader petals, and they are 3 inches across. It is a showy yet refined plant, and both this and the type require well-tilled soil for their better development.

A. plumosum, which we must now call *Bottionea thyrsothoides*, is a slender-growing plant resembling *graminifolium* and *ramosum*. It has much-branched plummy stems studded with semi-drooping star-like flowers half an inch across. It is the better plant of the small-flowered group, as there is always a finer display and the stems form loose thickets of flowers. It is the only plant of the group for which a warm position and a rich soil are necessary. All the species produce seeds freely and make a vigorous root increase. They flower in early summer, and in some cases in autumn also. M.

THE CHIMNEY BELLFLOWER.

We are indebted to Mrs. G. H. Trollope, Fairmile Hatch, Cobham, Surrey, for the photograph of splendidly-flowered plants of *Campanula pyramidalis*, from which our illustration has been prepared. The photograph was accompanied by the following note: "The photograph does not do the plants justice, but it gives a little idea of their size. They were grown in cold frames entirely up to the last few weeks, when they were placed in a cold greenhouse to keep the bees off them before they were brought into the living rooms, and where they have lasted at least four weeks in perfection. The reason of their size is that they are two year old plants, not having flowered the first year, and consequently we are able to grow them in large pots and feed them well."

all the rest will retain their usual shade of rose. The reason given by some authorities is "alluvial deposits in the soil" in which the roots of the plants showing the blue flowers are growing. Whatever induces blue flowers outdoors without special treatment I cannot say, but I have never seen flowers produced in this shade from plants grown in pots unless they had received some special attention, or in some few cases where the soil in which they were potted contained some mineral, such as iron. There is a variety (*H. Hortensia rosea*) which I believe is known in Covent Garden as Otaksa, which produces the most decided blue flowers. This subject of blue *Hydrangeas* is continually cropping up among admirers of these handsome plants, and an exchange of views is always interesting and instructive.

Munden Gardens, Watford. C. RUSE.

Maroon and bronze. — Black Knight and Hannah Dale.
Striped and flaked (red and rose). — Jessie Cuthbertson and Paradise Red Flake.
Striped and flaked (purple and blue). — Prince Olaf.
Bicolor. — Jeannie Gordon.
Marbled. — Helen Pierce.

TOO-MUCH-ALIKE VARIETIES.

The National Sweet Pea Society brackets the following varieties as too-much-alike. "Not more than one of the bracketed varieties shall be shown on the same stand at any exhibition of the National Sweet Pea Society." Priority is given to the first name.

- | | |
|--------------------------|--------------------------|
| { Etta Dyke | { John Ingman |
| { White Spencer | { Paradise Carmine |
| { Paradise White | { Spencer Carmine |
| { Queen Alexandra | { George Herbert |
| { Scarlet Gem | { E. J. Castle |
| { Her Majesty | { Rosy Morn |
| { Splendour | { Rosie Sydenham |
| { Duke of Sutherland | { Mrs. W. King |
| { Monarch | { Phyllis Unwin |
| { Lottie Eckford | { Dora Breadmore |
| { Maid of Honour | { Miss Bostock |
| { Ivy Miller | { Clara Curtis |
| { Black Knight | { Primrose Spencer |
| { Stanley | { Evelyn Hemus |
| { Boreatton | { Mrs. C. W. Breadmore |
| { Lord Rosebery | { Countess Spencer |
| { Cyril Breadmore | { Paradise |
| { James Grieve | { Enchantress |
| { Mrs. Collier | { Pride of St. Albans |
| { Mrs. Felton | { Olive Bolton |
| { Dora Cowper | { Codsall Rose |
| { Devonshire Cream | { Gorgeous |
| { Ceres | { Miss B. Whiley |
| { Yellow Dorothy Eckford | { Mildred Ward |
| { Captain of the Blues | { Countess of Lathom |
| { Bolton's Blue | { Coral Gem |
| { Lady Grizel Hamilton | { Marbled Blue |
| { Countess of Radnor | { Hester |
| { New Countess | { Mrs. Henry Bell |
| { Princess May | { Sutton's Queen |
| { Flora Norton | { Kitty Lea |
| { Miss Philbrick | { Romani Ronni |
| { Modesty | { Mrs. Hardcastle Sykes |
| { Duchess of Sutherland | { Princess Victoria |
| { Sensation | { Pink Gem |
| { Countess of Aberdeen | { Florence Morse Spencer |
| { Zoe | { Vera Jeffrey |
| { Mid-Blue | { Lorna Doone |

THE GREENHOUSE.

A NEW BEGONIA (B. PATRIE).

As that most popular of all Begonias, *Gloire de Lorraine*, was raised and distributed by the eminent nursery firm of MM. Lemoine et fils of Nancy, the announcement of the distribution of another variety which is considered extremely promising will be of interest. An illustration just received shows a group of plants of dwarf habit and extreme floriferousness. The variety in question is described as a new winter-flowering Begonia, the result of crossing *B. socotrana* with a variety of *B. Pearcei*, a tuberous species with velvety leaves and yellow flowers. It has the same style of growth as *B. Gloire de Lorraine*, but is distinguished therefrom by its greater vigour, denser habit, more fleshy leaves and, above all, by the brighter colour of its blossoms. Its culture is just as easy and it can be quickly propagated.

The inflorescences cover the plant like a dome and arch over at the tips in a graceful manner. The flowers, nearly all males, have four petals, and are almost as large as those of *B. Gloire de Lorraine*, their colour being a kind of reddish (*groseille*), coppery salmon with a golden sheen. They are so numerous that a plant 25 centimetres high and the same in width bears several hundreds of them at a time, each flower lasting for a long time. As in *B. Gloire de Lorraine*, the flowers are persistent on their pedicels, remaining fresh on the drooping clusters for more than a month without shrivelling. The flowering season extends from November to April. The fact that *B. Gloire de Lorraine* emanated from the same source would lead one to have high hopes of the newcomer. As might be supposed from the fact that one of the parents is a strictly tuberous species, the variety *B. Patrie* shows a leaning towards Messrs. Veitch's many varieties between *B. socotrana* and some of the Andean tuberous-rooted sorts.

H. P.

BLUE HYDRANGEAS.

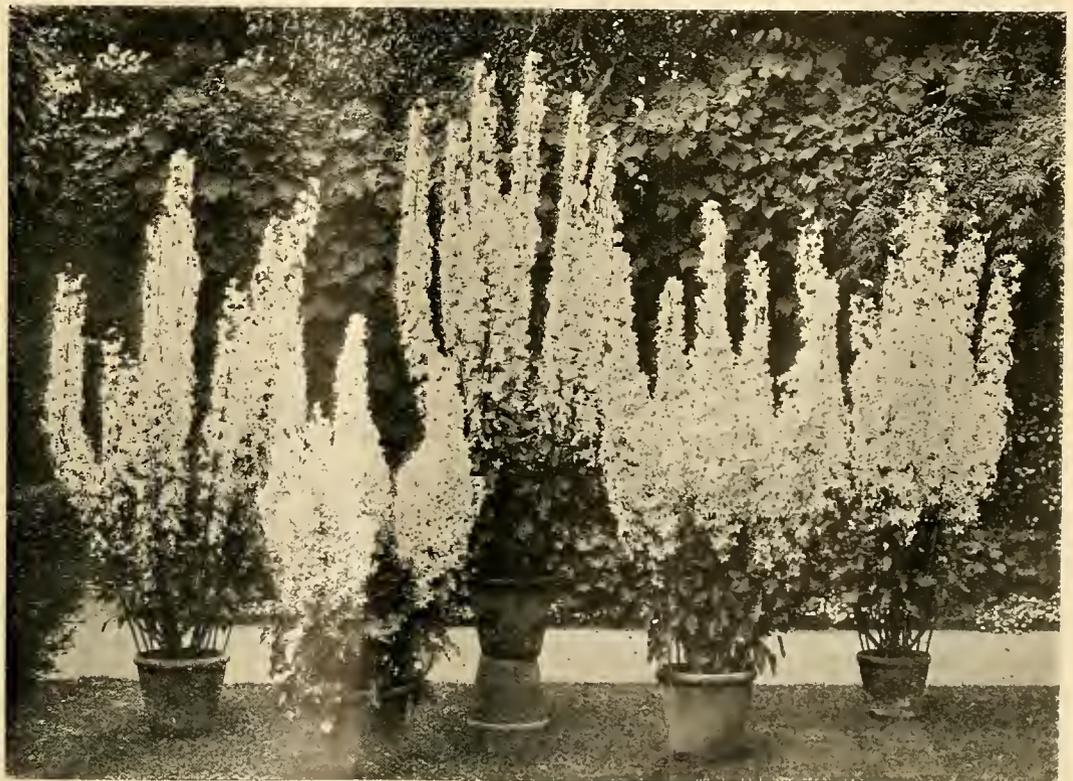
MANY and varied methods, more or less successful, are adopted by those wishing to induce their plants of *Hydrangea Hortensia* to produce blue flowers, while occasionally one may see plants in the open ground with apparently no particular treatment afforded them producing flowers of a lovely blue shade. Sometimes among a large quantity of plants a few will have blue flowers, and

SWEET PEA NOTES.

CLASSIFICATION.

The floral committee of the National Sweet Pea Society recommends the following varieties as the best in their colours:

- White.* — Dorothy Eckford, Etta Dyke and Nora Unwin.
Crimson and scarlet. — King Edward and Queen Alexandra.
Rose and carmine. — John Ingman.
Yellow and buff. — James Grieve and Paradise Ivory.
Blue. — Lord Nelson and A. J. Cook.
Blush. — Mrs. Hardcastle Sykes.
Cerise. — Chrissie Unwin.
Pink. — Countess Spencer and Constance Oliver.
Orange shades. — Helen Lewis and St. George.
Lavender. — Lady Grizel Hamilton and Frank Dolby.
Violet and purple. — Rosie Adams.
Magenta. — Menie Christie.
Picotée-elyed. — Evelyn Hemus.
Fancy. — Sybil Eckford.
Mauve. — Mrs. Walter Wright and the Marquis.



WELL-GROWN PLANTS OF THE CHIMNEY BELLFLOWER (*CAMPANULA PYRAMIDALIS*).

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE COLD FRAME.—This is already proving invaluable. I am just now lifting and placing in pots Carnations layered some time ago, and which are now well rooted. Later batches will be dealt with as they are ready. Three-inch pots are large enough at the present time, and the soil should comprise good loam, free



1.—A FIRM IVY SHOOT OF THIS YEAR'S GROWTH AND SUITABLE FOR MAKING INTO A CUTTING.

from wireworms, leaf-mould and sand. I am just about to insert my first batch of shrubby Calceolaria cuttings. They are now abundant on the old plants. Insert the cuttings in light sandy soil, in rows in the frames, or if more convenient use boxes for the same purpose, placing these in the cold frame subsequently. Cuttings are obtained from side-shoots about 3 inches in length.

The Vegetable Garden.—I am planting out Cabbages to provide supplies next spring and early summer. Lettuces, too, are receiving attention. A batch of young plants is being planted in a warm aspect for early use. In gardens where winter greens have been planted between rows of Potatoes, the latter had better be lifted as soon as possible. Make up Mushroom-beds in the open when the weather is not unsuitable. This matter was fully dealt with in a recent issue. Cauliflowers that were sown a month or more since should be quite ready for pricking out in cold frames. Plants raised during the period under notice invariably do well and

provide supplies in the succeeding early summer. A pinch of seed sown at this period will make up for any shortage that may arise and ensure successional supplies.

The Hardy Flower Garden.—Anticipating pretty floral displays next spring, I am now planting several varieties of the quaint bulbous Irises. The Netted Iris (*I. reticulata*) and its varieties are beautiful and should be in all gardens. The Persian Iris (*I. persica*) as well as *I. histrioides*, *I. alata* and others should each find a place in beds or borders, where they make a welcome display in the spring. The Spanish Iris, too (*I. Niphion*), should be planted at this period, and for pleasing effects may be grouped in masses of distinct varieties. The once-popular laced and other hardy Pinks I am planting freely at the present time. Many of these plants may be numbered among the best of our hardy flowering subjects. Bulbs of all kinds may be planted during the present month. Snowdrops I plant in gritty soil about 2 inches to 3 inches deep. The small bulbs of the charming Winter Aconite (*Eranthis*) should be scattered about and planted where they lie, some 2 inches deep. They do well in semi-cultivated areas, and are much appreciated in early spring.

The Greenhouse and Conservatory.—Tuberous Begonias and other flowering plants will need less water at the roots in future, gradually reducing it until the leaves turn yellow, when the waterings should be discontinued. I am moving into the cool greenhouse the earliest batch of the Chinese Primulas, where protection from frosts may be obtained for them. Later batches and *Primula obconica* may remain in the cold frame for some time yet. Cacti must be kept rather dry at the roots until February next, Epiphyllums, however, being an exception to this rule.

Chrysanthemums.—Hardy varieties in the open border must have considerable attention given to them at this period. I make it a rule to look through the collection pretty frequently, staking and tying cumbersome and unruly growths and removing spent blossoms before they rot. Apply liquid manure to plants that have their buds well set and those also that are partially open. The large-flowered, mid-season sorts need persistent attention just now. Buds that are not yet retained should be dealt with as soon as possible, and in the case of earlier buds showing colour the plants must be placed in a cool glass structure for protection. D. B. C.

HOW TO INCREASE THE IVY BY CUTTINGS.

OF all the hardy evergreen climbing plants we doubt whether there is any subject that will compare with the Ivy for real lasting usefulness. Owing to the great and pleasing diversity of its form and habit, varieties of the Ivy may be used on pergolas, garden arches, stumps of old trees, the walls of either dwelling-houses or outhouses, and in almost every conceivable way where a permanent covering is desired. *Hedera* is the botanical name of the Ivy, and all the forms now in cultivation have originated from one species, viz., *H. Helix*, which is a native of Great Britain and other parts of Europe. The green-leaved climbing varieties with black or yellow berries will grow in almost any aspect, but to do them well preparation of the soil in which they are to be planted amply repays the trouble taken. The ground should be deeply dug and heavily manured, and if old mortar rubbish is incorporated therewith the Ivy will revel in this, as it prefers a soil

with lime in it. On the other hand, the beautiful variegated sorts give better results in soils of a poorer nature, rich soils invariably causing the variegation to die out. These variegated sorts are not so robust, and for this reason should be planted in the warmer aspects. In south-west, west or south aspects they are seen to advantage.

When planting the Ivy see that the soil is made firm round about the roots, and for the first season the growths should be loosely secured to the walls or fences. We plant our Ivies from plants in pots in April, and they go ahead from the commencement. There are no doubt readers who would much prefer to raise a batch of plants themselves, either from stocks in their own garden or else from suitable shoots acquired from gardens of their friends. These plants may be propagated at any time between September and November quite successfully, although when raising plants in pots we prefer to insert the cuttings in October. Generally speaking, however, we prefer to make up a cutting-bed outdoors in a northern or western aspect. Those who prefer to raise these plants under glass may do so, where the temperature can be maintained at from 50° to 60°. We may mention here that these remarks apply especially to the green-leaved climbing sorts. Tree and variegated Ivies are usually increased by grafting on the common stocks in February.

The cutting-bed is our first consideration. This should be dug over at once and the surface soil well broken up, incorporating plenty of sand or gritty matter at the same time. Rake over and make fairly firm. This done, proceed to acquire a sufficient supply of shoots of the current year's growth. Fig. 1 gives a very good idea of the kind of shoot that it is intended to take in



2.—THE SAME SHOOT MADE INTO A CUTTING READY FOR PLANTING.



3.—A ROOTED GROWTH SEVERED FROM AN OLD PLANT.

hand. This is of a firm nature; soft shoots should be rejected. The cuttings when prepared should be from 6 inches to 8 inches in length. Fig. 2 shows how the cuttings should be prepared. Here it will be noticed that the shoot in Fig. 1 has been reduced in length and the lower leaves trimmed off close to the stem. To complete the operation, the stem has been cut through immediately below a joint, as it is from the base of the latter that the roots are emitted. Fig. 3 represents a shoot that has been severed from the old plant with roots adhering. Pieces of this kind may frequently be obtained, and with such material we may proceed at once to plant either in specially-prepared quarters or in permanent quarters, where their future well-being is practically assured.

Fig. 4 shows a number of Ivy cuttings inserted in a box of sandy soil. In this case they are dibbled some 3 inches to 4 inches apart in rows, and the latter rather farther asunder. Fig. 5 illustrates a number of prepared cuttings inserted in a 6-inch pot. Note how that portion of the stem from which leaves have been removed is inserted, so that the cuttings have quite a natural appearance. Always press the soil firmly at the base of each cutting, otherwise it will fail to root satisfactorily. Water the cuttings in after the operation is completed.

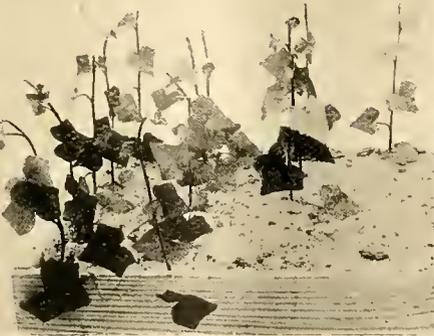
Should the cuttings be rooted in prepared beds outdoors or in cold frames take out a small trench some 3 inches to 4 inches deep and sprinkle in the bottom some coarse sand if the soil be of heavy texture. Place the base of each cutting firmly on the sand in the bottom of the trench, then fill in the latter, treading the soil to make it firm round the bases of the cuttings. The cuttings should be 4 inches apart and the rows about 8 inches asunder.

PLANTING SNOWDROPS.

The present is the best time of the whole year for planting the bulbs of this charming and

popular little flower, and no time should be lost in carrying out the work. It is true that good results can be and are secured from later plantings; but nothing is gained and much may be lost by any delay in getting the bulbs into the soil. Wherever they are planted they should be placed in masses, as the effect is then much better than when a bulb is placed here and another there. For planting in grass or the fronts of shrubberies, or for carpeting a bed of deciduous shrubs, the Snowdrop is eminently suited, while clumps dotted about in nooks in the rockery are most pleasing in the early days of spring.

The plants are not at all fastidious as to soil, as they will thrive in almost any, except that of a very wet and close character. Two inches is a good depth to plant the bulbs, taking care that each one is placed quite to the bottom of the hole. Other bulbous subjects which form excellent companions to the Snowdrop are the pretty little *Scilla sibirica* and the *Glory of the Snow*, as *Chionodoxa Lucilia* is popularly called, the bright blue colour of these contrasting in a pleasing manner with the pure white of the Snowdrop. In addition to the common and double-flowered Snowdrops there is a large-flowered and handsome one named *Galanthus Elwesii*, which should certainly be included in every collection. In addition to their uses in the open garden, all the plants mentioned above



4.—CUTTINGS PLANTED IN A BOX 4 INCHES DEEP.

are splendid for window-boxes, where they will flower with little trouble if planted now.

WHEN TO GATHER HARDY FRUIT.

The beginner in gardening who possesses a few fruit trees which are carrying good crops is naturally anxious to secure these with as little loss as possible, and frequently his or her anxiety on this point leads to the removal of the fruit before growth is anything like completed. This applies particularly to Apples and Pears which do not ripen until some time after they are ready for gathering, and the result of this premature removal from the trees is fruit that is shrivelled and comparatively flavourless a few weeks after gathering. As implied above, these fruits need not be ripe at the time when they are ready for collecting; indeed, only very early varieties are, and one is led to make this statement because the two phases are so frequently confused by amateurs. Apples and Pears will ripen perfectly after they are removed from the tree, providing such removal is not premature.

The exact time when such fruits are ready for picking is easily understood by those who are used to the work; but the beginner will often experience a difficulty in determining this point. A general and fairly reliable guide is to take a good average sound fruit and cut it in two, so as to expose the seeds. If these are brown the crop may be regarded as ready for picking, although a few fruits on the tree may not be quite far enough advanced. A better test is to gently lift

each fruit until its natural position is nearly reversed. If it is ready for gathering, the stalk will then part from the spur quite easily without any pulling whatever. Where sufficient energy is required to remove the fruits with leaves adhering to the stalks, the crop is not ready and should be left a few days or a week or two longer.

PLANTING OUT YOUNG CARNATIONS.

WHERE layering was done early in July the young plants ought now to be in excellent condition for removal from the parents, and the sooner the work is done the better. It is a good plan to go over them a few days previous to lifting and sever the layers from the old plant with a sharp knife. Removal is then felt less than when the young plants are severed and lifted at the same time.

During the last decade there has been a growing tendency among cultivators to treat the Carnation as a half-hardy plant, the rooted layers either being potted up and stood in a cold frame or house, or else planted out in a prepared bed in the cold frame, there to remain until the spring before being transferred to their flowering quarters. How far this system has tended to discourage the culture of Carnations by amateurs would be difficult to ascertain, but it is certain that many now regard a cold frame as essential for the culture of these plants. This is a great pity, because the Carnation is a perfectly hardy plant and, except in the wettest and coldest of soils, will stand the winter outdoors unharmed. Even where the natural soil is cold and wet it may be considerably improved by the addition of road scrapings, old mortar, wood ashes, burnt earth or similar lightening material, this being thoroughly mixed and deeply dug into the ground at once, breaking any large lumps encountered.

Lift the young plants with as much soil adhering to their roots as possible and transfer them to the prepared bed without delay, taking care to avoid deep planting, and make the soil moderately firm around the roots. Birds are frequently a great source of trouble during the winter, and the plants must be protected from these and rabbits by placing netting over them almost as soon as planted. Where birds only are to be feared, black cotton is less conspicuous and equally as effective if stretched from sticks a few inches high placed at intervals over the beds.



5.—CUTTINGS PLANTED ROUND THE EDGE OF A 6-INCH POT. IF THE POT IS PLUNGED IN SOIL IN A COLD FRAME THE CUTTINGS WILL FORM ROOTS MORE QUICKLY.

THE TOWN GARDEN.

BULBS IN MOSS FIBRE.—If we give, as we all desire to do, honour to whom honour is due, then we shall credit the versatile Mr. Robert Sydenham for having made this form of bulb culture so enormously popular. Mr. Sydenham wanted to sell his bulbs, but he was wise enough to see that the use of soil and pots would not commend itself to all ladies, so he told them how to cultivate bulbs in moss fibre and shell, offered to sell them the necessary material, and lest they should have trouble in finding suitable receptacles, he secured some most artistic jars and listed them in his catalogue. This should have been sufficient to satisfy the most fastidious; but in case there were sceptics who doubted the possibility of what Mr. Sydenham promised, he grew bulbs in jars and showed them at various exhibitions; at this everyone capitulated and sought to do likewise. All these things were done years ago, but Mr. Sydenham is still willing to do them, as our American friends would say, "right now." On behalf of my fellow town gardeners and myself I tender thanks to the genius from Birmingham.

PREPARATION OF THE MATERIAL.—One of the principal points in this form of culture is to have the material in proper condition at the time of use. It should be borne in mind that it is perfectly clean, and that if a newspaper is spread on the drawing-room table all the processes in connexion with it can be done there. Assuming that the mixture of moss fibre and shell is procured, it will remain only to bring it into the correct condition of moisture prior to use. This is ensured by adding a little water and thoroughly turning; it may be necessary to apply three or four quantities of water, but judgment must be used in this matter to have the material just pleasantly moist when it is put into the jars in advance of the insertion of the bulbs. My own experience goes to prove that this is the greatest element towards success or failure, and that when once the knowledge to decide the correct condition has come, the whole matter becomes exceedingly simple and failures will be few and far between.

THE BULBS AND THEIR INSERTION.—In saying that the chief element to success lies in the condition of the material, I was regarding the question from a purely cultural point of view, for the use of the finest quality bulbs is even more imperative. If the bulbs are poor, no excellence in preparatory work or subsequent management will produce perfect flowers; therefore, procure sound, solid bulbs which have been selected with precisely the same care as those for glasses. This done, the potting (if I may use the term) should proceed on the same lines as in the case of ordinary soil, and throughout the treatment should be identical with that already advised for those grown in pots. It will, however, be essential to use even greater care in watering, as the fact that there is no drainage predisposes the receptacle to stagnation and souring which are fatal to success.

BULBS IN GLASSES.—This is another delightful way in which town gardeners can grow bulbs. The water should not actually touch the base of the bulb, but it must be so close that there is only the thickness of a piece of paper between; in each receptacle there must be one or two knobs of charcoal, as although it will not yield food it will help materially to keep the water sweet. The bulbs for this purpose must be specially chosen for their good shape and solidity, and the bulb merchant should be apprised of the purpose for which they are to be used when the order is given. These will require a sojourn in the dark, just the same as those in pots of soil or jars of moss fibre.

SELECTION OF BULBS.—Neither for pots, jars nor glasses has a selection of varieties been given for the simple reason that most readers will prefer indulge their own tastes. H. J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

BOUVARDIAS that are planted out should now be carefully taken up and potted. See that the plants are moist enough before taking up, then a much better ball of soil can be secured and the plants will scarcely feel the check. When they are potted place them in a pit and shade rather heavily for a few days. Syringe well until the roots take hold of the new soil. Solanums, Salvias and Libonias will need similar treatment, though they need not be put under glass for another week or ten days.

Violets.—I have noted in a previous calendar the necessity for preparing the frames for Violets. These plants may now be taken up and put in the frames. Use good soil (fresh and rich) around the roots, take away any runners that may be on the plants, and allow a fair amount of room between the plants; but above all keep them near the glass. After planting is completed, thoroughly water and shade lightly, if necessary, for a few days.

Chrysanthemums.—Those early varieties which are showing colour should be placed under glass or the night dew may ruin the blooms. Keep a sharp look-out for earwigs. Carnations of the winter-flowering section that have stood outside must now be placed in the houses, which should have been made scrupulously clean.

KITCHEN GARDEN.

Parsley.—This is always in demand, and some plants should be pricked out into a frame or two-light box. Plants from the June sowing will suit this purpose well, and choose the finest curled varieties.

Lettuce.—Continue to prick out those varieties which are to stand the winter. Plant rather close in the rows as the plants can with advantage very often be used as thinned in the spring; in fact, they should be planted close with this idea. Plant out also quick growing varieties in frames for use in October, November and December. Golden Ball and All the Year Round are good varieties for this purpose.

HARDY FRUIT.

Apples, Pears and Plums.—The protection of these will be necessary against the ravages of the birds. Nets should be cut up and placed over choice varieties, and if these are kept in a dry place, when finished with they will last for the same purpose for several seasons. Unfasten the ties of grafted trees and see that the shoots are secured to stakes to keep them from blowing out. Get a good stock of soil ready for top-dressing trees, and mark all those that require lifting or root-pruning, as this work can be proceeded with as soon as the fruit has been gathered.

FRUIT UNDER GLASS.

Early Peaches should have the surplus wood taken out now so that the fruiting wood which is left may have the benefit of light and air and have ample room for development. Keep the roots well supplied with moisture.

ORCHIDS.

Odontoglossums should be looked over during the next week or two and potted or top-dressed as required. Many plants will be making fresh roots, and the cool, refreshing nights now will enable them to make very speedy progress. Dendrobiums which have completed their growth may be kept somewhat drier.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

USEFUL WINTER PLANTS.—*Begonia fuchsoides* and *B. weltoniensis* are special favourites among those who have much indoor furnishing to do in winter. They do best when potted in fibrous loam, a little peat, leaf-mould and silver sand or road grit, preferring, like *Libonias*, a warm, moist pit during the summer, where they can be treated to early closing and gentle syringings overhead. They will also bear a little weak liquid manure once a week when the pots have become well filled with roots. *Eupatorium odoratum* and *E. riparium* are of very easy culture, rooting freely into a compound of loam, well-rotted manure and rough sand. Plants which have grown one year should be cut hard back and repotted, cool treatment throughout suiting them best.

KITCHEN GARDEN.

Spring Lettuce.—In many places this is even more important than the winter crop, and there are very few who grow Lettuce all the year round, as the losses from December to March are so great. Frost, of course, injures the plants, but damp and fogs are equally fatal, and large plants suffer more than smaller ones at this period. For spring supplies I advise sowing in the open about the middle of this month. Thin sowing is most important, as crowding means weak plants, and if necessary thin early before the seedlings touch each other. Grown thus, with a favourable winter, there will be good plants for putting out in February or March, leaving the large ones to mature for early cutting. Such hardy sorts as Stanstead Park, Sutton's Winter Green and Lee's Hardy Green are among the best winter varieties.

FRUIT UNDER GLASS.

Vines.—Young planted-out Vines will by this time have made their growth, and attention should be directed to the ripening of the wood. The front ventilators must never be quite closed now, and should there be any suspicion of green wood keep the hot-water pipes slightly heated. The laterals may now be allowed free extension. Succession Vines must be encouraged to ripen their wood, so that they may be in fit condition for pruning at the proper time. All growths should be kept in check, and if the foliage is at all crowded the wood may be shortened a little, so that light and air are admitted.

Pot Roses.—Now is the best time to lay in a stock of these for winter blooming. Many lovers of Roses have not the convenience to produce plants of the same quality as the nurseryman, and it pays better to purchase plants than to attempt the rearing one's self. Bought specimens are now in the right condition to go on growing in a gentle heat. I find it best to start the plants almost as received, excepting that it is best to remove the twiggy shoots and cut back the next growth to a plump eye. Mistakes are frequently made in pruning these pot Roses hard at first. Tie them out as much as space will allow, and out away but very little of the growth. Soon after starting the dormant basal eyes will begin to swell, and will eventually throw up growths which will yield some beautiful blooms.

FLOWER GARDEN.

Bedding Plants.—From now onwards every effort should be made to keep the beds and their contents as neat as possible by picking off all dead and dying leaves and flowers. If further stock is required, it is better now, in the case of Geraniums, to depend on lifting the youngest and least ungainly of the plants in the beds before they have become much injured by frost, trimming them into shape and boxing them up to go through the winter under glass.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich

NEW PLANTS AT WISLEY.

THE joint sub-committees of the floral committee of the Royal Horticultural Society and the National Dahlia Society met at Wisley on the 4th inst. to examine the Dahlias, a number of which are this year on trial. The generally inclement weather and continuous rains for some days previously had been most unfavourable for the development of the flowers, not all of which were in a condition to judge of their merits. The following, however, each received three marks as judged from the garden or decorative point of view.

Dahlia Emily Hubbard.—This belongs to the decorative class. Flowers pure white, freely produced on sturdy, erect stems; height 4½ feet.

Dahlia Brightness.—A member of the Pompon Cactus section, but the flowers are somewhat above the usual size. Colour scarlet, growth and flower heads erect; height 3 feet.

Dahlia Avoca.—A free and profuse-flowering Cactus variety. Colour crimson, shaded scarlet, the tips of the incurving florets being of a reddish hue. A showy plant, 4 feet high.

Dahlia Miss Willmott.—A plant of good garden value, free in growth and flowering. The colour is yellow, shaded with orange; height 4 feet.

Dahlia Stalwart.—A variety of good Cactus type. Flowers bright crimson, with maroon centre. The plant is free flowering and not more than 3½ feet high.

In addition to the Dahlias, the following plants were also awarded three points each.

Phlox Prosper Henry.—A dwarf-habited, free-branching variety of much promise. The pure white flower has a conspicuous lilac centre, and is of excellent form; height 1½ feet.

Phlox Comtesse de Jarnac.—This variety was not in flower, but its silvery leaf variegation was conspicuously good, and it was regarded from this latter standpoint. The plant is about 2 feet high.

Zea japonica gigantea quadricolor.—The varietal names of this strikingly-beautiful Maize are fairly descriptive, the plants presenting a handsome appearance.

THE EDITOR'S TABLE.

APPLE THORLE PIPPIN.

Mr. William Baylor Hartland writes: "I send you a nice early Apple named as above, and am drawn towards dropping you this note on account of what is being said over the value of that over-estimated fruit Worcester Pearmain. Thorle Pippin has character and quality, and bears in thick, overcrowded bunches; then it will keep as a dessert fruit until Christmas, and is a great bearer. The Worcester Pearmain, to my mind, has nothing to recommend it but colour and constant fruiting, and its rich tone catches the public eye and the coster's barrow. The great fault now with many of our committees is that the great aim is to please the barrow of the coster and ignore merit in other directions."

[This is a variety of excellent flavour, with a pleasant acidity that would be much liked by some. It is also of attractive appearance.—ED.]

AUTUMN FLOWERS.

Dr. McWatt sends from Morelands, Duns, N.B., many interesting autumn flowers which, as he rightly says, are rarely seen in our gardens. They comprise *Chrysanthemum arcticum*, a branch of the beautiful *Spiraea Aitchisonii*, which, as our correspondent mentions, is fit to be planted among good flowering shrubs. Then also is sent *Senecio tanguticus*, which is a good plant for the more southern counties of the British Isles. We were very pleased to see some flowers of *Anemone japonicum* Queen Charlotte, a very pretty double form of a rose colour, and splendid inflorescences of the Swallow Wort or

Willow Gentian (*Gentiana asclepiadea*) and the white variety *alba*. As our correspondent remarks, these are very beautiful plants which are not very often seen. At Kew a fine effect is produced by growing them among hardy Ferns on a steep bank at one end of the rockery. Many other interesting plants were sent, but we think these were the most worthy of notice. We thank our correspondent for so interesting a collection of autumn flowers.

ABELIA RUPESTRIS (CHINENSIS) FROM LOWESTOFT.

The Rev. M. Made, Lound Rectory, Lowestoft, sends flowering sprays of the pretty shrub *Abelia rupestris*, or *chinensis* as it is now called, the sweetly-scented, bell-shaped flowers and glossy green foliage being most pleasing. He writes: "I enclose some sprays of *Abelia rupestris* from my rockery. The plant is growing well in a sheltered sunny spot (south aspect) in a raised position. The soil is partly leaf-mould and sandy loam. The *Abelia* was planted last spring."

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Twelve best Carnations for exhibition (Burnbob).—Agnes Sorrel, maroon; Ann Hathaway, yellow; Charles Martel, scarlet on white ground; Erl King, buff, marked rose; Hidalgo, yellow, red and maroon; John Pope, deep rose; Lady Hermione, salmon pink; Liberte, yellow, maroon and crimson; Miss Willmott, coral; Hildegard, white; Robert Berkeley, scarlet; Rony Buchanan, terra-cotta and rose.

Single Hollyhocks (North Lincs).—It is possible that your single Hollyhocks are of an inferior strain, but all the same, as the strains ordinarily grown are so good, it is still not probable. The cultivation seems to have been too rich, and it is possible that it has created long stems and large leaves at the expense of the flowers. Very possibly if the plants be kept through the winter several stems will break up next year, less gross in growth, and you may have well furnished spikes and fine blooms. It is very possible that the strong manuring you have given your plants has enabled them to withstand an attack of the Hollyhock fungus. Probably next year you will find the fungus present, but may have a fine display of bloom all the same. In any case cease giving the plants further manure, liquid or solid.

Plants for beds (Springtime).—The end of May is rather late for good effects with Cottage Tulips generally, unless you purposely defer the planting of them till the end of the year. You might do this with absolute safety with both Cottage and Darwin Tulips, provided the bulbs are kept in a perfectly cool and dry place. At the time stated there are no other plants capable of the same bold effect as these late May-flowering Tulips, and the number of suitable carpet plants is not large; that is to say, whose colours would not clash with the Tulips, for we presume you require the twain to be in flower at the same time or nearly so. Two very fine yellow-flowered and cheap Tulips are Golden Crown and Golden Eagle, carpet plants for which might be golden yellow Polyanthus or red Polyanthus. For a crimson and scarlet Tulip use *Gemeriana sphatulata*, the surface to be carpeted with double white

Arabis. *Macrospella*, another scarlet, may have a carpet of single white *Arabis* or white *Alyssum*. *Flambeau*, *Herschell* and *Glow* are fine varieties of Darwin Tulips with richly coloured flowers, for which carpet plants are scarcely necessary. *Doronicum Harpur Crewe* makes a fine bed of yellow for the same season.

THE GREENHOUSE.

Plants for flowering in the house during December and January

(Sussex).—Of bulbous plants to flower during the period named may be especially mentioned Roman Hyacinths, which potted at once and brought on in a greenhouse temperature will flower well. The same also applies to Freesias. The varieties of Polyanthus Narcissi, such as double Roman, Paper White and Early Snowflake, potted now, stood out of doors and covered with ashes till they are rooted, and then gently forced, will also be available, and Tulips of the Duo Van Thol section of different colours are equally valuable for flowering in the depth of winter. With regard to Arum Lilies, your better way will be to purchase plants showing flower at the proper season. Strong clumps of the Christmas Rose bristling with flower-buds can be obtained, and these if potted will make a goodly show. There is no need to obtain these before the latter part of November. Retarded bulbs of *Lilium longiflorum*, which need to be potted about three months before they are required to bloom, are very desirable, and so are the varieties of *Lilium speciosum*, that need about eighteen weeks to develop their blossoms. *Spiraea* and *Lily of the Valley*, too, give great satisfaction from retarded crowns. As it is very difficult, indeed practically impossible, to actually time the flowering of these without a good deal of experience (for the weather is such an important factor in the matter), it will be much better to purchase them from the large growers just as the blossoms are on the point of expanding. Of hardy shrubs *Azalea mollis* and *White Lilacs* might be flowered within the time named, but they need to be hard forced. You could obtain flowering plants of American Carnations in December, and greenhouse Heaths, Indian *Azaleas*, *Begonia Gloire de Lorraine*, *Primulas*, *Cyclamen*, *Solanum capsicastrum* with its red berries, *Poinsettia pulcherrima* and a few other lesser-known plants.

Lonicera hildebrandiana (B. H.).—The plant appears to be infested with spider, which may be cured by fumigation or by syringing with insecticide. The house has probably been kept too close for it, and more air should be given. Cutting back should be left till the plant has made full growth, when all surplus shoots may be thinned out.

Odontoglossum leaves spotted (J. W.).—The tiny spots on the very youngest leaves of *Odontoglossum grande* are not caused by any insect or disease, but are simply the normal condition of the plant. As you say, the spots gradually disappear as the leaves develop. This feature is by no means confined to *Odontoglossum grande*, for several other Orchids behave in the same way.

ROSE GARDEN.

Roses by the sea (E. W.).—Tea Roses are very suitable to grow by the sea. Some of them are more robust than others. You would find the following thrive excellently: *Yellows and creams*—Marie van Houtte, Mme. Hoste, Mme. Charles, Mme. Ravary, Souvenir de Pierre Notting and Billiard et Barré. *Pinks*—Mme. Abel Chateau, Caroline Testout, Grace Darling, Mme. Leon Pain, Killarney and La France. *Reds*—Griiss an Teplitz, Marie d'Orleans, Marquise de Salisbury, Betty Berkeley, General Schablikine, Richmond, General McArthur and Papa Gontier. The *Rugosa* and Chinese or monthly Roses also do well, of which there are several sorts, and also the dwarf Polyanthus, which are especially lovely. You could also grow some of the flowering shrubs by the sea, viz., the hardy *Fuchsias*, *Altheas*, *Hydrangeas*, *Lilacs*, *Guelder Roses*, *Tamarisks*, *Hypericums*, *Spiraeas*, *Philadelphuses* and *Weigelas*. Most of these are tall growing. Of tall-growing herbaceous plants *Tritomas*, *Delphiniums*, *Asters* or

Starworts, Sunflowers of sorts, Ox-eye Daisies, Anemones and Aaron's Rod would do well; and of low-growing kinds choose Phloxes, Paeonies, Pyrethrums, Poppies, Geums and Potentillas.

Rose to name (*Mrs. J.*).—The Rose you send is the Persian yellow Briar. The green centres are probably the result of early frosts, although this variety being so double will often come malformed in this way. It would make a pillar Rose, growing to a height of some 4 feet to 5 feet in course of time. The variety Harrisonii would make the better pillar Rose. It is not so rich in colour, but far easier to grow.

MISCELLANEOUS.

Exhibiting Ten-week Stocks (*F. E. P.*).—As your schedule so strictly confines the number of spikes of Stocks to be shown in a vase to six, it will be wise to read that condition literally and set up six of the best spikes of each variety you have. If the centre spikes are over, use the best of the side spikes. If you have given the correct reading of the schedule, it does not say each vase must contain a distinct variety, and therefore no one can be disqualified if, having six spikes exactly in each, the varieties are mixed. All the same, we advise you to set up one variety in a vase only, because some judges do odd things. Probably that is what is wanted; but the schedule does not say so. At many shows we have found the Stock class to be "six plants as pulled" the best way to show them. Your schedule says "spikes," not "plants," so adhere to spikes.

Names of plants.—*H. E.*—The shrub is *Symphoricarpos racemosus*, and the perennial is *Artemisia vulgaris*.—*C. Jones.*—*Vitis inconstans*, synonymous with *Ampelopsis Veitchii*.—*W. A. Macgregor.*—*Pyrus lobata*, synonymous with *Mespilus Smithii*.—*O. G.*—*Coronilla Emerus*.—*C. S. S. J.*—*Crinum Moorei*.—*Mrs. B.*—*Rhus Cotinus*.—*E. Bunbury.*—*Crinum Moorei*.—*Lord C.*—*Molcaella spinosa*.—*T. C.*—*Asplenium bulbiferum*; *Amorphophallus Rivieri*.—*Lady Davis*—*Magnolia acuminata*.—*H. G. Cole.*—The Sweet Pea we do not recognise, but it is very poor and, commercially, useless.

Names of fruit.—*O. N. J.*—1, Hawthornden; 2, Potts' Seedling; 3, Cellini Pippin; 4, White Transparent; 5, Queen Caroline. —*E. Barror Jones.*—Purple round, Cox's Emperor; red oval, Victoria; yellow, spotted red, Jefferson; green oval, Lawson's Golden Gage; green round, Green Gage. Please number fruits when sending again. —*Glasgow.*—1, Orleans (kitchen); 2, Egg Plum (kitchen); 3, Brahy's Late Gage (dessert); 4, Late Prolific (dessert); 5, Washington (dessert); 6, S and 9, Victoria (kitchen); 7, Wyedale; 10, Dove Bank; 11, Prince Englebert; 12, all smashed up; 13, Green Gage. —*R. U.*—1, Mr. Gladstone; 2, Golden Spire; 3, Gascoyne's Scarlet Seedling; 4, unable to recognise, probably a local variety; 5, Crimson Queen (Herefordshire). —*H. G. Cole.*—1, Blenheim Orange; 2, New Hawthornden; 3, Sugarloaf; 4, Prince Englebert; 5, Plum Blend Purple; 6, Pear Jargonelle. —*R. E. D.*—Apples: 1 and 9, Yellow Ingestre; 2, Pearson's Plate; 3, Round Winter Nonsuch; 4, Lady Sudeley; 5, Bess Pool; 6, Cox's Orange Pippin; 7, Braddick's Nonpareil; 8, Pearn's Pippin; 10, Blenheim Orange; 11, Hambleton deus Ans.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

The fortnightly meeting in connexion with the above society, held on the 15th inst., was well attended, and both the quantity and quality of the exhibits was good. Dahlias were naturally very prominent, the magnificent bank staged by Messrs. Dobbie and Co. attracting much attention. Other flowers were well shown, and several interesting fruits were to be seen.

ORCHID COMMITTEE.

Present: Mr. J. Gurney Fowler (chairman), Messrs. James O'Brien, Jeremiah Colman, H. Little, W. Boxall, Stuart H. Low, R. G. Thwaites, F. J. Hanbury, Walter Cobb, A. A. McBean, C. H. Curtis, F. J. Alcock, W. P. Bound, J. Cypher, Harry J. Veitch, F. J. Thorue, H. G. Alexander, H. A. Tracy, W. H. White, Gurney Wilson, J. Wilson Potter, W. Bolton, A. J. Foster and de B. Crawshaw.

Messrs. Sander and Son, St. Albans, were exhibiting a small group of plants in their usual high-class style. These comprised good specimens of *Miltonia spectabilis* moreliana, *Odontoglossum grande*, *Cattleya gaskelliana* alba, *Phalenopsis Esmeralda* atro-rubens, *Brasso-Cattleya Doris* and B.-C. Charles Maron. Silver Banksian medal.

From Messrs. Moore, Limited, Rawdon, Leeds, came a nice group of various kinds, a large well-flowered plant of *Vanda cirulea* occupying a prominent position. *Odontoglossum harrayanum*, *Trichocentrum albo-purpureum* and the curious green-flowered *Cynorchis chlorochilon* were three of the most conspicuous. Silver Banksian medal.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, put up a nice little group of splendidly-grown plants. Among these a particularly fine flower of *Cattleya Iris*, *Oncidium oblongatum citrinum*, *Coleogyne Veitchii*, *Stanhopea oculata*, *Dendrobium sanguinolentum* and *Cypripedium concolor* were specially noticed. Silver Banksian medal.

Messrs. William Bull and Sons, King's Road, Chelsea, staged a nice little bank of *Cattleyas*, including several interesting crosses. *C. Harrisonii* × *C. aurea*, *C. veitchiana* × *C. aurea* and *C. schofieldiana* × *C. aurea* gave some very

interesting results. A pretty little bigeneric hybrid, the result of crossing *Cattleya Harrisonii* with *Sophranitis grandiflora*, was also included, this partaking in an unmistakable manner of both parents.

Messrs. Charlesworth and Co., Heaton, Bradford, exhibited a tastefully-arranged group of well-grown plants, including many interesting things. *Cypripedium Daisy Barclay*, *Zygopetalum Burkii*, *Z. roeblingianum*, *Vanda saederiana*, *Sophran-Cattleya Gratixae* and *Laelio-Cattleya Aleyone* were a few that we noticed as being especially good. Silver Flora medal.

From H. S. Goodson, Esq., Putney (gardener, Mr. G. E. Day), came a nice collection of well-grown plants, including *Cypripediums*, *Cattleyas* and *Odontoglossums* in great variety. *C. fairieanum*, *Miltonia Leopoldii* and the curious little *Angreem distichum* were three of the most interesting. Silver Flora medal.

The handsome group staged by Messrs. Cypher and Sons, Cheltenham, contained many very fine specimens that manifested the good culture meted out to them. *Miltonia spectabilis* moreliana, *Phaio-Cymbidium Chardwarensis*, *Cattleya thayeriana*, *Cypripedium concolor*, *C. Mandie*, *C. fairieanum*, *Masdevallia stupenda*, *Zygopetalum rostratum* and *Oncidium papilio majns* were only a few among the many interesting subjects to be seen. Silver Banksian medal.

Messrs. Stanley and Co., Southgate, London, N., exhibited an interesting group of *Cattleyas* and *Cypripediums*, among which were some choice and interesting plants. *Cattleya Harrisonii* alba Stanley's variety was one of the most beautiful, the flowers being pure white with the exception of a pale yellow blotch on the lip. *Cypripedium A. de Lairesse* was in first-class condition. Silver Banksian medal.

FRUIT AND VEGETABLE COMMITTEE.

Present: Mr. Joseph Cheal (chairman), Messrs. W. Bates, J. Willard, Alex. Dean, George Kell, W. Fyfe, H. Parr, A. R. Allan, J. Davis, W. Barnes, W. H. DIVERS, G. Reynolds, J. Jaques, Charles Foster, J. McIndoe, Owen Thomas and W. Ponpart.

Messrs. J. Veitch and Sons, Limited, Chelsea, staged a remarkably fine group of high-class vegetables, these including such subjects as Cabbages, Savoys, Early Elm and De Vertus, Brussels Sprouts, Carrots, Parsnips, Potatoes, Beetroots, Onions, Turnips, huge heads of Celery and Lettuces of various sorts, the centre of the group being occupied with a collection of ornamental Gourds. The arrangement here was exceedingly good and showed the high-class produce off to the best advantage. Carrot Veitch's Matchless, a long, large, beautiful clear variety, attracted much attention. A very interesting and instructive exhibit. Silver-gilt Knightian medal.

From Messrs. Carter Page and Co., London Wall, came a very interesting and comprehensive collection of Tomatoes, all shapes, sizes and colours being represented. The yellow varieties were especially good. Silver Banksian medal.

Mrs. Trotter, Wyrham Park Gardens, Barnet, Herts (gardener, Mr. J. H. Juniper), exhibited three bunches of a white Grape, a sport from Black Hamburgh. The habit is stated to be vigorous, and the fruits free setting and of good keeping qualities.

A beautiful collection of Melons came from Lady Northcliffe, Sutton Place Gardens, Guildford (gardener, Mr. Joseph Gootley). These were a very well-finished lot, and the skins of all were well netted, thus adding much to their attractiveness. Hero of Lockinge, Sutton's A 1 and The Pear were the varieties shown. Silver Knightian medal.

A promising new Melon of good flavour named Barnett Hill Favourite was shown by F. H. Cook, Esq., Barnett Hill, Womersley, Guildford (gardener, Mr. A. Michelson).

Apple Red Victoria, a beautiful large cooking variety, was exhibited by Mr. G. W. Miller, Clarkson Nurseries, Wisbech, and received an award of merit.

Mr. W. H. B. Fletcher, Aldwick Manor, Bognor, Sussex, exhibited a spray of *Vitis Coignetiae* bearing several clusters of ripe fruits, these being very rarely seen.

A collection of Apple Grenadier from Mr. Charles Luffen, West Dulwich, received cultural commendation.

FLORAL COMMITTEE.

Present: Mr. W. Marshall (chairman), Messrs. H. B. May, W. A. Binney, C. T. Drury, James Walker, C. R. Fielder, J. Jennings, C. Blick, W. T. Ware, Charles Dixon, A. Turner, H. J. Jones, E. H. Jenkins, James Hudson, J. T. Bennett-Poe, James Douglas and W. J. James.

Mr. Amos Perry, Hardy Plant Farm, Winchmore Hill, displayed in excellent fashion a particularly good lot of hardy things, notably Lilies, Larkspurs and Poppies. The former group was represented by such species as *tigrinum*, *anratum* and *speciosum* in variety, the Larkspurs in their many beautiful shades creating a fine display. *Artemisia lactiflora* (with creamy inflorescences) and *Endbeckia Herbston* (a rich yellow and possibly an improved form of *R. nitida*) were noted for their pleasing effects. Silver Flora medal.

Messrs. William Cutbush and Sons, Highgate, had a capital group of Carnations, displaying the blooms in large vases in a most effective way. Some of the best were Helen Gould, Mrs. H. Burnett, White Perfection (very fine), Robert Craig, Victory and Britannia, the three last named representing the finest types of scarlet-flowered Carnations at present in cultivation. Messrs. Cutbush also set up a group of the showy *Coleus Cordelia*, the leaves of which are of a scarlet and bronze tone. Silver Flora medal.

Messrs. G. and A. Clark, Limited, Dover, had a small yet attractive group of hardy plants in which *Gladiolus princeps*, *Himmemannia fumarifolia* (a yellow Poppywort), *Gilia coronopifolia* (rich scarlet in tall spikes), *Kniphofias* in many showy varieties, *Helianthus mollis*, *Helenium*

Bolanderi Golden Gem (a showy plant with blackish disc), *Delphinium The King* (a fine deep blue with white eye) and others. Bronze Flora medal.

Messrs. H. B. May and Sons, Edmonton, filled a long table with well-grown examples of scarlet *Salvia*, the blue and white-flowered varieties of *Plumbago capensis*, *Bonvardias* in scarlet and white, a fine bed of well-flowered *Heliotrope*, and a brilliant lot of single, double and Cactus-flowered *Pelargoniums*. Silver Flora medal.

Mr. A. L. Gwillim, New Eltham, Kent, displayed superb blossoms on boards in colours of yellow, scarlet, orange, crimson, salmon and other shades of *Tuberous Begonias* representative of an excellent strain. Silver Banksian medal.

The *Gladioli* from Messrs. J. Burrell and Co., Cambridge, were a superb lot. The compactness of the well-formed spikes, the brilliant and decisive shades of colour and the handsome flowers all told of excellent culture. In not a few instances, as many as a dozen or thirteen flowers were seen on a spike. The fact that the great majority of those exhibited were seedlings as yet unnamed precludes us from giving a list of names. Silver-gilt Flora medal.

The Misses Hopkiss, Mere Gardens, Shepperton-on-Thames, had a small rockery exhibit arranged with hardy plants.

Messrs. T. S. Ware, Limited, Feltham, put up an imposing group of hardy plants in the cut state, displaying in the most effective manner a large collection of seasonable subjects. The new double-flowered *Aster Beauty of Colwall* was shown in excellent form and there were numerous plants of interest or merit. Bronze Flora medal.

Messrs. William Bull and Sons, Chelsea, had a small group of stove plants with *Orchids*.

Mr. J. T. West, Tower Hill, Brentwood, had a capital lot of *Cactus* and *Pompon Dahlias* in many good varieties, the whole being admirably staged. Among the too rarely seen *Pompons* Star, yellow; Darkest of All, maroon; Adelaide, lilac; Daisy, fawn; Douglas, maroon; and Donovan, lilac and mauve, were all good. Silver Flora medal.

Messrs. Eggett and Son, Thames Ditton, had a small group of hardy Ferns in variety.

Messrs. Paul and Son, The Old Nurseries, Chesham, displayed an interesting lot of shrubs, deciduous and evergreen, in which we noticed *Rhus typhina* laciniata, *Buxus sinensis* (a very distinct species), *Spiraea Aichisonii*, *Ailanthus glandulosa* vilmoriana, *Berberis purpurea* (Paul's variety), *Enonymus latifolius* in fruit, and many others. *Hibiscus* in variety and *Rosa sericea ptericantha* were also notable. Silver Flora medal.

Messrs. Carter Page and Co., London Wall, again set up a sumptuous lot of *Cactus* and other *Dahlias*, finely arranged in groups. Tufted Pansies also came from this firm. Silver-gilt Banksian medal.

The single and *Cactus Dahlias* from Messrs. J. Cheal and Sons, Crawley, were very good and effectively arranged. *Glencoe*, *Peggy*, *Columbine*, *Darkness*, *Snowdrop*, *Hector* and *Mrs. Bates* are all good single-flowered sorts. Silver Banksian medal.

Mr. W. Peters, Leatherhead, had a group of *Aster Lena* Peters.

Some very fine *Begonias* came from Messrs. Cannell and Sons, Swanley. *Rosebud*, a lovely salmon pink; *Washington*, scarlet; and *Polar Star*, a very fine white, were in every way excellent. Silver Banksian medal.

Mr. Frank Brazier, Caterham, had a large display of *Phloxes* and *Michaelmas Daisies*.

Messrs. Hugh Low and Co., Enfield, had a lovely lot of Carnations, in which *Britannia* and *Victory* were especially good. *Chironia ixifera* with pink flowers was also superb, while a variegated *Draecena* named *Prince Albert* of the *D. australis* section is a distinctly good and pleasing variety. Silver Banksian medal.

Messrs. James Veitch and Sons, Limited, Chelsea, had a glorious lot of *Nerine Fothergillii* major with scores of the attractive scarlet heads of flowers. Three species of *Aschynanthus*, viz., *pulcher*, with scarlet flowers; *grandiflora*, with vermilion-orange flowers; and *lobbianus*, with crimson-scarlet flowers and dark foliage. The same firm also staged a very large collection of shrubs, among which the *Heaths* and *Pernettyas* were very interesting. Silver-gilt Banksian medal.

Messrs. Barr and Sons, Covent Garden, filled a table with seasonable hardy plants, *Snagdragons*, *Sternbergias*, *Zephyranthus candida*, *Plantago maxima*, *Nertera depressa*, *Parnassia caroliniana*, *Kniphofias*, *Actea spicata* alba, *Phloxes*, *Primula capitata* and others. A fine display was made with *Sedum spectabile atrosanguineum*. Bronze Flora medal.

Messrs. Dobbie and Co., Rothesay, filled the end table of the hall with a remarkable lot of *Cactus*, *Pompon* and single *Dahlias*, the flowers being in splendid condition and most artistically arranged. The variety was well high endless, and in their many and gorgeous shades made a very effective whole, enhanced to a considerable degree by the introduction of the coloured sprays of *Kochia*. We have no hesitation in regarding this as the most representative and complete group of *Dahlias* we have ever seen, the *Peony*-flowered, show and other types, in addition to those already named, being fully represented. Silver-gilt Flora medal.

From Messrs. W. Wells and Co., Merstham, Surrey, came a representative gathering of early-flowering *Chrysanthemums*, *Pentstemons*, *Michaelmas Daisies* and *Phloxes*, the numerous varieties being displayed to advantage. Silver Banksian medal.

The Hardy Plant Nursery, Guildford, had many good seasonable hardy plants, such as herbaceous *Lobelias*, *Gladioli* and *Michaelmas Daisies*.

Messrs. Pennell and Son, Lincoln, exhibited in fine condition their new Ivy (*Hedera dentata variegata*), perhaps the best of all silver-leaved Ivies.

THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

PHOTOGRAPHIC COMPETITION FOR OUR READERS.

WE frequently receive photographs from our readers of some pretty spot or corner in their gardens, and it has occurred to us that it would be interesting if prizes were offered for the best examples sent in. We therefore offer a first prize of two guineas for the best photograph of a reader's garden, and a second prize of one guinea. Each photograph must be accompanied by a written description of the garden. Photographs must be sent addressed to "The Editor, 20, Tavistock Street, Covent Garden, London, W.C.," on or before October 31, and the envelope or wrapper must be marked on the outside "Photographic Competition," and accompanied by a coupon, which appears in the advertisement pages. Each photograph must have the sender's name and address plainly written on the back. Rejected photographs will be returned if stamps are enclosed for postage. The Editor reserves the right to use any photograph and description that does not win a prize, and his decision must be regarded as final.

NEW SEEDLING ROSES AT THE AUTUMN SHOW.

I THINK a description of the new Roses staged at the National Rose Society's autumn show, held in the Royal Horticultural Hall, Vincent Square, on Thursday in last week, would not be without interest to such of your readers as were not present. The class, taken as a whole, was memorable in more ways than one—in that the judges thought that no less than four out of the ten varieties staged were worthy of a gold medal, three others received a card of commendation, one they desired to see again, and of the two that were passed over one at least had already received the lesser award and the other variety put up was, unfortunately, not eligible, having already passed into commerce prior to November, 1907.

Perhaps there is no more vexed question troubling the Rose world at the moment than the judging of these new seedling Roses. Undoubtedly the seedling Rose class is the most difficult of any in the whole schedule to judge; and although the methods adopted have been improved of recent years, they are, I think, still capable of improvement, and no doubt the matter will receive the further consideration of the committee of the National Rose Society. At the same time, I am still of opinion that it will never be satisfactorily solved until the Roses are judged first of all as seen growing, secondly as staged, and that only those who have seen the

Roses growing in fair quantity and know them can really form a fair opinion of their relative merit.

I will take the flowers in the order in which they were staged:

Lady Alice Stanley.—A Hybrid Tea raised by Messrs. S. McGredy and Son of Portadown, Ireland; a large flower with a round petal of good shape, not quite the usual petal of the exhibition Rose, but none the less pleasing on that account, coming well to a point in the younger flowers. The scheme of colour is after the style of that old garden Rose Grand Duc A. de Luxembourg or the more modern Mrs. E. G. Hill, namely, having the deeper shade on the outside of the petal and the lighter shade inside, the reverse of the usual colour scheme, the colour outside being a deep coral rose, inside pale flesh, suffused pink. Fragrant, a good grower and free autumnal. Exhibited by the raisers in good form on more than one occasion this year. Awarded a gold medal.

His Majesty.—A Hybrid Tea also raised by Messrs. S. McGredy and Son. A fine dark crimson flower of great size and good substance; of the usual exhibition type with high pointed centre. The plant exhibited showed strong growth, with flowers produced at the end of each shoot; a very promising variety, fragrant. Gold medal.

Lady Gwendoline Little.—A Tea raised by Messrs. J. Jefferies and Sons of Cirencester. A pretty decorative variety, free habit and flowering profusely; flowers small but of good colour. Mme. Abel Chateaubault colouring on a golden yellow ground would perhaps best describe this flower; fragrant. Awarded a card of commendation.

Iceberg.—A very interesting cross between wichuraiana and a Tea (I believe Niphetos), with the foliage of the wichuraiana and habit of growth of a good bedding Tea, the first of a new race that has great possibilities: raised by Messrs. Paul and Son of Cheshunt. The flower is a pure white, small, but perfectly formed; perpetual in character. One felt that some award other than a card of commendation was merited. Might it not be possible to have three grades of medals for these seedling Roses—a gold, a silver-gilt and a silver medal? As I have remarked, here was a new break, very interesting, a perfect Rose in its way that a card of commendation hardly did justice to. Messrs. Paul and Son are to be congratulated on striking another fresh line. Rose growers will always remember with gratitude that to them we owe the first Hybrid Tea. What is to be the name of the class of this fresh break I wonder? Awarded a card of commendation.

A. Hill Gray.—A Tea raised by Messrs. Alexander Dickson and Sons of Newtownards,

Ireland. A beautiful Rose of excellent shape, well staged in a tall stand. Delightful pale yellow colouring, fragrant and a good grower; undoubtedly the finest Rose staged in the class. The award of a gold medal was practically unanimous. Good Teas are scarce and are very welcome, especially when up to exhibition standard.

Dr. O'Donel Browne.—A Hybrid Tea approaching closely to the Hybrid Perpetuals, raised by Messrs. Alexander Dickson and Sons of Newtownards and sent out by them this year. A fine-shaped flower, resembling Dupuy Jamain in colour and shape but coming much better than that old favourite, being particularly good in autumn. A good vigorous grower with very strong perfume, and, moreover, free flowering; colour rosy carmine. Awarded a gold medal.

Mrs. David Jardine.—A Hybrid Tea also raised by Messrs. Alexander Dickson and Sons: as shown here not quite in character. A great number of flowers were staged, but some were deficient in size. This Rose has already made a great reputation in America under glass, and I believe it to be a thoroughly good Rose. At its best it reminds me of a pink-pointed Mrs. Theodore Roosevelt. Very free flowering, almost Tea-like in character; a good grower.

Grace Molyneux.—A Hybrid Tea raised by Messrs. Alexander Dickson and Sons, but not staged in its true form. Having grown this Rose for the last three years I can thoroughly recommend it. It has a strong Tea perfume, distinct foliage, its flowers produced on long stalks and very vigorous. Excellent for decorative purposes and sometimes coming good enough for exhibition. It has already received the National Rose Society's card of commendation, but as staged was not up to gold medal form.

Mrs. William Cooper.—Hybrid Tea raised by Messrs. Hugh Dickson of Belfast. A beautiful Rose, not shown at its best; pale flesh pink of Viscountess Folkestone colouring. Not perhaps quite distinct enough, but the judges asked to see it again.

A sport from Dorothy Perkins, the name of which I missed.—Staged by Messrs. Cocker and Son of Springhill Nurseries, Aberdeen. A very pretty shade of pink, said to be freer in autumn than Dorothy Perkins. A card of commendation was awarded.

Teresa Bevan.—Staged but not eligible for the gold medal, as it had, unfortunately, been put in commerce prior to November, 1907. A Tea raised by Messrs. Garaway of Clifton, Bristol, of very beautiful colouring, quite distinct; old gold, flushed vivid pink. It is of great merit as a garden Rose, apparently free flowering, and the plant shown had good growth and foliage. Altogether a very interesting class, and, having regard to the time of year, showing great progress.

Purley.

HERBERT E. MOLYNEUX.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

September 29.—Royal Horticultural Society's Exhibition of Flowers and Fruit, Vincent Square, Westminster, 1—6 p.m.

October 7 and 8.—National Chrysanthemum Society's Early Autumn Exhibition, Crystal Palace.

October 15 and 16.—Royal Horticultural Society's Exhibition of British-grown Fruit, Vincent Square, Westminster, S.W.

Exhibit of English-grown Grapes.—It will be known to most of your readers that the Royal Horticultural Society have, at their Wisley garden, the most complete collection of Vines to be found in this or any other country, and they propose to exhibit at the fortnightly exhibition of flowers and fruits to be

held on the 29th inst., at the Royal Horticultural Hall, Vincent Square, Westminster, about thirty varieties of dessert Grapes grown upon these Vines, so affording a unique and perhaps hitherto unparalleled opportunity for the comparison of so large and representative a collection of fruits. Such an exhibit is intended to be chiefly educational, and especially to draw attention to some of the smaller-berried varieties which so vastly surpass in flavour the larger and more showy varieties. Officers of the society will be in attendance with the exhibit on the 29th inst., to give information to, and to answer the enquiries of, visitors.—W. WILKS.

United Horticultural Benefit and Provident Society.

—The monthly meeting of this society was held at the Horticultural Hall, Vincent Square, Westminster, S.W., on the 14th inst., Mr. Charles H. Curtis in the chair. Four new members were elected, making a total of fifty-two this year to date. The amount of sick pay since the last meeting was £39 13s. Mr. A. Hemsley resigned his office on the committee through pressure of business and inability to attend the meetings, which was accepted with regret, and a vote of thanks was accorded him for his valuable services for several years past. The annual dinner will be held this year at the Waldorf Hotel, Aldwych, W.C., on Thursday, October 15, at 6.30 p.m. Dr. R. Boxall of Abinger has kindly consented to preside on this occasion.

Resignation of Mr. Charles Ross.

—Many of our readers will learn with regret that this veteran gardener, now in his eighty-fourth year, will be leaving Welford Park, Newbury, with which place he has been so long identified, at Michaelmas next. We learn also that Mr. W. Pope, formerly of Highclere Castle Gardens, has taken over the kitchen and fruit garden at Welford Park on his own account. During Mr. Ross's residence at Welford he has raised many fine Apples, and not long since was awarded the Royal Horticultural Society's Hogg medal as an Apple raiser.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Prizes for cottage gardens.

—The report in THE GARDEN for August 29 on the Countess of Selkirk's cottage gardens prizes is happily only one of many such instances where gardening is encouraged in the rural districts by the offering of prizes—in some cases of a substantial nature—by ladies and gentlemen of the neighbourhood. Fortunately, there appears to be a natural love for cottage gardening, especially of late years, and the rapid growth of horticultural shows has doubtless added great stimulus to this fascinating and profitable pastime; further, the offering of prizes, such as those mentioned above, acts as an incentive to each one to strive his utmost to beat his neighbour. The cottagers of Duffryn and St. Nicholas, near Cardiff, are particularly favoured in having valuable prizes to compete for, those for the "best vegetable garden" given by John Cory, Esq., and for the "best flower garden" by Reginald Cory, Esq. The gardens were judged in July, but though the entries were not so numerous as those mentioned in your report, the competition was very keen, and many excellent examples of well kept and cropped gardens were seen. I notice that Mr. Service, in his report of the Countess of Selkirk's garden prizes, advises the use of more hardy border flowers instead of so many usual bedding subjects. This is good advice; and the idea seems to have been grasped at Duffryn, where as many as thirty to forty distinct varieties of perennials were noted in some gardens. In the vegetable gardens instances were noticed of the keenness for gaining points by having a large

variety, but this idea in a cottage garden when carried to extremes is not advisable. In many gardens one saw perhaps half-a-dozen plants of Celery, Leeks or Tomatoes, and often of very poor quality. The better plan would be for exhibitors in cottage garden competitions to have a schedule of points drawn up for them, and such subjects that are known as the most useful to a cottager encouraged by giving more points. A good plot of Potatoes, or bed of Onions, for instance, should score more points than half-a-dozen small batches of less profitable subjects.—ARTHUR COBB, *Duffryn Gardens, Cardiff.*

Autumn Roses.—Some varieties of Roses are doing exceptionally well this autumn, and should the weather continue to be fine there will be plenty of beautiful flowers for some time to come. Caroline Testout is especially good, and although the flowers are not so large as they were early in the season they are splendid in form and colour. Mrs. J. Laing, too, is doing well, and is one of the best and most useful Roses we have. It is especially good for table decoration. Kaiserin Augusta Victoria is probably better now than it was in the early season. It is a mass of flowers of beautiful form and colour. This is a valuable variety for cutting during the autumn. Frau Karl Druschki has been flowering all the season, and the colour is just as pure now as earlier in the season. George Nabannand is a splendid autumn variety, and is worth growing for that purpose alone. Mme. Ravary is a splendid variety, and has been flowering all the season. The beautiful Mme. Abel Chateau, too, is a very continuous bloomer. Lady Battersea, Papa Gontier, Gustave Grunerwald, Maman Cochet and Richmond have all done well this autumn.—H., *Frogmore.*

Caterpillars on fruit bushes.—As your correspondent "A. P. I. S." is having trouble with caterpillars, I advise him to try the following next year as a preventive: Just as the Gooseberries and Currants are in flower, or about half set, dust the leaves all over with a mixture of 1lb. of Hellebore powder and 2lb. of flowers of sulphur thoroughly mixed together, dusting it on through a fine flour-dredger when the foliage is damp with dew or after rain, choosing a calm day. The powder will be washed off before the fruit is fit for use, but the effect will last the summer, and he will not be troubled with many caterpillars. A very good thing to kill them is to dissolve 2oz. of Matchless Cleanser soap in one gallon of water and syringe the bushes with it in the evening; but by using the powder he will have a preventive and will not want a cure, as I have proved.—R. H. MANN.

Bulbs in good condition.—In a recent call at Messrs. James Veitch and Sons, Chelsea, I learned that the Dutch bulbs have come over in remarkably fine condition; in fact, the supply is one of the best for many years. Hyacinths are large, firm and thoroughly well ripened; Tulips are very plump and richly coloured. This is good news and opens up a pleasing prospect for bulb-lovers.—W. P. W.

Charming Cactus Dahlias.—Whatever we may think of the Cactus Dahlias as garden plants, there is no gainsaying that they are very beautiful as flowers on the show-board. Among several pretty sorts at the National Dahlia Society's exhibition I noted the following: Daisy Staples, pink with white centre; Antelope, yellow with bronze outer florets; Faunus, fawn; Lusitania, orange scarlet with crimson edge, a splendid flower; Ibis, glowing orange; Harold Peerman, canary; Cecilia, pink, lemon centre; and Marjorie Cairnes, yellow with rose outer florets.—W. P. W.

Classification of the Daffodil.—There seems to be a very remarkable muddle in Class VII. of the new Narcissus classification of Daffodils. The committee "have been compelled to fall back on purely arbitrary divisions, determined chiefly by measurement," which they say "are now put forth by the authority of the

Royal Horticultural Society." It appears something new that any voluntary association should take to themselves the alteration of a classification which has been in the process of evolution by scientific botanists for a period of over 200 years. In this class are brought together the following species, together with some about which there is a doubt: *Triandrus* in all its varieties, and *calathinus*, which may or may not be a variety; *Jonquilla*; *juncifolius* with its allies *gracilis*, *serotinus* and *viridiflorus*; *biflorus*, which is said to be a hybrid; *odorus Campnelli*, *rugulosus* and *heminalis*, which are said to be hybrids; and *Tazettas*. As far as one can learn the *Tazetta* is common to the temperate zone of Asia, and has probably found its way to Europe in past ages through the Byzantium. It is a favourite flower in Persia, China and Japan. Its general growth and coarse habit do not seem to fit it to be shown in the same class as the delicate and graceful flowers of *triandrus juncifolius* and *Jonquilla*. And no one would ever think that the new classification was meant for any more than a guidance to show committees in drawing up their schedules. Yet how would these species look if shown in the same class? Some unlucky person who thought that the greater number of species he could show in the class would be a help to a foremost position, would find his exhibit utterly neglected for the great coarse *Tazetta*, with its strong smell, and the many coarser hybrids with incomparabilis flowers crammed six to twelve on one stalk. Fashion may demand size, but those who follow fashion oftentimes lose all sense of artistic feeling and become mere slaves in the following of Goliath. It would seem the wisest to allow the *Tazettas* and their hybrids a class to themselves and not have them bunched up with others to whom they have no affinity. In collections of *Daffodils*, species should have their proper place, and it would be a good thing if in many schedules a number of varieties to be exhibited should be fixed, not to be exceeded, in each class, section or division which is allowed to be shown in that collection. Only too often we find in a fifty class nothing but florists' flowers, with a preponderance of poetical and red-tipped cups, when in the schedule it is open to all species and varieties. It is to be hoped that committees of shows may keep species distinct from garden hybrids and not mix up the inter-breeding of species with the produce of hybrids.—A DAFFODIL LOVER.

Rose Prince de Bulgarie with yellow flowers.—I notice in THE GARDEN of September 14, 1907, that a correspondent describes Prince de Bulgarie as yellow. This has also been my experience this season. Not only Prince de Bulgarie, but also Joseph Hill has come a beautiful apricot colour, without any suspicion of pink. The autumn flowers, however, have reverted to the ordinary colours described in the catalogues. I may state that they were grown as standards and were not shaded. The soil is a heavy loam on sand. Is this a temporary reversion to the colouring of one of the parents or can it be explained in some other way?—C. O. JONES, *Norlands, Mount Road, New Brighton.*

Grape Prince of Wales.—In your note on page 430 I note what you say respecting this Grape. I am convinced it has a large future before it with those persons who cannot successfully cultivate Mrs. Pince; and there are numbers who fail with the latter, either in the size of the berry, or, what is more important, the colour is deficient. With Prince of Wales the colouring is so much easier and no difficulty is experienced. The berries are much larger, the bunch equally shapely, and, what is highly important, the flavour is all that can be desired. To many I have recommended Prince of Wales and none have regretted adopting the hint.—E. M.

Scarcity of wasps.—I do not remember a season when so few wasps have been in evidence. Last year about forty nests were

destroyed in or near these gardens, but at present (September 2) only two nests have been discovered and very few wasps are seen. This is a consolation to fruit growers, especially those who have large quantities of standard fruit trees, which it is almost impossible to cover with wasp-proof material. The reason for this scarcity is stated to be owing to the late, cold spring, a large number of wasps dying during hibernation. Workers are reported to be fairly numerous in some districts. Birds are the worst enemies this season, attacking Tomatoes, in addition to fruit. In our case it cannot be moisture they are seeking, as the garden is parallel with the river.—C. RUSE, *Munden Gardens, Watford.*

THE GIANT PUFF-BALL.

The subject of our illustration is a large cloven example of the Giant Puff-ball (*Lycoperdon giganteum*, now usually referred to as *L. Bovista*). The name *Lycoperdon* is derived from the Greek *lukos*, a wolf, and *perdon*, dung, from the old belief that Puff-balls grew from the dung of the wolf. *Bovista* comes from the German *bofist*, a fairy ball. A modern popular name is



A GIANT PUFF-BALL.

Devil's-box, or, when the fungus is over-ripe, Devil's Snuff-box; the modern apt Greek name is *Kranion*—like a skull. We have in the illustration before us a cloven skull as represented by a cleft Puff-ball. Giant Puff-balls usually grow in gardens, orchards and rich pastures. Sometimes they grow in huge fairy rings from 30 feet to 50 feet in diameter, truly elfish productions. Individual examples often attain a very large size, a common diameter is 12 inches to 18 inches, with a weight up to 20lb. An example is on record of a diameter of 5 feet 4 inches one way and 4 feet 6 inches the other, with a height of 9½ inches. The Giant Puff-ball belongs to the edible class, and fungus enthusiasts eat and approve it. If tried for the table it must be when the flesh is perfectly white, then cut in slices less than half an inch thick, dip in beaten-up eggs, sprinkle with bread-crumbs, add pepper and salt if approved and fry till the surfaces are browned. The illustration is from a photograph kindly sent by Mr. R. W. Woosnam, *Warley Mount, Brentwood, Essex.* The Puff-ball shown, our correspondent mentions, was found in *Southchurch Churchyard* (near *Southend-on-Sea*); "it weighed 4lb. all but an ounce, and when cut through was found to be solid throughout."

THE ROTATION OF CROPS.

THIS is one of the oldest phases of good kitchen gardening, yet it is safe to say that none is less perfectly understood by the majority of cultivators. The reasons for this failure on behalf of cultivators to grasp the elements of the rotation of crops need not be sought for in vain, the chief one being that hard-and-fast rules cannot be laid down concerning what particular crop shall succeed an existing one, and also that in many cases the grower has only a partial control over circumstances, and consequently is obliged to do the best he can with the soil at his command.

At the outset it may be as well to briefly consider the principles which underlie the rotation of crops. The chief object with most cultivators in changing crops is to get the best possible results from the soil, the idea being that different classes of plants require different kinds of food for their upbuilding; and there is, no doubt, a lot of wisdom in such a course. Another point, however, which is frequently overlooked, but which is equally or even more important, is the fact that certain diseases and pests attack certain plants only, and therefore by keeping these plants off the ground for two or three years a disease may be eradicated. Club-root of the Cabbage family is a disease which may be mentioned as an example.

As previously stated, a cultivator frequently has to do the best he can under existing circumstances, and often these are such as to render it imperative to overlap crops which would be much better if given entirely fresh ground. There are, however, many gardens wherein it is possible to give the various plots a change of crop each season, and wherever such a course is possible every effort should be made to adopt it.

As the question is naturally a very complicated one, only general indications and hints as to carrying out the work can be given; but these, coupled with intelligent application, will, I hope, prove of some use to amateurs and others who have only given the matter a passing thought. Taking the Cabbage family first, it has been proved that all the members thereof require practically the same kinds of food, and in addition, as previously stated, all are subject to attacks of club-root and other diseases and pests which do not attack some other classes of plants; hence it would be unwise to let a crop of Cauliflowers, for example, be followed by spring Cabbages, as the former will, to a great extent, have exhausted the soil of those particular foods needed by the Cabbages, and any disease which might have been present on the first crop would almost certainly make a host of the second. In practice it is found to be a good plan to let deep-rooting crops, such as Parsnips, Carrots or Beet-roots, follow any of the Cabbage family.

Potatoes, again, are another crop which ought not to occupy the same ground two years running, as they are veritable gluttons so far as potassic manures are concerned, and in practice it has been proved that much better results can be obtained by only cropping a certain plot with Potatoes once in three years. Any of the Cabbage family, Peas, Beans or Onions may, with advantage and safety, follow Potatoes, Carrots, Parsnips, Beetroots or Celery. Generally speaking, Beans should not follow Peas nor *vice versa*, and this applies to any kinds which are closely related or belong to the same family, hence Tomatoes should not follow Potatoes. The same general remarks apply to flowers, and any Sweet Pea enthusiast, for instance, will avoid growing his favourites on the same soil two years running if he possibly can.

In gardens where such rotation is impossible of course the food difficulty is overcome to a great extent by judicious manuring, but the question of disease or insect attack can be only thoroughly dealt with by keeping a particular plot free from a crop that is likely to be attacked for several years. H.

MESSRS. WATKINS AND SIMPSON'S TRIAL SEED GROUNDS.

TOWARDS the end of July we had the pleasure of visiting the very extensive trial seed grounds of the wholesale firm of Messrs. Watkins and Simpson at Twickenham and Feltham, and we noticed many fine varieties of flowers, some of which should find a place in every garden. We were specially interested in the vigorous manner in which selection is carried out. With everything an ideal is selected, and all that do not conform to this are pulled out and discarded, no matter what the cost may be. The result of this continuous selection is the evolution of strains of old and new plants that are far superior in every way to those with which growers of a few years ago were familiar.

Sweet Peas naturally occupied a prominent position in the trials, practically all the varieties on the market, and some that are not, being included. In many cases the firm's own stock was growing side by side with that secured from other sources, and the result was in nearly every instance favourable to Messrs. Watkins' strain. It is not necessary for us to here go into details of the varieties, but it may be interesting to record that a comparison made with Countess Spencer, Enchantress and Paradise, as grown here, revealed no appreciable difference in either.

Other hardy annuals were being tested in great variety and extensive tracts. Candytuft Giant Hyacinth-flowered is a strain that will, we think, soon oust the older white variety from all good gardens. As its name implies, the flower-spikes resemble in shape those of bedding Hyacinths, and, as the flowers are of the purest white, a bed of it would prove most effective; it is also excellent for cutting. Clarkia Tom Thumb double white is another annual that is already a great favourite. The plants possess a very compact habit, each being thickly studded with pure white flowers which resemble miniature Roses. In Dianthus superbissimus we have a remarkable strain of Indian Pink, the flowers being of enormous size, rich glowing colours, and possessing very heavily-crested petals, this latter feature giving them a unique appearance.

The annual Sweet William is at present almost a novelty. The strain seen was a very good one, and plants raised from seed sown last March were flowering freely. The annual Wallflower is a good companion to the foregoing and may be sown at the same season. It is obtainable in brown and lighter colours. Double flowers are not always an improvement on the single type, but the double Californian Poppy (*Eschscholtzia californica flore-pleno*) raised by Messrs. Watkins and Simpson certainly is. The strain gives a very large percentage of doubles from seed, and the large flowers are held erect on good stout stems. A strain of Zinnias with twisted petals has long been on the market, but the plants have never proved very satisfactory. A strain that we saw in these trials had, in addition to the twisted petals, a sort of crest on each, the flowers resembling miniature Cactus Dahlias. The plants appeared to be thriving well, and should do much in restoring the Zinnia to popular favour.

The Snapdragons or Antirrhinums were remarkable for the bright colours and freedom of flowering. The beautiful art shades seen in many of them were most attractive, and we hope to include some among our own flowers another season. Salmon Pink, Coral Pink and Vesuvius, a rich self orange variety, particularly appealed to us.

A BLUE NEMESIA.

Nemesias are steadily advancing in favour as bedding plants, and the new hybrid dwarf compact Triumph strain seen possessed some quite new and lovely colours. The plants are of splendid habit and remarkably floriferous. A

blue *Nemesia* is indeed a novelty, yet we saw a good batch of one named Blue Gem. The plants are very compact and are thickly studded with flowers of a pretty Forget-me-not blue colour. This is one of the most charming annuals we have seen for a long time, and we can, with confidence, predict a most brilliant future for it. *Cosmos Early Rose* is another novelty that will prove most welcome. It is very early flowering and of a dwarf habit, the flowers being a pale rose colour.

Numerous other good annuals were seen, but a description of them would occupy too much space. We must, however, mention the wonderful strains of Cockscombs and Petunias. The former certainly were the most regular and beautiful lot of plants we have ever seen, the prize dwarf crimson being exceptionally good. Nor have we ever seen larger *Petunia* flowers than those of the firm's Excelsior strain. In addition to the enormous blooms we have rich colours, graceful outlines and vigorous plants, and we can confidently recommend this selection to lovers of this flower.

THE FLOWER GARDEN.

DAFFODIL NOTES.

PLANTING IN GRASS AND WOODS.

ALTHOUGH the planting of Daffodils in grass has become fairly general, there may, nevertheless, be some who would be glad of a few hints as to what and how to plant. Any variety of Daffodil will do well in grass provided its foliage is allowed to die down, or at least become quite ripened and yellow before the grass is cut. This point is vital. The reason is that the food for next year's growth is manufactured by the leaves, and there is no machinery which can enable them to put six days' work into four.

In the actual work of planting an immense amount of labour is saved by choosing a favourable time for the operation. I would never plant while the ground is hard and dry after its summer baking, but always wait for the advent of the autumn rains to moisten and soften it. Moreover, the bulbs will not root in hot, dry ground, so no time is gained by what may be termed premature planting. I have buried a considerable number myself one year with another, and have tried a variety of ways. Sometimes I have taken up odd single sods, at others I have flayed large patches at once, but I have come to the conclusion that the work can best be done by using such an instrument as Barr's Bulb Planter. "At every operation it lifts a clean, circular little sod of grass, which is released from the cup when the second hole is made and lies ready at hand to fill in the holes when the bulbs have been put in." In actual practice what I always do is this: I prepare an adequate quantity of fine light soil in which I put a fair quantity of bone-meal (about 7lb. to a bushel). On the day of planting I have two assistants, one with a box of this soil and a box of bulbs, whose work is to drop soil into the bottom of the hole which I have made with the Planter and then put the bulb on top of it; while the other with another box of soil puts a little more on the bulb and then replaces the little sod, breaking off some of the bottom to enable the ground to be made level. It is surprising how many can be planted in a day if three like this are at the job. As planting in grass is permanent this little extra trouble should not be grudged. It is labour that will be well repaid in the good seed off it gives the bulbs.

The most pleasing results from a spectacular point of view are obtained by making large, irregular colonies of one variety. The more uneven in outline they are the better, and there should be a few stragglers here and there in three or four places. In the mass itself there

should be about 5 inches or 6 inches clear between the holes, but here again a certain number of irregularities in the distances are useful in giving a sort of natural look. Over and above these larger clumps I would advise every now and again small ones of only a dozen or so bulbs, these to be planted just anyhow and with an occasional solitary bulb.

In planting in woods the same unevenness should be studied, and what is essential and should be carefully noticed is that comparatively open parts must be selected where the sun can get to the leaves to ripen them. I know a case where some bulbs were planted in total shade under some Elders, with the result that in the third year there was not a single bloom. As any kind—even the difficult white trumpets—will do well the choice is very large, and individuals can safely gratify their own particular taste without considering if what they propose will do well or not. There are two things, however, that are worth thinking about. First, that on the whole flowers that are borne well above the foliage, like *Leonie* and *Lobularis*, give a particularly good effect; and, secondly, that as propagation by offsets is very slow in grass, it would be well to select some free seeders which will naturally spread themselves by seed. In this last category I would mention *Abscissus*, *Obvallaris*, *Spurius*, *Golden Spur*, *English Lent Lily*, *Princeps*, *Albicans*, *Pallidus Præcox*, some incomparabilis and all the varieties of *Poeticus*. JOSEPH JACOB.

NOTES ON IRISES.

DWARF, GRASSY OR BEARDLESS IRISES.

The few dwarf Irises of this group are among the gems of the genus. They are mainly moisture-loving, but plants that will thrive on dry rockeries and in moist peat beds are to be found among them. Their flowers, although small, are profusely borne, and what they lack in size is fully compensated for in wealth of flower, chaste colouring and that quiet charm that is inseparable from *Iris verna*, *I. cristata*, *I. flavissima* and *I. gracilipes*. All flower in May and June.

I. agrostifolia.—A very rare and somewhat tender species; flowers in February. Its blossoms are akin to those of *I. arenaria*, but are coloured cerulean blue.

I. arenaria.—The Hungarian Iris grows 4 inches to 6 inches high, and produces small but very pretty yellow flowers nearly 2 inches across, the falls of which are scoop-shaped and tinted a darker yellow. The leaves are finally 6 inches long, and arranged in close grass-like tufts often many feet in diameter. The rhizomes are small and pliant. Prefers a sandy soil and a dry position.

I. cristata.—A low-growing, curiously-rooted plant from the Southern United States of America; proves difficult to grow in any but damp peaty soils. It prefers to grow on the banks of waterways just above the water-level, so that the rhizomes may be normally dry but the roots in the moister soil below. The best plants of *I. cristata* the writer has seen were growing between large flagstones resting on a marsh, and the plants, though often covered with running water, flowered profusely. The rhizomes are often 6 inches long, very slender and bristle with small side growths that soon form goodly tufts in the right position. The flowers are lavender-coloured, fringed at the margins and furnished with a striking signal patch of rich orange. It resembles the flower of the wonderful *I. japonica* in colouring and shape, but rarely exceeds 6 inches in height. One of the daintiest Irises of this group, and worth every care.

I. flavissima is a charming little plant hailing from Siberia and countries southward. It makes slender grassy growths, forming a clump of slender leaves 6 inches long. The flowers are borne in pairs and are coloured lemon yellow, the falls of which are bearded orange yellow, and the long and very broad horizontally-poised blades are coloured orange also. The basal half

of each segment is chequered purple, and the fragrance resembles that of vanilla. It prefers a light sandy soil and full sunshine, but it much resents drought.

I. Blondowii is the Altaian form of stronger growth, reaching a height of 12 inches, and is about twice the size of typical flavissima. The colour scheme is similar.

I. gracilipes.—A fascinating Japanese Iris that everyone admires. It has long slender rhizomes which bear distinct leaf growths and flowers. The leaves do not exceed 1 foot in length, but the flowers are borne on stems a little longer, and they are coloured lilac with fringed margins, orange signal spots, and many flowers are produced on each stem. A miniature of *I. tectorum* in many respects, rare at present, as only one small colony has been discovered, and that is carefully guarded from the unscrupulous collector. It is quite hardy in the neighbourhood of London, but may require protection from a Yorkshire or Scotch winter. It increases fast and seeds freely under cultivation.

I. ivioides is a tender species requiring frame protection. It has slender leaves in flattened tufts, and bears numerous white flowers with rich blue blotches as in the Peacock Iris. Requires a warm position on rockwork and quite sandy soil.

I. lacustris.—A dainty, almost ever-blooming, American Iris, that may be described as a slender *I. cristata*, with short and narrow grassy leaves in broad tufts and slender stems bearing myriads of small lilac flowers with white signal blotches. A charming Iris for a damp site on the rockery, thriving well in sandy peat.

I. prismatica.—Another miniature, has slender growths like a meadow grass, wiry Rush-like stems, and generally two flowers in each sheath coloured a pale tint of violet. The standards and falls are equally 1½ inches long, but the latter are keeled greenish yellow, and are furnished with a white signal patch closely veined with violet. A very pretty species, seemingly rare, but of quite easy cultivation and is rapidly increased. The plants of *I. prismatica* to be seen in most gardens and nurseries are but forms of *I. versicolor*.

I. ruthenica is the Russian Flag, and forms singular fan-like growths bearing sedge-like leaves and slender-stemmed pale violet flowers that are exquisitely fragrant. It rarely exceeds 1 foot in height, and delights to grow in moist sandy soil at the foot of a rockery between boulders where the soil is cool.

I. verna.—A charming dwarf Iris from the United States, with stout blue-green leafage more or less rigid, and short-stemmed rich violet flowers 4 inches high, the standards of which are paler in tint, and the exquisite violet of the falls is relieved by an orange signal patch. Established plants give a perfect sheet of blossom, and the Primrose-like fragrance reveals their presence yards away. It likes a damp soil and a warm situation, and shows a marked partiality to leaf-soil, but it must not be allowed to dry out. Never disturb a thriving clump; it will resent it. M.

ANTIRRHINUMS AND PENTSTEMONS IN WINTER.

THESE lovely flowers are quite hardy in the Southern Counties, and will withstand the weather of an ordinary winter without any protection. In the Midland and Northern Counties, however, it is advisable to give the seedlings, or rooted cuttings, the protection of a cool frame. Seeds may be sown in the autumn, and the resultant seedlings kept throughout the winter in boxes in a cold frame. Early in spring the young plants should be put out in a nursery border 4 inches apart, and carefully treated until May, when they should be transferred to their flowering quarters. Young seedlings, which are about 1 inch high, may be transplanted at once in a nice compost of sandy loam and leaf-soil in

a box. These young plants will grow and make sturdy specimens by next May, but they must be kept in a cool frame, as frost would penetrate the soil in the boxes if the latter were left in the open. Rooted cuttings must also be cared for in like manner. There is quite a difference between coddling the plants and giving them judicious protection. They are not weakened by the latter, but greatly strengthened, as more roots are produced before the time comes to put the plants in the flower borders. AVON.

THE DALMATIAN BELLFLOWER.

(*CAMPANULA PORTENSCHLAGIANA*.)

THIS charming little Dalmatian Campanula is burdened with a cumbrous name, but it certainly is one of the most useful of the smaller-growing members of a family that plays a prominent part in furnishing our rock gardens; indeed, a rockery planted entirely with Campanulas would make an effective display for the late spring and summer months and last well into the autumn. Of free-spreading habit in half-shady or sunny

THE ROSE GARDEN.

ROSE MARECHAL NIEL AND CANKER.

YOUR esteemed correspondent Mr. J. T. Strange, in THE GARDEN for August 22 on page 406, invites me to try and give him some further information in reference to the above subject. So far as memory goes, with reference to parentage of Maréchal Niel in the mid-sixties of last century I was frequently brought in contact with Messrs. Hollingsworth of Turkey Mills, Maidstone, who were great enthusiasts in Roses, especially Teas and Noisettes. On Mr. John, as we called him, coming home from one of the great London shows, where Maréchal Niel had been well shown, some discussion arose as to its parentage, and suggestions were made in respect to it, but in order to clear up the matter, if possible, Mr. John wrote to some eminent authority in France, and when I met him some time after he told me it was Solfaterre and Isabella Gray.



A COLONY OF THE DALMATIAN BELLFLOWER

situations, this Bellflower will soon cover a good space with its stoloniferous stems, which love to ramble among moisture-holding rocks or stones. In such positions it will produce masses of rich violet flowers from June onwards through the summer months. It is also known under the more acceptable name of *C. muralis*, and varies a good deal in the size of its bells. The Bavarian form bears the largest flowers, and is also very vigorous in habit; therefore it has been named *C. portenschlagiana major*.

This plant has often been confounded with the Italian *C. garganica*, quite a distinct species with wide-open flowers of a blue-lilac colour and more tufted habit, not stoloniferous. *C. portenschlagiana* is one of the easiest Campanulas to grow and delights in a somewhat half-shady situation, although it will grow in full sun providing that the roots can obtain moisture. When planting it should be provided with a gritty compost of loamy soil, to which may be added some broken limestone. This plant does not appear to ripen seeds in this country; at least, I have never seen any yet. However, it may be propagated readily by means of division in spring or cuttings in July. W. IRVING.

Some year or so after a bloom of Maréchal Niel was sent to me with a leaf-bud attached, and taking advantage of it I worked the bud on Isabella, the only available stock at the time. It took, made good growth and continued to grow at the end of an old greenhouse and flowered well without a sign of canker, Isabella being cut away to make room for its stronger rival. On visiting Maidstone some years after the old tree was still in existence, much neglected, but canker was not visible. I understand the place has changed hands and the old tree and greenhouse, like most old things, done away with to make room for a lawn tennis ground.

I am now experimenting with Maréchal Niel. One is grafted on Jaune Desprez, an old climbing variety, and the other on Ophirie, another old and sweet-scented variety of the buff and salmon type. The two plants, although only 1 foot high, have two buds each and are doing well. If all goes well I intend to graft Maréchal Niel on that old free-blooming and growing variety Blairii No. 2 to try the effect, as at present I am unable to get Isabella. Messrs. B. R. Cant and Sons of Colchester write me to say they fail to trace it in foreign or English catalogues (I should be thankful

to any reader who could locate it); Messrs. Cant say my description of it, which I wrote for them, is correct. I cannot agree with Mr. Strange in his statement that it splits or has a green centre, but I must confess to not having seen a flower fully open. The following is the best description I can give of it: Foliage very like Aimée Vibert, very shiny, rather more spines on the under side of the leaves, which in nearly all cases carry seven leaflets; wood wiry and slightly tinged with pink, the partly-opened bud much resembling a light-coloured Souvenir de Pierre Notting, the calyx, like that of Soliaterre and Maréchal Niel, short, full and rounded, with a rather weak footstalk. I might mention that I obtained Isabella Gray from a very old Rose grower, Mr. Alex. Constable of Sandy Lane, Boxley, and I believe Messrs. Hollingsworth's came from the same source.

EDWARD F. KEMP.
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TREES & SHRUBS.

EVERGREENS FOR AUTUMN PLANTING.

WHEN evergreens are to be planted at this time of year, it is always desirable to do the work as early as possible after the beginning of September, for at that period roots are active and the ground warm, while the autumn rains and heavy dews exercise a beneficial effect by keeping leaves and branches damp and so preventing undue transpiration. In most instances the ground will have been prepared previously, but in those cases where it has still to be dug the work should be done at once, and each position should be ready before the plants arrive. It is a very bad plan to obtain plants and then have to select places for them and prepare the ground. The plants have to be laid in and then disturbed again, while valuable time is lost, as every day is of great importance at this time of year, and the delay of a few days in planting may make all the difference between success and failure.

Although all evergreens are better planted either very early in autumn or late in spring, it is not absolutely necessary that all should be, for some, especially when planted in a small state, may be dealt with at any period, except during frosty weather, between August and June. Those subjects which lift with good, compact balls of soil, for instance, such as Rhododendrons, may be planted almost any time, but the majority of those which are lifted without soil, or with a comparatively small ball of soil only, should be planted before mid-October and as much earlier as possible. Some difficult subjects are Hollies, Evergreen Oaks, Portugal Laurels and Laurustinuses.

When selecting material for planting it is always advisable to choose those with short, sturdy growths, rather than those with rank, strong-growing shoots. The latter look much the best plants, and inexperienced buyers would select them in preference to those of shorter growth and sturdier habit. The experienced man, however, knows that the strong growth of

young evergreens often denotes a few long roots and very little transplanting, while short growth suggests regular transplanting and plenty of fibrous roots. It is also better to select comparatively small and young plants rather than large and older ones, for they establish quicker, and often are quite as large at the end of five years as those which were considerably bigger at planting time. Of course, this does not apply in the case of large plants that can be removed with good big balls of soil.

In the event of root injury, or in cases where the heads appear to be out of proportion to the roots, it is a good plan to reduce the leafage at the time of planting. This can usually be done without disfiguring the plants by judicious



A GROUP OF RHODODENDRON SAPPHO IN A GARDEN IN IRELAND.

pruning and thinning out of the branches. Plants which are usually most satisfactory when planted in a comparatively small state without balls of soil are Pines in variety, Berberis Darwinii, B. stenophylla, B. japonica, B. nepalensis, Garrya elliptica, Portugal Laurels, Hollies, Evergreen Oaks of all descriptions, Tree Ivies, Arbutuses, Ceanothuses and Cotoneasters. Most of these establish readily when small, but are very difficult when large. K.

A GOOD RHODODENDRON.

RHODODENDRON SAPPHO is a very showy subject, the blossoms of a clear, almost blue-white, the eye so dark as to appear black, except on the closest inspection, when it shows a deep prune

red. The illustration is from a photograph taken in County Donegal, where, in the peat soil, Rhododendrons, both hybrid and Himalayan species, flourish, and their blooms make a brilliant display for many months each year. S. M. W.

WHAW-WHI (PLAGIANTHUS LYALLI).

Now is the best time to increase this lovely subject. It is, to my mind, one of the best of summer-flowering shrubs. The beautiful clusters of pure white flowers, which are produced in July, are separately borne upon a stalk about 1½ inches in length. Not only is it free flowering, but another of its merits is its lasting power.

The shrub itself has rather a spreading habit. The cuttings should be of this year's wood, about 3 inches to 4 inches long. Prepare a pot (about 5 inches) with sandy loam, making it very firm. Make sure that the drainage is perfect. Prepare cuttings in the usual way, and dibble them in with a pointed stick, being very careful to make the soil firm round the base of each. Water the cuttings in and plunge them in a frame of Coconut fibre with a little bottom-heat. A. J. J.

COLOURED PLATE.

PLATE 1357.

A NEW FRUIT — THE LOWBERRY.

HYBRIDISTS are often producing new flowers, fresh variation in foliage and improved habits of plants, but their labours in connexion with fruits are not rewarded so bounteously, and the process usually takes longer to obtain results. A cross between the Loganberry and Blackberry is the subject of the coloured plate issued with this week's number.

The Lowberry in appearance might at first be described as a gigantic Blackberry, measuring usually 1½ inches long, jet black in colour when ripe, and the fruit is very juicy. Although the Raspberry is one of the parents of this new fruit, the habit of the plant is more akin to the Blackberry, for the long canes run from 12 feet to 18 feet in one season.

The Lowberry should be planted with plenty of room to allow for this abundant growth, and may be trained on trellises in the same way as the Raspberry, and it also makes an excellent plant for training over arches, the bunches of luscious-looking fruits being most attractive.

Messrs. Hugh Low and Co. of Bush Hill Park, Enfield, exhibited this fruit at the Royal Horticultural Society's Holland House Show in July, and the interest then displayed by visitors proved that new fruits are as popular as new flowers. Messrs. Low recommend the planting of the Lowberry in well-manured soil and firmly securing the long canes. After fruiting the old canes may be cut away as in the Raspberry.

When exhibited, and at the time our plate was prepared, this fruit was called Low Junior, but the name has now been changed to Low berry.

THE FRUIT GARDEN.

CURRENTS AND THEIR CULTURE.

NEXT to the Gooseberry there is no fruit better suited for the amateur than the Currants, as bushes are easily and cheaply procured, easily propagated, and require comparatively little cultural attention if a good start is made. The fruits, too, are useful for a variety of purposes, and for growing on a north wall the red and white forms are eminently satisfactory.

As stated above, a good start in their culture is essential, as the bushes will occupy the ground for some years, and, consequently, there will not be an opportunity of working it much during that time. All Currants delight in a good loamy soil, but the red and white varieties will do well in almost any, except pure sand, providing they have plenty of food and moisture supplied to them during the growing and fruiting season. Black Currants need a cool root-run, and they will thrive on soil of a damp but not water-logged character. The present is an excellent time for preparing the soil, and this work should be done without delay. Trenching is advisable, and unless the ground is already well enriched a good dressing of thoroughly decayed manure should be incorporated with the bottom spit. Ground thus prepared must be allowed to settle for a few weeks before planting, which can be done with much success when the soil is in good working order in November.

Red and white varieties are usually grown in cup-shaped bushes, and if two or three year old plants are purchased the foundation will already have been laid. The object of the cultivator will be to secure a number of main upright rods emanating from the top of a short leg or stem, all laterals being spurred back annually, the same as is done with Vines. A good plan is to shorten these laterals to within four leaves of their bases at the end of July or early in August, then at the winter pruning cut them again so as to leave only two buds on each. By doing this a number of well-ripened spurs are produced, and it is these which will bear fruit the following season. Trees grown on walls are usually trained fan-shaped, and sometimes as espaliers or cordons, pruning being precisely the same as that advised for bush specimens, *i.e.*, the spurring back of lateral growths. Black Currants are best grown as bushes, and the pruning of these is quite different to the system adopted for red and white varieties. Black Currant fruit almost exclusively on wood of the previous year's growth, hence pruning will consist of the entire removal of old worn-out growths during the late autumn or winter months.

As stated above, propagation of all the types is easily effected by means of cuttings taken during the autumn or winter pruning. These must be made from shoots of the previous summer's growth, those the same thickness as a lead pencil being the best. They must be firm and well ripened, and when the cuttings are made each should be about 12 inches or 14 inches long. It is best to cut close beneath a joint at the base, and the soft top of the shoot must be removed close to a bud. In the case of red and white varieties, all the buds, with the exception of four or five at the top, should be removed, as this

ensures a clean stem for the future bush. Black Currants are best when growths are pushed up from the base, consequently all the buds are left intact on the cuttings of these. Cuttings of all types should be planted as soon as made in well drained rather light soil, in rows 18 inches apart and the cuttings 9 inches asunder in the rows. The following winter the best of the resultant plants may be placed in their permanent quarters, or, better still, all can be planted more thinly in nursery quarters until they are two or even three years old.

During the growing season Currants of all sorts greatly appreciate soakings with clear water and weak liquid manure, and a mulching of short decayed manure over the roots during hot weather is of the greatest benefit. It frequently happens that red and white varieties set their fruits so freely that thinning in the early stages is necessary if good sized berries are desired, and this is a point that ought not to be overlooked. Plants grown on north walls are very valuable for late supplies, but where such a position is not available the supply may be considerably lengthened by tying up a few of the latest bushes rather tightly with brown paper, making sure that leaves and fruits are perfectly dry before doing this.

Aphides are the worst pests of Red and White Currants, but these are comparatively easily got rid of by any of the usual methods. Black Currants, of course, are considerably damaged by the big bud mite, a pest which it seems well nigh impossible to eradicate, the lime and sulphur treatment in the spring being, perhaps, the most effective. This sometimes, however, will scorch the young foliage rather badly, and must therefore be used cautiously. Some good varieties are: Red—La Versailles (Fay's Prolific and Comet) and Champagne Red. Messrs. Laxton Brothers have a new red one, which promises to be extra good. White—White Transparent and White Dutch. Black—Boskoop Giant (very fine), Lee's Prolific, Black Naples and Baldwin's Black.

THE LOGANBERRY.

WITH the advent of other new hybrid berries of the Bramble section, the merits of the Loganberry are apt to be overlooked, yet it is a most useful fruit and should find a place in every garden where a fair amount of room exists. Reputedly it is the result of cross between a Blackberry and a Raspberry, but some are inclined to think that it is a true natural species. However that may be, it is one of the few useful fruits for which we have to thank our American cousins.

It is an exceedingly vigorous subject, frequently making growths 12 feet or more long in one season, hence it must be given plenty of head-room. A favourite situation for it is over an arch, where it forms a beautiful and at the same time useful plant. It delights in a deeply-worked, rich and rather heavy loam, which will afford it a cool root-run during the hot days of summer. After the fruits are gathered, the growths which have borne them are cut right out at the base, the best of the young ones being tied in to take their place and for bearing fruit the following year.

As will be seen by the illustration, the fruits are freely produced in large clusters, and they much resemble large Raspberries in shape and size, being red in colour when ripe. Owing to a rather acid flavour, they are valued more for preserves than for dessert, although when thoroughly ripened they very nice.

Propagation is easily effected by pegging down the tips of the young, non-fruiting canes and covering them with soil. Treated thus they quickly form roots, when they may be severed from the old plants in the autumn, and either grown for one season in a nursery bed or transferred direct to their permanent positions. As planting time will soon be here, those who have room and suitable soil for a plant should make a point of securing one. Naturally, such a fruit has quickly been made good use of by hybridists, the Lowberry and the Laxtonberry being two good fruits obtained by using it as a parent.



THE LOGANBERRY: ONE OF THE PARENTS OF THE LOWBERRY.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE HARDY FLOWER GARDEN.—Dutch bulbs in great variety may be planted in their flowering quarters as opportunity offers. Hyacinths should be planted 4 inches deep and 7 inches to 8 inches apart; Tulips, 4 inches deep and 5 inches apart; Narcissus, 4 inches to 5 inches deep and from 8 inches to 10 inches apart, according to the size of the bulbs. Scillas should be planted 3 inches deep and about 2½ inches apart. Chionodoxas: Plant similarly to the Scillas. Muscaris require to be planted in the same manner; and Snowdrops and Leucojums when planted 3 inches deep and 3 inches apart answer very well. English and Spanish Irises also succeed very well when planted rather more than 4 inches deep and 6 inches apart. The pretty Winter Aconites if planted 1½ inches deep and 2 inches apart make a nice effect. Liliun candidum (the Madonna Lily) succeeds when planted 3 inches deep and 12 inches to 18 inches apart.

The Vegetable Garden.—For early supplies next year I am planting Cabbages in drills. Should the weather be very dry, I water them in with a copious application. Coleworts for quick results may be planted at the present time. I am lifting maincrop Potatoes now, and find they are not altogether free from disease. It is imperative that the diseased tubers be separated from the perfect ones, as they soon contaminate the latter. Celery has progressed remarkably well of late, especially where early planting was done. Plants are easily bleached by tying 6-inch strips of brown paper round them. In most cases two such strips are sufficient, following with the second lot when the plants have grown sufficiently. I am about to make a sowing of Hammersmith Cabbage Lettuce just now, and in conjunction with a sowing of Bath Cos future supplies are practically assured. Sow the seed in prepared quarters that have a sunny aspect.

The Window Garden.—Window-boxes may have the bedraggled summer-flowering subjects removed and be replanted with small shrubs. Those who do not care for shrubs may very well plant early-flowering Chrysanthemums, as these will make a gay display for some time to come. Wallflowers are always attractive, and if yellow varieties are planted together with Forget-me-nots, the effect should be beautiful indeed. Dutch bulbs in variety may be utilised

for the same purpose, and they are easily managed. For the window indoors bulbs should be potted up and plunged in ashes or Cocoanut fibre refuse until well rooted; they may then be placed in the window. Sponge foliage plants frequently to remove accumulations of dust.

The Greenhouse and Conservatory.—I am already housing the earliest of my large-flowered Chrysanthemums. The housing should be a gradual process. Ventilate freely the greenhouse in which the plants are placed. Glass houses in which more tender subjects are growing must be heated at night, otherwise some of the plants are sure to deteriorate. Lilies that have ceased flowering and the foliage of which has turned yellow should be cut down and the pots arranged on their sides; water should be withheld. I am now dealing with plants of *Plumbago capensis* that have been beautiful during the past summer. Shoots of this year's growth should be cut back to within



2.—POTATOES WITH SHOOTS FORMING; THE LATTER MUST BE PROMPTLY REMOVED.

1 inch or so of their base. Subsequently they will break into fresh growth. D. B. C.

HOW TO HAVE NEW POTATOES AT CHRISTMAS.

It is scarcely necessary to say that a good dish of home-grown new Potatoes would be a most welcome adjunct to the roast beef, turkey, or other joint at the Christmas dinner, and as such are not by any means difficult to procure the cultivation of them is a subject which the beginner in gardening may safely undertake. It has long been known that tubers which had been kept over for a whole year without planting were capable of producing young ones without making any top growth; but it is only during comparatively recent years that this knowledge has been made use of in a comprehensive and practical manner.

Perhaps it may be as well at the outset to briefly explain what happens to the tubers to cause them to behave thus, as this will make matters much plainer to those not well versed in Potatoes. A Potato tuber if well ripened contains an abundance of food, chiefly starch, which, in the ordinary course of events, is used for the production and maintenance of shoots until they have made roots and leaves and are thus capable of forming their own food. When, however, new Potatoes are required during the winter



1.—POTATOES TO GIVE NEW ONES AT CHRISTMAS.

months the tubers are kept in the dark one whole summer, and any shoots that are formed are promptly and persistently rubbed off, consequently very little of the food that is stored in the tuber is used. Towards the end of the summer the Potatoes thus treated appear to tire of making, or attempting to make, growths, and consequently start the formation of new tubers and thus get rid of their stored-up food which represents energy. Of course, the conditions must be favourable for the Potatoes to behave thus, and as tubers must be selected at lifting time for the purpose the present is a good period to make a start. As will have been ascertained from the above remarks, tubers selected now will, if treated as described below, be in a condition suitable for producing a crop of new ones this time next year, and by treating them in batches new Potatoes will be obtainable all through the winter of 1909-10.

When lifting the crop select a number of the biggest tubers and make sure that they are quite free from disease. Fig. 1 shows a number of suitable Potatoes for the purpose. These must be stored in a dark, cool place for the winter, taking care, of course, that frost does not reach them. Early next spring sprouts will begin to form, as shown in Fig. 2, and these and any that are pushed subsequently must be promptly removed during the whole of next summer. In addition to the removal of sprouts next year, care must be taken to keep the tubers as cool and dark as possible, and they must not be kept too dry, else they will shrivel considerably, as shown in Fig. 3. The above remark must not be construed to mean that they need keeping wet; an earth or brick floor would be a suitable place for storing during the summer months.

By September of next year the Potatoes thus treated will be ready for the production of new ones, and to induce them to do this they may be treated in several ways. One large grower lays them out thinly on the floor or on shelves in dark caves, and covers them thinly with fine soil. For the amateur, however, such a course would be impossible, and where room is limited good use may be made of boxes, those about 12 inches in depth being most economical, as they will take two layers of tubers. A layer of fine light soil, about 2 inches thick, is first placed in the bottom of the box, then the Potatoes are placed on this several inches apart each way. On the top of these another 2 inches of soil is placed and then comes another layer of Potatoes, these in turn being covered with soil. Of course, where there is plenty of room, boxes to carry one layer of sets only will be the most convenient. A section of a box prepared with two layers is shown in Fig. 4. The soil should be nicely moist, not



3.—A MUCH-SHRIVELLED TUBER, THE RESULT OF KEEPING TOO DRY.

wet, when used, and, providing a proper situation is afforded the boxes, no water will be required. A suitable position is the floor of a greenhouse, where the temperature will range from 50° to 60°, and in such a place new Potatoes should be ready for gathering in about six or eight weeks. It is essential that the tubers be kept quite dark.

Fig. 5 gives a good idea of how the new Potatoes are formed on the old ones. As they become large enough for cooking they are removed and others will be formed, until all the stored or reserve food in the old Potato is exhausted. Of course, the flavour of Potatoes thus produced is not equal to that of tubers grown in the ordinary way; but if good flavoured varieties, such as Factor, Windsor Castle, or the better strains of Up-to-Date, are used, a dish of such new Potatoes will be by no means despised during the winter months. To ensure a crop on Christmas Day a batch of old tubers should be started about eight weeks previously and another



4.—SECTION OF A BOX OF TUBERS.

two weeks later, that is, providing the temperature given is as advised above. A lower temperature will do, say, 45° to 50°, but the formation of new Potatoes will then take longer.

POTTING UP OLD BEDDING PLANTS.

With the advent of the first slight frost the beauty of the majority of the plants which have occupied the beds during the summer months will pass away, and the owner must, if he desires to save them, lift the plants and take them under cover for the winter. The Geranium or Zonal Pelargonium is still a great favourite with many for bedding purposes, and although it is best to take cuttings in August or early September, and thus secure young plants for another season, it frequently happens that the supply runs short and the cultivator is glad to fall back on the best of the old plants in the spring. These old plants have at least one point in their favour, viz., that they commence to flower earlier and are usually more prolific than young ones.

In lifting the plants from the beds only the best and most shapely specimens should be retained, and these should have all soft growths and nearly all the leaves removed, and also the long, fibreless roots shortened. They may then either be potted up singly into 5-inch pots or else be placed fairly close together in boxes and some soil well shaken and made firm about the roots. It is necessary to drain the pots or boxes well, and soil of a more sandy or light character than usual should be employed. They must be kept in a frost-proof but cool and dry structure for the winter, the greatest enemy being a damp, cold atmosphere; hence great care must be exercised in applying water, as they will stand soil that is almost dry during the dull days of winter. Those that are potted up singly now will, of course, remain in the pots until bedded out next summer, but those stored in boxes will need potting off next February or March.

Fuchsias and Heliotropes may be treated in a similar manner, but the first named may be

stored in a shed, room or under the stage in the greenhouse so long as frost does not reach them and they are not subjected to wet conditions. Cannas may also be potted up singly or stored collectively in boxes of soil. Where a warm greenhouse is available a few plants properly potted in soil composed of good loam two parts, decayed flaky manure one part and a dash of sand may be placed therein, and fresh foliage will soon be formed and the plants rendered suitable for garnishing.

Tuberous Begonias should be lifted with their tops entire and placed thickly together in boxes of light soil or even leaf-soil for a few weeks until the tops naturally die off, when the corms may be taken out, cleaned of superfluous roots and soil and plunged in single layers in shallow boxes of clean sand or Cocoanut fibre refuse, the boxes then being stored in a frost-proof shed or room. The great point to bear in mind in the storing of bedding plants of all sorts during the winter is that damp is far more injurious to them than a low temperature; hence an endeavour should be made to keep the atmosphere in the structure wherein they are stored as dry and buoyant as possible.

SOLANUMS AND THEIR CULTURE.

SOLANUM CAPSICASTRUM, S. Hendersonii and Williams's hybrids all produce very fine berries. Probably the first of the three above named is the favourite variety with amateurs, and it is certainly a most useful plant for the embellishment of the greenhouse or conservatory, or even the dwelling-room window in autumn and winter. The plants are easily grown from seeds sown in a light sandy soil in March, or from cuttings inserted early in April. Some growers plant out the young specimens in June and lift and repot them early in September. Others grow them in pots throughout the season, and I do not hesitate to recommend the latter mode of culture as the best for amateurs to adopt if they will attend to the watering and feeding of the plants during the warm days of summer.

The right treatment of the plants at the present time is very important. Those that are to be lifted require very great care. Pots large enough to hold the roots and some soil must be obtained and a nice light, rich compost prepared. The plants should be carefully lifted with as much soil as possible adhering to the roots. Having drained the pots, place the roots and ball of soil in the pot, and then fill up any vacancy with the new compost. Press down the latter with the fingers and place the newly-potted plants in a cool frame. Supply them with water directly they are potted, but afterwards be careful not to give too much. A good syringing with clean water occasionally will be quite sufficient. It is also advisable to lightly shade the plants for a time from the sun's rays, but when they are established in the pots air and light should be freely admitted and weak doses of liquid manure given. Plants grown in pots during the summer should be taken to the shelter of a frame before frosts occur. Continuous feeding with soot water and liquid manure may be the rule in their case, then the foliage will be a deep green and the berries large and well coloured.

HOW TO GROW GIANT ONIONS.

THE inexperienced amateur generally waits until the spring before commencing the preparation of the ground for the Onion crop, but this is a mistake. Probably a plot of ground is available which is well open to the light and sunshine throughout the day and of a rather heavy nature, that is, inclined to be clayey; if so, it is an ideal rooting medium for Onions if it is properly prepared. In the first place it will be necessary at once to deeply trench the ground. Go down quite 3 feet, but do not bring up the cold subsoil; leave it below after thoroughly breaking it up.

Both the middle and the top portions should be left in the original positions, but the middle portion should also be partially pulverised. The top layer, however, must be thrown up in large lumps and be left so throughout the winter months. Do not mix any manure with the soil, but put in about 3lb. of lime (unslaked) to each square yard of ground, mixing it evenly with the top portion. The rains, frosts, snow and weather generally during the winter will have a beneficial effect upon these lumps of clayey soil. They will be pulverised and sweetened, and when, early in March next, the cultivator is able to commence the turning over of the top 18 inches of soil, it will crumble to powder. If the soil is always worked while it is in a comparatively dry condition it will form an ideal Onion bed by the middle of April, and towards the end of that month the young plants must be put out. Instructions on the raising and planting of the young Onions will be given in due course.

THE FLOWERING PERIOD OF VARIOUS BULBS.

ALL amateurs like to have a good idea as to the time when the different kinds of bulbs which they are growing will come into flower. The dates given below are approximate. If the weather proves to be very mild, the blooms will develop early; but if cold the flowering will be retarded.

Name.	Date of Planting.	Period of Flowering.
Hyacinths	..Middle of October.	..April to May 20
Tulips, earlyApril 20 to May 10
..lateApril 30 to May 25
DaffodilsApril 10 to May 10
SnowdropsFebruary 1 to March
CrocusesMarch 20 to April 20
ScillasFebruary 15 to March 20
AnemonesApril 20 to June 1
RanunculusJune 1 to July 1

Dark-coloured soils of a light nature are warmer than light soils of a clayey nature. The dark



5.—HOW THE NEW POTATOES ARE PRODUCED ON THE OLD ONE.

ground attracts the sun's rays, and so becomes warm quickly in spring. Moreover, the water does not lodge in dark, light soils as much as in heavier loam; and all these conditions have an effect upon the growth of the bulbs in the ground. A quantity of road grit, sand and well-decayed leaf-soil should be added to tenacious loam. Drainage is also an important factor in the warming of clayey ground. Frost does more harm to bulbs growing in the latter kind of soil, on account of the excessive moisture in it, than to those in soil of a sandy nature, so it is advisable to put on a layer of Cocoanut fibre on the surface 1½ inches deep.

Bulbs should always be planted with a trowel or handfork and not with a dibber, especially where the soil is of a tenacious character. If the latter implement is used, a hollow space is frequently left beneath the base of the bulb, much to the detriment of the latter, as decay will often result. AVON.

THE TOWN GARDEN.

BULBS IN THE GARDEN.—There are many scores of beautiful plants which can be successfully cultivated in town gardens, but of them all the most generally satisfactory are those usually known as Dutch bulbs. There is not a single garden in which they cannot be persuaded to grow with more or less ease, and in those places where reasonable attention is accorded they bring unbounded satisfaction. When once the bulbs are in they do not call for any cultural aid, for during the dull days of winter they are steadily making root growth and providing themselves with the power to supply food to the handsome spikes or blooms in the following spring. Hyacinths, Narcissi, Tulips, Crocuses and several others may be requisitioned with a certainty that the results will be gratifying to the owner and his friends.

PREPARING THE SOIL.—It is an excellent rule to avoid the use of natural manures entirely in the soil in which bulbs are to be planted, but it is erroneous to suppose that they will succeed perfectly in poverty-stricken ground. If the beds and borders were generously manured for the summer occupants it is improbable that it will be necessary to add any manure for the bulbs; but if the soil is poor, some sweet, thoroughly-rotted material should be incorporated with the second spit in such a position that it is impossible for the bulbs to come into actual contact with it. In any case it is imperative that the mechanical working shall be excellent, as bulbs are like practically all other plants in their appreciation of a friable medium in which to grow. This preparatory work should be carried out at least two weeks prior to the planting. Thus, immediately after the summer occupants of the beds have passed their best, they should be removed and the soil dug and manured, if necessary, for the bulbs.

DEPTH OF PLANTING.—This will, of course, depend upon the size of the bulbs, and the best rule to adopt is to cover all kinds with at least twice their own depth of soil. In light lands, however, it is permissible and often desirable to place them deeper than this, and Daffodils can always be put well down with advantage, as they grow more strongly and bloom magnificently. In small gardens it will add to the smartness of the garden to cover the beds after the planting is finished with a thin layer of Coconut fibre refuse. This will not, as many people suppose, convey any food to the plants, but simply make the beds neater for winter.

TIME AND MANNER OF PLANTING.—As has been said, the planting should be completed by the end of the first week in November, but it may be successfully carried out until the middle of December, while if it can be done by the middle of October I think that the grower will gain; however, this is essentially a matter for each cultivator to decide for himself. He must, too, settle the precise system of planting. Personally I am in favour of clumps for borders and one variety only for a bed, but others will like lines in the borders to produce a ribbon effect, while many admire mixtures in the beds. If two colours are desired in a bed, charming associations may be made with an *Incomparabilis* Narcissus or a large trumpet Daffodil and a Hyacinth, or a Daffodil and a Tulip. Care must, however, be taken that the two utilised shall flower as nearly as possible at the same time, or the attractiveness of the combination may be destroyed entirely. For use among shrubs and beneath trees the bulbs should be distributed as naturally as possible and never planted in lines or clumps of any set shape. For this particular purpose the bulbs which are flowered in pots should always be saved, as they bloom well the first season, and if the position and soil suit them they will improve season by season if allowed to remain undisturbed.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

SOIL FOR HYACINTHS.—I am fully convinced that many persons who buy bulbs very often blame the bulbs rather than their treatment, and it is largely due to not having proper soil. For growing the best quality flowers the soil is an important factor, and it ought to be prepared some weeks before it is wanted for use. A good compost would be one-third of fibrous loam, one-third of really first-class manure, about one-sixth of good leaf-soil and one-sixth of sharp sand. Take care that the manure is very old; new manure would practically ruin the bulbs. The whole lot should be thoroughly mixed up and in wet weather have some boards or sheet-iron placed over it.

All plants that have been cultivated outside for blooming in the winter should now be taken up, potted and housed, as we cannot depend upon the weather. Late Chrysanthemums, however, may yet be left out if the weather is genial. Permanent shading may now be dispensed with on greenhouses.

Pots and Frames.—These should have a good clean before receiving the occupants for the winter. Cinerarias, Primulas, Freesias and Calceolarias must be kept on stages near the glass so that they do not become drawn. In fair weather draw the lights right off cool subjects every day, and do not coddle anything.

HARDY FRUIT GARDEN.

Continue to gather such fruits as are ripe. Late varieties of Apples and Pears will go on growing for a considerable time yet. Do not store any bruised or specked fruits, as these only court disappointment and trouble, and small fruit should not be stored with good samples. The proper way to test when fruits are fit to gather is to lift each in the palm of the hand in an upward direction, and if it is ready it will part readily from the spur.

Lifting and Root-pruning Fruit Trees.—These operations may be commenced as opportunities occur, remembering that the earlier they are done the sooner will the trees establish themselves, as while the soil is warm it is surprising how soon the fibrous roots are made.

KITCHEN GARDEN.

The Cabbage Plot.—If the ground has been prepared as advised and the plants are ready, lose no time in getting them established in their winter quarters. Brussels Sprouts are supposed to be fit for use with the advent of partridges, but they are not so good yet as later in the season. However, keep all decaying foliage picked off, as this allows the buttons more room.

Tomatoes.—Cut all the fruits now, and those not ripe, if cut with a long piece of stem and hung up in a house or frame, will ripen, and with care may be kept for a very long period. Small green fruits may be picked. These are used in chutney with much success.

Cucumbers under Glass if not already planted should be seen to at once, and in soil as recommended in the calendar for the 12th inst. Stop the shoots at one joint above the fruit and tie regularly. Do not overcrop the plants.

FRUITS UNDER GLASS.

Vinerias.—Keep a little heat on all houses containing fruit, and ripen all late varieties as soon as possible. Keep the bunches looked over so that no damaged berries are left, as these soon injure others.

Figs.—Give these all air possible so as to ripen up the wood for next season.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

In the stove it will be necessary to reduce the water supply of such plants as the Allamanda and other summer-flowering climbers that have done their work for the year; but the reduction must be gradual, so that the wood ripens naturally.

Eucharis amazonica flowers naturally at this time of the year; but their season may be governed to some extent by withholding water for a week or two and then resuming its use in the form of liquid manure, combined with an increase of bottom-heat, which will cause the spikes to push up quickly.

Cypripediums.—Many of the cool house Cypripediums are now showing flower-buds, and it will add to their appearance when in bloom if the plants and stages are nicely cleansed from the sediment which sometimes adheres to them. This should be done while the buds are in the growths, and then there is no fear of injuring them. Most of the flowers will need supporting, and some neat stakes should be in readiness for the purpose.

THE FRUIT GARDEN.

Strawberry Beds.—Hoe and clean the surface of the ground, remove all runners, and should the weather continue dry give a liberal application of water, repeating it if required, especially with recently-planted specimens. A mulching of decayed manure applied immediately after taking off the runners, as well as feeding the plants, is of great assistance in dry weather.

Gathering Apples and Pears.—This must now have special attention. Gather each variety when it is ripe, always bearing in mind not to be too soon. Fruit gathered too early never attains the proper colour and flavour. Exercise every care so as not to bruise the fruit. The work of gathering Apples and Pears must be done only when the fruit is dry. Keep the fruit-room for the present well ventilated to carry off the moisture that always appears to collect about newly-gathered fruit.

KITCHEN GARDEN.

During fine weather keep the Dutch hoe at work among growing crops, as this will assist the plants in their growth and destroy countless small weeds, which make their appearance more freely now than at any other season of the year.

Tomatoes.—Reduce leaves upon plants in the open ground so that the sun may reach the fruit. These plants are easily injured by frost, and should have a light covering thrown over them whenever danger from this source is apparent. Plants in pots for winter fruiting will now have set several bunches of fruit, and must not be allowed to remain outside any longer or the cold nights will have an injurious effect on their constitutions later in the season.

THE ROSE GARDEN.

Preparations should now be made for obtaining a quantity of own-root Roses. The advantages of own-root Roses over those that are budded or grafted consist of immunity from destruction by frost, absence of suckers, continuity of flowering, greater longevity and economy. The most suitable wood for cuttings is that which flowered first this season. To ensure success I have always found it absolutely necessary to put the cuttings in early.

FLOWER GARDEN.

Carnations.—If well rooted, the earlier these are lifted and replanted the better, and the more likely are they to winter well. On the other hand, it is safer to leave them till the first or second week in October, unless they lift with a nice ball of roots and soil. The beds or borders should be well prepared, neither rich nor poor, and where the land is deficient in lime a good sprinkling of this in a fresh, slaked condition should be given.

T. B. FIELD.

(Gardener to Baroness Berners.)
Ashwellthorpe, Norwich.

NEW PLANTS.

CATTLEYA HARRISONÆ ALBA STANLEY'S VARIETY. This is a very pretty and pure flower of really exquisite form. The sepals and petals are of medium size, very firm texture, and of the purest and glossiest white imaginable. The labellum is comparatively large, moderately open, with beautifully crimped edges. This also is pure white, with the exception of a pale lemon-coloured band, about one-eighth of an inch wide, running across it about half an inch from the base. Shown by Messrs. Stanley and Co., Southgate, London, N. First-class certificate.

Cattleya Maronii aurea.—This is a very handsome flower of rather refined appearance and of unique colouring. The rather narrow lanceolate sepals and the broader frilled petals are of a uniform golden yellow. The labellum is large and very spreading, with beautifully frilled edges. The throat is the richest possible orange yellow with carmine markings, the lip proper being bright carmine, suffused pale yellow. Shown by Sir Trevor Lawrence, Bart., Burford, Dorking. Award of merit.

Populus alba lasiocarpa.—A valuable and striking novelty from China which has endured the past three winters in the open at Coombe Wood with impunity. Only small, sturdy plants about 2 feet high were exhibited, and these, furnished with broadly-ovate cordate leaves 1 foot in length and about 9 inches in breadth, presented a handsome appearance. The plant is said to reach some 15 feet or 20 feet in height. The footstalks, which are some 4 inches in length, and the more prominent veins are coloured a reddish scarlet, the texture of the leaves being exceptionally strong and firm. Shown by Messrs. James Veitch and Sons, Limited, Chelsea. First-class certificate.

Dahlia Betty.—A single-flowered variety of rosy lilac hue with maroon-shaded centre. From Messrs. J. Cheal and Sons, Crawley.

Dahlia Brigadier (Cactus).—A showy variety whose well-formed flowers are reddish crimson.

Dahlia Monarch (Cactus).—A flower of reddish salmon tone with conspicuous yellow centre. Both the above were shown by Mr. J. Burrell, Cambridge.

Dahlia Snowdon (Cactus).—A snow white variety, very beautiful and pure.

Dahlia Teutonic (Cactus).—A striking shade of amaranth crimson, and one of the most effective we have seen, the much-incurved florets rendering it conspicuous.

Dahlia Satisfaction (Cactus).—Rosy carmine with white centre, the tips of the florets incurving in a very beautiful manner. These three were shown by Messrs. J. Stredwick and Sons, St. Leonards.

Dahlia Flora (Cactus).—A distinct and showy variety coloured yellow and fawn, the florets being white tipped.

Dahlia Nellie Riding (Cactus).—This variety is coloured a deep maroon crimson, a lighter shade pervading the extending florets, which are pointed with white. This handsome pair came from Mr. J. T. West, Brentwood, Essex.

Dahlia Adela (Pompon).—The blooms are of model size and form, and are of pure white colour. From Mr. Charles Turner, Royal Nurseries, Slough.

Each of the above Dahlias received an award of merit, and all the plants named and the under-mentioned new fruit were shown before the Royal Horticultural Society on the 15th inst., when the awards were made.

NEW FRUIT.

Apple Red Victoria.—This is a new kitchen variety of very beautiful appearance, the exposed side being of a very brilliant glossy scarlet, with subdued yellow on the shaded portion. It somewhat resembles Gascoyne's Scarlet in shape, but is more brilliantly coloured and quite distinct. Shown by Mr. G. W. Miller, Clarkson Nurseries, Wisbech. Award of merit.

LEGAL POINTS.

Greenhouse (Tenant).—An ordinary greenhouse built in a garden by a residential tenant and constructed of wooden frames fixed with mortar or cement to foundations of brick-work cannot be removed as a tenant's fixture. If it is a mere case resting on the land or even on a foundation it is an ordinary movable.

Gardener's references (E. R.).—A reference given to a servant becomes his property, and if handed to a subsequent employer or agent he can compel its return. If it has been lost or destroyed the servant generally has a claim to damages, but it is hard to estimate what the damages ought to be, and the servant must have acted reasonably and done everything possible to mitigate the loss, i.e., attempted to get fresh testimonials.

Allotments (Garden).—The holder of an allotment on the determination of his holding is, by the Allotments and Cottage Gardens Compensation for Crops Act, 1887, entitled to compensation for crops, including fruit, growing upon the holding in the ordinary course of cultivation, and for labour expended and manure applied in anticipation of a future crop. For fruit trees and bushes growing thereon planted by the tenant there is no compensation unless they were planted with the landlord's written consent, but where he is not entitled to compensation the tenant of an allotment may, before the expiration of his tenancy, remove by virtue of Section 7 (6) of the Allotments Act, 1887, a statute which was somewhat later than the one before mentioned.

BARRISTER.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Herbaceous plants (H. P. B.).—If the border is much overhung by trees we do not think that Roses could be grown with very much success. If, on the other hand, the trees but slightly shade the border this might prove helpful, though we are bound to say we favour quite an open if sheltered spot for Rose growing in general. There are, however, many good and showy herbaceous plants that would prove a success, as, for example, single and double Pyrethrums, Phloxes, Kniphofias, Montbretias, Oriental Poppies and such like. Of the Pyrethrums, Hamlet, Monarch, James Kelway, J. N. Twerdy, Mrs. Bateman Brown, Pericles, Captain Nares, Melton, coccinea, Merry Hampton and Sherlock are all good and showy; while of Phloxes, such as Etna, Boule de Feu, Anguste Riviera, Flambeau, Regulus, Le Siecle, Lothair and William Robinson are all showy and distinct. The Flag Irises, single red and pink-flowered Hollyhocks, Gaillardias, Sweet William Salmon Queen and pink-flowered Antirrhinums would all be serviceable. The seeds of the Verbascums, (Euthera biennis and Foxgloves could be sown thinly in the wood, but the Bracken will be best if roots are planted. The Bracken is not an

easy thing to transplant, and seedlings take a long time to grow. Where strong this Fern would outgrow the Nettles, otherwise the only way to get rid of them is to dig them out or cut them down frequently. It is highly probable, we think, that the leaves of your Violets have been eaten by caterpillars, but we could not say definitely without seeing them.

Lilium giganteum (A. W. G.).—The better plan will be to allow the growth to fully mature and then lift and replant the offsets. The length of time the plant is in position prior to flowering is responsible for the almost complete exhaustion of the soil in its vicinity, and to permit the offsets to remain, in the circumstances, would be to afford them a very poor chance indeed. In anticipation of their ripening off you might prepare a new position in readiness, arranging the young bulbs in a group with ample room for future development.

Mecconopsis seedlings (Poppy).—The seedlings should have been potted off when large enough to handle in a mixture of peat, loam and sand in about equal parts. It is best to get the seedlings along as quickly as possible in the early stages, but without in any way forcing or coddling them. You had better even now pot them off, and when established provide them with a cold airy frame for the winter months. What these things suffer from most in all stages is a damp or close atmosphere. Frost and cold are much less harmful than damp, and this must be guarded against at all times. Afford very little water during winter.

Fungus-infested plants (Enfield).—The portions of Rose, Snapdragon, Phlox, Sweet Pea, Statice, Stock and Ivy-leaved Geraniums sent were all so badly infested with fungus that we speedily consigned them to the flames. The Geranium leaves were eaten up with a warty fungus like that which attacks the Hollyhock. The Phlox leaves were burnt brown; indeed, it presented the most remarkable evidence of fungoid destruction among flowers we have seen. Pull or cut and burn at once everything that is thus affected, sparing nothing. Then get from some of our advertisers of mildew or fungus destroyers prepared Bordeaux mixture, with which they will send you full instructions for use, and spray that twice or thrice at intervals of ten days over every flower or plant in your garden. How it became so infested with fungus we cannot tell. Only severe remedies can save plants in it from destruction.

Construction of Water Lily pond (F. O. Dobell).—The chief defect in the construction of the pond would be the use of the so-called brick tubs, and if you arrange brick receptacles at all these should be freely pigeon-holed, so as to permit the roots to pass out into fresh soil placed around from time to time. A simpler plan would be to sink the Water Lilies into their positions, first securing them in wicker baskets with about two pecks of loamy soil and cow manure. It is the rich muddy bottom of a pond that Water Lilies delight in mostly, and this you should try to imitate so far as you can. The amount of the overflow will be ample. You will be able to get from Messrs. James Veitch and Sons, Limited, Chelsea; Messrs. Barr and Sons, Covent Garden; Messrs. T. S. Ware, Limited, Feltham, and other dealers in hardy plants any of the colours you require; but you should remember that the blue-flowered forms belong to the *Nymphaea stellata* set and are not hardy. For the side pockets *N. odorata* varieties would be best. A matter of much importance is the foundation or bottom of the pond, and this should be made sufficiently strong to preclude the idea of shifting or settling down. A strong concrete bed of somewhat greater width than the full size of the pond should be first made, unless you have abundance of easily-tempered clay near which could be puddled into shape. In any case, some care will be required to make the pond quite watertight, as there is nothing more vexatious than a Lily pond whose water level cannot be relied upon.

ROSE GARDEN.

Mildew on Crimson Ramblers

(T. E. Baines).—We should say your plants have been too dry at the roots. This condition of things will engender mildew as much as anything. It is just possible your plants contain a lot of old wood that should have been removed in March. Very often this old wood becomes so decrepit that it is incapable of yielding healthy new growth, the consequence being mildewed shoots. Now is a good time to cut out the old wood—that which is of a dark brown colour—and then tie up the new growths in their place. Afford good soakings of water and liquid manure alternately once a week during May and June and again soon after flowering. If you syringe with Lifebuoy soap water as soon as mildew is seen, you will check it if not entirely cure it. Use half a bar of the soap to three gallons of soft water and repeat this spraying every three or four days. To ensure the water and liquid manure finding its way to the lower roots it is sometimes advisable to make some holes around the plants with a crowbar. You do not say

whether your Ramblers are on a wall or not, but we have found this to be the very worst position to plant the Crimson Rambler.

Rose Bessie Brown with drooping blossoms (*W. G. R.*).—This is a common complaint about this beautiful Rose, and one that prevents us recommending it for garden cultivation. Under glass, where its blossoms can be tied up to sticks, and the rain and moisture of the air kept from them, it is an ideal variety; but unless tied up and its flowers shaded, it is a hopeless Rose to grow outdoors. We should say that Queen of Spain and Mrs. Myles Kennedy will replace this variety for garden culture, although it will be a long time before the exhibitor obtains a more perfect Rose than Bessie Brown.

Philadelphia Rambler with malformed buds (*Rebecca*).—It is the one great failing of this Rose to sometimes produce buds such as you send. Some seasons this does not occur to such an extent as this year. Possibly the cold nights we experienced not long ago are responsible for the trouble. It is certainly climatic, because under glass we have none of this difficulty with the Rose. The only fault there is that it does not yield its trusses quite so freely as one could wish. There are now so many beautiful ramblers that it does not pay to retain those with peculiarities such as this Rose has. Plant instead either Wedding Bells, Rubin or Mrs. F. W. Flight if you do not already possess them.

Applying liquid manure to Roses (*E. L. P.*). In watering Roses in the open ground it must be remembered that there is a great difference in their case to those grown in pots. In the latter instance one must be careful not to overload the soil with too much liquid manure; but with regard to plants in the open ground one may give them a good helping and they will not suffer from it. Considerable harm might follow if the liquid were too strong, but if given well diluted the plants can take a good painful each. We have given vigorous plants a pailful of pure liquid as drained from a large heap of cow manure, and have seen no harm arise; on the contrary, the lusty vigour of wood and foliage clearly showed that the plants appreciated this excellent diet.

Liquid manure for Roses (*Ignoramus*).—The amount that should be given to each bush and rambler depends somewhat on their strength. Vigorous plants could utilise half a gallon of the liquids named by our correspondent "J. D.," in our issue of July 4, whereas weakly plants should receive but very little, if any. We do not care to give these latter any chemical manures. In their case soot-water or liquid made from cow manure is much the safest, but to vigorous plants the chemicals named would give excellent results. You have misunderstood "J. D." when he advises the application of a certain manure on Monday and another mixture on Tuesday. He does not mean that you should continue watering with liquid manure. If applied once a week or once in ten days it would be ample, and we should advise you to vary the liquid manure, giving the plants some diluted cow manure and soot every other week. If the soil is dry water one day and apply the liquid manure the next. It does not follow if the surface soil be dry that the soil beneath is dry also.

Cutting back a hedge of Penzance Briers and pruning other Roses (*Perplexed*). If you prune the old hedge very severely, you will not obtain much bloom next year. We advise you to cut away at once one or two of the very oldest growths of each plant right down to the ground. You may have to sacrifice some new shoots in doing this; but it will have a beneficial effect by inducing new wood to grow from the base. This treatment should be adopted every June as soon as the plants are off bloom. Mme. Alfred Carrière, so grand upon a wall, is equally free-flowering when grown as a large free bush or pillar. The let-alone principle is advisable in this case, as with Grüss an Teplitz. Instead of pruning back the long growths, it would be well to tie or bend them over somewhat. This induces a freer blooming. Such varieties need a large space where they can develop. Grüss an Teplitz, when grown against a wall, should be very sparingly pruned. All that is necessary is to remove some of the old wood occasionally, and all young ripened wood should be laid in the entire length. We have had plants of Grüss an Teplitz in the open that have never been pruned, and they have flowered most profusely; but we recommend an annual removal of some of the oldest shoots. Réve d'Or is a somewhat shy bloomer and needs little, if any, pruning for some years. One of the finest plants of it we ever saw was one that had its straggling shoots clipped back with a pair of shears each spring. You should try and open out the plant in a fan shape as much as possible, so that light and air may penetrate, and do not object to a few growths drooping outward.

FRUIT GARDEN.

Growth on Apple trees (*U. C.*).—The growth in the woolly aphid, more commonly called American blight. It is a terrible pest and difficult to eradicate, as it sometimes attacks the roots as well as the branches of trees. Experiments have for some time been carried out on the Duke of Bedford's experimental fruit farm at Woburn, in spraying fruit trees with different insecticides for the eradication of such pests. Here it has been proved that by spraying (gently

with a syringe) with White Rose paraffin all insects were killed with which it came in contact, leaving the foliage and branches of the trees unburned. In the past we have always urged caution to be exercised in the use of paraffin on fruit trees, either in summer or winter, for the eradication of insect pests, and even now, in the face of this strong evidence, we would advise you to try the experiment on one branch of a tree only at first, and if after the lapse of a week no ill effect on the foliage were perceived, you may confidently proceed with the spraying, with deadly effect as far as the aphid is concerned.

Apple trees mildew (*W. H. E.*).—Your Apple trees are suffering from a bad attack of mildew. It is very seldom this disease attacks an Apple tree which is in a healthy and vigorous state. On the other hand, when at all feeble and out of health Apples are an easy prey to it; therefore the best way of preventing a similar attack in future is by trying to infuse greater vigour and strength to your trees, either by replanting or top-dressing with rich soil. If not too old for replanting, this should take place early in November, cultivating the land deeply and well enriching it with decayed manure before planting. If the trees are too old for replanting, take off the surface soil down to a good body of roots and top-dress with good loam and well-decayed farmyard manure in equal proportions. The trees will root freely into this new material next year, and consequently regain their vigour. When all the leaves have fallen, take away 2 inches of the surface soil round the trees and burn it, as it is sure to contain more or less of the mycelium of the mildew. There is no better insecticide for killing mildew than Bordeaux mixture. Spray your trees with this next winter.

KITCHEN GARDEN.

Onion Ailsa Craig (*R. Hilton*).—Give the ground a dusting of guano round the roots, forking it in very lightly. Then give a good watering, which will wash the guano down to the roots of the Onions. One handful of guano will be enough for six or seven Onions. Do not let the manure touch the Onions. In another ten days give them a soaking of manure water from the stable or cowyard, and if they should be still growing and the weather is fine give them another similar watering at the end of another ten days. They will by then have about finished their growth.

Finochio, or the Italian Fennel (*T. M. D.*). Whether due to indifference for it as a vegetable or to difficulty in inducing it to make good or satisfactory growth, Finochio is very little grown in this country. It has stout, fleshy stems like a series of scales, and when the plants are half grown they need to be partially earthed up. Then about ten days later the plants may be cut for cooking. It is, properly boiled, fit for eating. The flavour somewhat resembles that of Celery, but is more refined. Seed to produce a summer crop may be sown in April in rows from 18 inches to 20 inches apart, then thinning out the plants to 9 inches apart, so as to allow for full expansion and partial earthing. In warm countries a sowing is made in late summer to stand the winter. Probably our climate is too cold to enable the plants to make full growth and thus become edible.

Cabbage caterpillars (*North Lancs.*).—The caterpillars which prey on your Cabbages are the product of the Cabbage moth (*Mamestra brassicae*). These moths deposit their eggs on the Cabbages, and the caterpillars soon hatch out. These feed on the leafage until they have performed their functions, then descend into the soil, where they hibernates as chrysalids, and come forth as moths again the following year. So long as the moths abound, so long will they infest gardens. It is needful to destroy the chrysalids in the soil during the winter, and burying them deep down helps to that end. Allowing poultry to scratch and feed on the soil also causes many to be destroyed. If the Cabbages were heavily dusted with lime or soot, this would help to keep the moth at bay, but would render the Cabbages inedible. Covering the Cabbages with fine muslin would protect them; otherwise the only remedies are to hand-pick the caterpillars or to dust the hearts with fine salt overnight, washing it off with clear water next morning.

Insect-infested Globe Artichoke (*G. W.*).—Ants use aphides very much as we do cows, but the smaller insects breed so fast that they need no larger insects to carry them. Evidently your Globe Artichokes are either too old or have to grow in very poor soil. It would, no doubt, be best were you to cut off suckers having good roots attached from your present plants next November and plant them out into deeply-trenched and well-manured soil in rows 4 feet apart. In the Isle of Wight the plants should need no winter protection, but more north they do. In the meantime fork up the soil about your present plants, give them liberal soakings of liquid manure and add a mulch of manure. Good growers do not allow plants to remain on the ground longer than three years. Pick off caterpillars as fast as seen, first

damping the parts infested with aphid, then dust freely with Tobacco powder. Tie cotton wool dipped in paraffin round the stems of the heads just below them to check the ascent of ants.

MISCELLANEOUS.

Worms on Strawberry and other plants (*R. E. McDonnell*).—Are you quite sure that the worms you sent, which are one of the many kinds of earthworms, are the culprits, or are there some other creatures in the soil that have caused the injuries to your plants which you have overlooked? I rather think that you will find that there are. I have never known earthworms to injure plants in the way you say these have. Earthworms may be killed by soaking the soil thoroughly with lime-water. If you can find any other creatures at the roots of the plants, please send some and I will say if they are likely to be the offenders or not.—G. S. S.

Insects under felt (*L. E. E.*).—The insects which you found in the felt that was under your carpet were the grubs of the bacon or leather beetle, which feed on various animal substances—skins, leather, wool, bacon which has been kept hanging for some time, &c. The two smaller insects which looked like spiders were small beetles which I do not think have any English name, but are known to entomologists as *Niptus hololeucus*. They feed on a great variety of different substances, but are never found in such numbers as to be the cause of real injury. You should take up the felt and have it well beaten in the open air; this, however, you have probably done already.—G. S. S.

School shows (*L. S. H.*).—Bulbs, soil and pots usually have to be supplied to the children, and it will be necessary to arrange with a local gardener to give one or more demonstrations in the preparation of the pots and the subsequent potting of the bulbs. This we consider preferable to moss-fibre culture for children, as success depends in this case almost wholly upon watering, and, unfortunately, this cannot be taught. School gardens are arranged either for the scholars to work on individual plots about three-quarters of a rod in area or as a class on one large plot, the former being, in our opinion, preferable. We have no doubt that Mr. J. C. Newsham, Farm School, Basing, Basingstoke, would give you particulars of the system adopted in your own county.

Names of weeds (*Kingscote*).—The two most troublesome weeds you send are, unfortunately, too well known to us in England. No. 1, with the creeping, fleshy roots and creepig top growth, with pretty reddish flowers, is *Convolvulus arvensis*, or common Bindweed. Once it gets hold of the ground it is most difficult to eradicate. Beyond getting out all the roots possible by deeply forking the ground, almost the only other course is to keep it constantly cut down with the hoe, not waiting until it has made several inches of growth, but cutting it off the moment a tiny shoot is seen. Once it gets among the roots of Gooseberry bushes, Raspberries, Strawberries or other plants, the only course is to clear out the whole lot and work the soil deeply, picking out every piece of root seen and burning, then planting the ground with some crop that will enable the hoe to be freely used about it. Weed No. 2 is one commonly found in low-lying, wet soil and is very sour. It is known as Horsetail, but its proper name is *Equisetum*. This is a very deep-rooting weed, and its presence shows that the ground is water-logged and needs draining, also that a dressing of ground lime, half a bushel to the rod, worked into it will do good in helping with the draining to sweeten the soil. All the same, all roots possible should be forked out, and, as with the other weed, the hoe kept in constant use to cut off all growths as fast as they appear. When that is done, these deep fleshy roots will die in time.

Names of fruit.—*Burntwood*.—1, Irish Peach; 2, Warner's King. *Kite's Nest*.—1, Hereford Beaufin; 2, New Hawthornden; 3, Red Beetgeheimer; 4, King of the Pippins; 5, Scarlet Pearmain; 6, Worcester Pearmain. *Vinery*.—Your Grape is West St. Peter. *—A Constant Reader, Bedford*.—1, Ecklinville Seedling; 2, Ribston Pippin; 3, Cellini Pippin; 4, Worcester Pearmain; 5, Lord Suffield; 6, Lord Grosvenor.

Names of plants.—*D. S.*—Rose Hon. Edith Gifford. *—H. H.*—1, Jeannie Dickson; 2, Jules Margottin; 3, Tom Wood; 4, Comte Raimbaut; 5, Reine M. Henriette; 6, Hugh Dickson; 7, Heinrich Schultheis; 8, Cheshut Hybrid; 9, Louis van Houtte; 10, Hon. Edith Gifford; 11, Mrs. Bosanquet; 12, John Hopper. *Begoni*.—A seedling variety of the tuberous-rooted Begonia, of which the forms are very numerous. *—Mrs. E. B. B.*—A seedling of *Phlox Drummondii*. *—W. E. G.*—*Tanacetum vulgare*.—*F. L., Italy*.—1, Probably *Calamintha species*; 2, *Mentha rotundifolia variegata*; 3, *Veronica spicata*.—*Glos.*—1, *Spinera japonica*; 2, *Macrotomia echioides*; 3, possibly *Fabiana imbricata*. *—C. O.*—*Rubus odoratus*. It bears red flat fruits. *—A. H., Pom.*—*Stanhoepa Wardii*.—*C. H., Patching*.—1, *Nicandra physaloides*; 2, *Silene Armeria*; 3, *Panicum capillare*.—*Anxious*.—*Rhus Cotinus*.—*W. G. H.*—1, *Tradescantia species*; 2, *Mimulus species*; 3, *Helenium autumnale cupreum*; 4, send when in flower. These specimens were so scrappy that it was impossible to name them all correctly. *—L. C. F., Saltash*.—Cannot name them from leaf only; send flowers. *—A. B.*—1, *Daucus Carota*; 2, *Polemonium caeruleum*; 3, *Potentilla argrophylla variegata*; 4, *Campanula latifolia*; 5, *Helianthemum vulgare variety*; 6, *Gillenia stipularia*; 7, *Verbascum phoeniceum*; 8, *Euphorbia Cyparissias*; 9, *Dicentra formosa*; 10, *Sedum roseum*; 11, *Hedera Helix aurea*; 12, *Eupatorium purpureum*; 13, *Anagallis arvensis*; 14, *Sidalcea malviflora*; 15, *S. candida*; 16 and 17, *Geranium species*, cannot name without flowers.



NEW HYBRID BERRY LOW JUNIOR.



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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

PHOTOGRAPHIC COMPETITION FOR OUR READERS.

WE frequently receive photographs from our readers of some pretty spot or corner in their gardens, and it has occurred to us that it would be interesting if prizes were offered for the best examples sent in. We therefore offer a first prize of two guineas for the best photograph of a reader's garden, and a second prize of one guinea. Each photograph must be accompanied by a written description of the garden. Photographs must be sent addressed to "The Editor, 20, Tavistock Street, Covent Garden, London, W.C." on or before October 31, and the envelope or wrapper must be marked on the outside "Photographic Competition," and accompanied by a coupon, which appears in the advertisement pages. Each photograph must have the sender's name and address plainly written on the back. Rejected photographs will be returned if stamps are enclosed for postage. The Editor reserves the right to use any photograph and description that does not win a prize, and his decision must be regarded as final.

THE ROCK GARDEN.

HOW AND WHERE TO MAKE IT.

THERE is probably no phase of open-air gardening so little understood, so much abused and about which such erroneous ideas exist, even at the present time, as the formation of a rock garden, be it on a large or a small scale. Too frequently the amateur is precluded from making any attempt to form such a garden by false notions of expense. Others, again, in their desire to see all the Alps from the back door, rear up the most ungainly and unsuitable masses of rock, burrs or clinkered bricks, cemented together in such a way that plant-life is impossible even from the outset. Yet others, and the villa or suburban gardener more particularly, will endeavour, by the help of a few barrow-loads of clinkers, to set up a rockery of a kind in which there has been no foundation, no thought and, worst of all, no knowledge of the requirements of the beautiful flowers that it is intended should be grown. And then some will carefully cement every bit of clinker together, forming miniature water-tight compartments, in which there may be the merest scrap of soil. The roots are then imprisoned for life. These are among the many failings, errors and shortcomings which make up the grand sum total of failures and create not a little disgust in the minds of those most concerned.

WHAT TO AVOID.

Clinkers, burrs and the cemented rubbish too frequently seen should be avoided, while tree

stumps, roots, the thicker branches of trees—seen in more than one instance horizontally disposed—are just as objectionable and out of place. Vertical masses of rock, or those piled-up wall-like structures with occasional projecting ledges, and into which the merest seam of soil is placed, are as bad.

POSITION.

This should be quite in the open, away from the far-reaching evils of hungry tree-roots, such as Limes, Elms and Poplars. In gardens where the surface is undulating, or where bold mounds or prominences exist, the cost of making a rock garden will be greatly modified, and such positions deserve the greatest care and consideration. Avoid near associations, where possible, with the dwelling-house, and particularly the formal parts of the garden, where these exist.

MATERIALS TO USE.

In so far as this concerns the right kind of stone for rock garden work, a great variety may be suggested, the most suitable being the varying forms of sandstone or millstone grit for first choice, while others, such as limestone, Kentish rag and the like, are very serviceable. Soft stones, such as the oolitic and magnesium limestone of the Cotswolds and other ranges, is not suitable, while the fossil-bearing strata of the same chain of hills are singularly effective when rightly placed. Stone that is either very hard or very soft should not be used.

ARRANGING THE STONES.

One of the common errors in rock garden making is that of using stratified rock in an obviously unnatural manner. This and the up-ending of pieces of rock, giving the latter the appearance of a badly-used milestone, will at once render the rock garden unsightly. Three-foot-high pinnacles of rock, dotted over a mound of earth in a more or less regular way at frequent intervals, are just as much out of place as are those flat slabs of soft limestone sometimes seen with so many square feet of surface exposed the wrong way up, unclad and unadorned by vegetation from year to year. Neither of these ways is geologically correct, nor are they suited to plant cultivation. By far the best class of rock is that roughly hewn and of rugged exterior, while thin slabs of rock should be given their proper place, *i.e.*, broken up for mixing with the main body of the soil or for forming walls or fences.

Having discovered the natural lay of the rock, any portion of the same should be inserted in the soil bank or mound, with the top surface of the stone slightly inclining to the bank of earth, the front base-line being just buried from sight. In this way the soil of the bank gathers to the upper surface of the stone, and, forming a slope,

affords the best possible position and opportunity for the successful cultivation of many alpine. At a totally different angle, pressing more deeply to the main body of soil, another piece of rock should occur, or it may be two, one above the other, the upper one always receding sufficiently to receive plants in the nearly horizontal fissures, and not projecting or precipitous, where no plant could exist. The reader who can take in the position of these two pieces of rock as above suggested may be said to possess the key to proceed, and by providing a surface as diverse as circumstances permit, avoiding the walled-up pattern, bring the thing to a successful issue.

Very thin slabs of rock, arranged 3 inches apart and buried nearly their full depth in the soil, to be filled with soil, broken stone and the like, not merely afford variety but are valuable for the smaller tufted alpine and where the rocky fissure forms the most desirable spot. Above all things remember that your rock garden is intended to be a home for the plants, and with some knowledge of the conditions of growth and the requirements of the subjects the operator should not go far astray. As a word of warning, the unassisted amateur should not be too ambitious, contenting himself for a while with a 3-foot-high mound, or even a rocky bed or prominence.

E. H. JENKINS.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

October 7 and 8.—National Chrysanthemum Society's Early Autumn Exhibition, Crystal Palace.

Flower show for our readers.

The announcement in our issue for the 19th ult., that the publishers intend to hold another flower show for readers of THE GARDEN next summer, has already created a considerable amount of interest, judging by the letters received. We hope to be able to definitely announce the date in an early issue, and the schedule will be carefully prepared to meet the wishes of readers as far as possible. Some useful suggestions have already been received and we hope other readers will furnish us with their ideas, all of which will receive careful consideration.

United Horticultural Benefit and Provident Society.—The twenty-second anniversary dinner of this society will be held at the Waldorf Hotel, Aldwych, W.C., on Thursday, the 15th inst., at 6.30 p.m. Dr. Robert Boxall of Abinger, Dorking, has kindly consented to preside on this occasion. It is earnestly hoped that all who possibly can do so will attend the dinner, and so make the function a successful and interesting one. The musical arrangements will be under the direction of Mr. Thomas Winter. Tickets (5s. each) to be obtained of the secretary, Mr. W. Collins, 9, Martindale Road, Balham, S.W.

The new species of Poplar.—Messrs. James Veitch and Sons, Limited, write: "We beg to thank you for the notice of our new Poplar in your issue of the 26th ult., on page 475. We would take the opportunity of pointing out that, through an error on the part of our printers, the name was given as *Populus alba lasiocarpa*, whereas it should have been *Populus lasiocarpa*, a true species and not a variety. Our plant has nothing to do with *Populus alba*, and is quite a distinct species. It was correctly labelled before the floral committee, and received a first-class certificate as *Populus lasiocarpa*."

Resignation of Mr. H. Hemsley.—Mr. H. Hemsley of Crawley, Sussex, informs us that he has resigned his position with Messrs. Cheal and Sons, and that he has started business on his own account. Mr. Hemsley is an expert on herbaceous plants, and particularly rock and alpine gardening, and his book on the latter subject is, of course, a well-known work.

Southampton Royal Horticultural Society.—We are requested by the secretary of the Southampton Royal Horticultural Society to state that, owing to unexpected circumstances, the council are compelled to alter the date of the Chrysanthemum show from November 2 and 3 to October 28, 29 and 30.

Sutherlandia frutescens.—I was sorry to see, in visiting some of our London gardens this summer, that the *Sutherlandia* had not grown and bloomed so well as last year, when it was grown to such perfection in Finsbury Park. This plant has succeeded much better with me this year than last: I have timber in my stems three-quarters of an inch thick, and some plants have spread and shot out from the sides 2½ feet, producing a brilliant display of foliage and scarlet flowers. I attribute my success to saving my old seedling plants last year and taking cuttings in autumn and early spring from them, and not sowing seed. Another good wrinkle is to see that you pinch the plants moderately hard at the end of March and April; they then grow away into fine strong specimens. I have a bed mixed with *Abutilon vexillarium variegatum*, Mrs. Pollock *Geranium*, *Solanum Pyracantha*, *Anthericum variegata*, *Alyssum wulfenianum* with edging of *Alternanthera versicolor grandis*. The effect has been really beautiful and such a charming contrast to the usual bedding-out.—H. J. SELBORNE BOOME, *Holwell Hyde, Hatfield, Herts.*

Memorial to Mr. George Nicholson.—A committee is being formed with a view to inaugurating a fitting memorial to the late Mr. George Nicholson, F.L.S., V.M.H., ex-curator of the Royal Gardens, Kew, and editor of the well-known "Dictionary of Gardening." Anyone who is interested in the proposition may obtain further particulars from Mr. Wilfred Mark Webb, the hon. secretary of the Selborne Society, at 20, Hanover Square, London, W.

PRIZES FOR READERS. OCTOBER.

THE WINTER PRUNING OF HARDY FRUIT TREES AND BUSHES.

A First Prize of FOUR GUINEAS,

A Second Prize of TWO GUINEAS,

A Third Prize of ONE GUINEA,

And a Fourth Prize of HALF-A-GUINEA

are offered for the best essays on the above subject.

The object of this competition is to draw special attention to the important winter work of pruning in the hardy fruit garden. Special attention should be given to the reasons for pruning and the benefits to be derived therefrom, as well as to the actual work. Various types of trees and bushes should be dealt with, and root-pruning may or may not be included at the discretion of the essayist.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The essays must reach this office not later than Wednesday, September 30. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Essays on fruit bottling.—I see in THE GARDEN for the 19th ult. one of your correspondents writes to say that she wonders that in the last competition on fruit bottling no one mentioned Fowler and Lee's patent process. I wrote a description of their method of preserving fruit; but, seeing in their book that no one was allowed to describe it or have it printed, I wrote to ask their permission. They said that they did not wish anyone to describe their method, as it was a patent process only used by them, so, of course, I did not send in the paper for the competition.

—ETHEL KEEP.

—Will Mrs. Arnold kindly inform me where to obtain the clamp bottles she recommends in her essay on fruit bottling, and the price of same? It would also be interesting to know the price of the bottles recommended by D. Hill, and whether either of them could be obtained in or near London. The only bottles obtainable in Richmond appear to be those with screw stoppers, which seem to answer very well, the fruit being treated as Mrs. Arnold recommends. Although rather late for this year, it would be useful to know where to obtain the best bottles in future. I think if an advertisement of such bottles had been in your valuable paper the same week as the prize essay it would have amply repaid the advertiser, the chief difficulty with myself and friends being suitable bottles.—J. H., *Richmond.*

—Kindly permit me to reply to your correspondents in THE GARDEN for September 19, page 455. I have no doubt whatever that the methods there advocated will answer; in fact, I know of an expert who considers 150° sufficient; but the conditions under which my article was written required the experience of the writer, and not manufacturers' instructions or expressed opinions of other people. In the opinion of your correspondents the fruit is boiled; this is not so, as it is impossible to do this in the time in a vessel heated by water and not actually covered by it. Anyone may test this by scalding milk in a double vessel. Pouring boiling water over the cold fruit sets the colour, and no after-process can spoil it. I have never found fruit to ferment by the use of sugar; in fact, it is used to counteract the effect of acidity set by the heating process. I have never had a burst bottle. Tomato purée is simply a culinary preparation and cannot be termed "bottled Tomatoes."—EMILY ARNOLD.

Tulips in demand.—I am told that nurserymen have a large number of orders for Darwin and May-flowering Tulips. Of the former, the following are in great demand: Clara Butt, rosy salmon; Edmée, salmon rose; Farncombe Sanders, dark salmon rose, tinged scarlet; Velvet King, purple; Pride of Haarlem, dark rose, shaded scarlet; Rev. H. Ewbank, heliotrope; King Harold, dark maroon; and Salmon King, salmon scarlet. Among the May bloomers, Picotee Yellow, yellow with faint crimson edging; Inglescombe Pink; Inglescombe Scarlet; Inglescombe Yellow; elegans alba, white with carmine edge; The Fawn, fawn, egg-shaped; and Bouton d'Or, a golden yellow, are being asked for on all sides. But early Tulips are also being sought after, especially varieties like Unique, white with soft yellow base; Sir Thos. Lipton, scarlet; La Remarquable, plum colour with lighter border; Rouge Luisante, deep rosy pink; King of the Yellows; and Pink Beauty. King of the Yellows is about the best early bedding Tulip of its colour.—W. P. W.

Use of Rowan berries.—I saw a question in THE GARDEN of the 5th ult. respecting Rowan tree berries. They can be utilised for jelly if picked from the stalks, put

into a saucepan and covered with cold water. Boil them down to a pulp, let the juice run through a jelly bag and weigh it, adding the same weight of castor sugar. Boil again and make it into jelly.—BARONIN GITA RANSONNET, Austria.

THE KITCHEN GARDEN.

SOME GOOD CABBAGES FOR SPRING.

THE Cabbage crop in the early spring is an important one, as when this is early the land that has provided the green vegetable crop is available for other crops, and a small, compact, sweet spring Cabbage is a delightful vegetable, so that the amateur's attention should be drawn to this point and the importance of autumn planting and of the best varieties. There are now some excellent early spring Cabbages, and the amateur who does not sow should obtain the plants from a good source.

One of the earliest is Sutton's April, and this is a model Cabbage of very compact growth and quite free from bolting. It is remarkably early, and is rightly named, for I have had it the first week in April after a severe winter. Another very reliable early Cabbage is Sutton's Flower of Spring. This is a little larger than April, but equally valuable where quantities are required. It forms a compact head of a most beautiful shape and is exceedingly delicate in flavour. A very fine spring Cabbage is Sutton's Favourite, a compact dwarf variety with remarkable short stem or leg and an ideal amateur's variety. Sown in August, I have cut this variety in the middle of April. I have not noted Ellam's Early Dwarf, as I consider any of the three named above far superior and more reliable as regards bolting. Veitch's Earliest of All is a splendid early dwarf variety which I have had in five months from date of sowing. Veitch's new Incomparable is a very fine type of early Cabbage and will become a standard variety. It is medium sized, does not bolt and is of fine quality. Carter's Early Spring is a very beautifully-flavoured early head and never fails, it being remarkable for its hardness, and it is well worth a trial for its compact growth and freedom from bolting. Carter's Early Garden has the same good qualities; it has a very distinct conical shape, is remarkably early and of a delicate flavour.

Autumn Planting.—It will be seen that there is no lack of good varieties to select from, and the amateur should be careful to get the plants from a good source, as he will then get a much better return. Of course, a great deal depends upon the planting; it is useless to plant in November or December and expect good heads in three months. I advise planting as early in the autumn as possible; for many years I planted my earliest on the land that had grown the spring-sown Onions, this being in good condition. It was not manured for the Cabbages, but deep drills were drawn in September and the plants put out when quite small in rows 2 feet apart and the compact sorts named 15 inches to 18 inches apart in the rows. In amateurs' gardens, if space is at all limited, these distances may be reduced a few inches, say 18 inches between the rows and 12 inches to 15 inches between the plants for the sorts named. Planting early in October will give excellent results, and the plants do well in good cultivated soil, but this must not be loose, as I find a firm root-run promotes a compact growth.

The plants are best when food is given early in the year when growth is active. It is an easy matter to give food in the way of guano, nitrates or liquid manure in the early spring, and the plants will then form hearts rapidly and the quality will be excellent. In poor land food should be given in the shape of manure dug deeply in the soil previous to planting.

G. WYTHES.

THE ROSE GARDEN.

STANDARD WICHURAIANAS.

VERY tall standards of this section are most pleasing in the Rose garden. We shall soon have to be on the quest for tall Briars from the hedgerows if they are to succeed. Early planting is a great point. Nor do these stocks do so well when the roots are cut too hard. They need more bottom to supply sufficient sap during winter and early spring, and we can well afford more care in pruning away the suckers during summer. When we can procure stems 6 feet to 9 feet long and induce them to break from near the top we have the groundwork of the finest form of growing some of the strongest drooping Roses. Plant the Briar stock nearly a foot deep and stake it at once. This is very important, as any sagging will destroy callus and young roots as they form. Frequent sprinkling overhead during a drying wind is also a great help. We must not lose sight of the fact that stems of this length have a great deal to support before new roots are formed, and many fatalities occur through the plant withering up. Lady Gay, Farquhar, Dorothy Perkins, White Dorothy, wichuraiana, Elise Robichon, Evangeline, Hiawatha, Minnehaha, Evergreen Gem, Pink Roamer and Gardenia are a dozen grand varieties for this purpose. It is an improvement when the young shoots are carefully trained out wider from the stem during the first year. RIDGEWOOD.

AN EXCELLENT CHECK FOR MILDEW ON ROSES.

LAST year, after a slight attack of mildew, I dressed the whole of my Rose garden with soot in December and again in March. This season the mildew appeared early in July rather badly. After the July and early August blooming was over, I thoroughly sprayed first with Mo-Effic, and two days later with a solution made with Jeyes' Cyllin Soft Soap. This process was repeated twice over every second day, and the effect was magical, the mildew being completely checked. Mo-Effic alone is good, but the Cyllin in Jeyes' soap after the Mo-Effic has really a marvellous effect. When rain came I gave a slight dressing of freshly-slaked lime and lightly hoed it in. It is beneficial in many ways, and thoroughly cleanses the surface of the soil. The Roses, rejoicing in their freedom, have thrown up plenty of new wood, the delightful coppery red and green shades of early spring. I have the promise of a splendid harvest of autumn blooms practically free from mildew, the rosarian's greatest enemy. Next season I shall apply this remedy soon after pruning, to prevent, if possible, the mildew appearing at all. E. E. F.

A FINE LONG-STEMMED ROSE.

FLORISTS and all who grow Roses under glass for cutting purposes know well the value of an erect-growing variety, one that will produce its blossom at the end of a 2-feet to 3-feet growth. Such an one is Souvenir de Maria de Zayas, the beautiful Rose raised by Messrs. Soupert et Notting and distributed by them in 1906. It is of a rather unique colour, a vivid carmine crise, with deeper shading, and perfect Camellia-like flowers of great beauty and most beautiful buds. I can confidently recommend the Rose under notice for the purpose named, and such a variety cannot fail to become useful in the garden, and, if I mistake not, in the exhibition box also. The great value of the Hybrid Teas as pot plants is this tendency to grow erectly, thus proving far ahead of the Tea-scented group, so much so that they must eventually displace them, seeing we are obtaining nearly all the colours found in the true Teas. Pharisaer is another grand sort for long stems, and no one can but admire its deep, shapely buds and huge petalled blossoms. Other excellent

varieties for a like purpose are Antoine Rivoire, Kaiserin Augusta Victoria, Clara Watson, Liberty, Richmond, Dean Hole, Lady Battersea, Mme. Abel Chatenay and possibly some of the more recent novelties. To obtain these extra long stems it is necessary to prune hard back to two or three eyes, and it pays to do this even if it means having a few more plants. P.

BACKHOUSE'S NURSERIES AT YORK.

DURING the past summer we had the pleasure of visiting the very extensive and comprehensive nurseries of Messrs. James Backhouse and Sons, Limited, at York, a visit that brought home to us very vividly the up-to-dateness of this old-established horticultural firm. No matter what phase of gardening a visitor may be interested in, he will find his pet subject dealt with here, no less than 100 acres being devoted to horticulture at the York nurseries, in addition to 70 acres elsewhere.

A prominent feature of the York nurseries is a broad, straight walk over a quarter of a mile long, this being flanked on either side by well-stocked herbaceous borders, which the firm regard as a sort of natural shop window, because herein are displayed the plants which are actually for sale. We noticed an abundance of choice and beautiful subjects, among them being some remarkably fine Eremuri hybrids, large quantities of extra good Delphiniums, Hemerocallis and a huge plant of Geranium ibericum.

Messrs. Backhouse have long been famous for landscape gardening in all its branches, rock gardening in particular, and the beautiful rock garden in these nurseries is worth travelling a long distance to see. Any description, however vivid, cannot do this magnificent garden justice. It has been made now some fifty years, and some extent of the size of the garden may be gained if we mention that nearly 5,000 tons of rock were employed in its formation. It takes the form of a sunk garden, rock-besprinkled banks forming nooks and crannies springing up on every side, while in the centre and forming islands of various forms huge masses of skillfully-prepared rockwork tower upwards, the whole garden presenting a most natural and enchanting spectacle. In this delectable spot the choicest of rock and water plants find a most congenial home, and it is under such ideal conditions as these that one is made fully aware of the many beauties of these most valuable plants. *Ramondia pyrenaica* abounded everywhere, and it appeared to be equally as comfortable on the top of rocky mounds as in the fissures in the face of cliffs. A combination of choice hardy Ferns and Iceland Poppies draping a huge mass of rock, their graceful outlines and delicate colours being reflected in the water beneath, formed a picture that will long live in our memory.

Glass houses, naturally, are a prominent feature at such extensive and comprehensive nurseries as these, and as an illustration of how prompt the firm is to adapt itself to any new branch of horticulture we may mention that a large area is now devoted to the now popular winter-flowering Carnations. In addition to a most healthy and extensive stock of all the best standard varieties, we noticed some very promising seedlings, a lovely deep yellow variety called Queen of Spain particularly appealing to us. It is a true perpetual-flowering variety, the flowers are of good size and excellent depth and the calyx and stem are all that can be desired. Such a Carnation is sure to be much sought after as soon as plants are obtainable. Malmaisons, too, are extensively cultivated, and the stock is a most healthy and vigorous one. Roses in pots abounded everywhere, huge tracts being devoted to these, as also to Roses grown in the open beds, all the plants being in the best of health.

The show and regal Pelargoniums are not, perhaps, grown so extensively now as they were a decade or two ago, but Messrs. Backhouse evidently have a large demand for them judging by the quantity grown. We noticed some very beautiful varieties among them, and probably in the selection of the best only for propagation, as is done here, lies the secret of maintaining these plants in popular favour.

In the houses devoted to Palms may be seen every kind of plant which can be included under this category. Choice and popular kinds are all grown, and specimens from a few inches to many feet high can be supplied, the houses presenting quite a tropical appearance.

The indoor fernery is a beautiful and almost unique feature here. Huge Tree Ferns stand like sentinels at intervals as though guarding their smaller *confères* beneath, while draping the boulders on all sides are choice filmy Ferns in the pink of condition. The collection of these filmy Ferns is one of the best and most extensive we have ever seen, and there is very little in this direction that the firm cannot supply. The underground fernery is reached by a series of roughly-hewn steps, which lead one under an arch of rockwork draped with Ferns and Selaginellas of all sorts. Inside this arch the visitor finds himself in a sort of fairy grotto. Huge rocks forming all sorts of mysterious yet beautiful nooks and caves are piled on every side, while here and there water trickles through chinks, to lose itself in a clear reflecting pool beneath. Draping these rocks on all sides are Filmy Ferns, Selaginellas

and many other subjects suited for such a position. One magnificent specimen of *Todea superba* which crowned a jutting rock possessed fronds measuring over 4 feet in length, and all the plants were on the same luxurious and magnificent scale.

Coming once more to the open we found conifers of all descriptions, fruit trees, bulbous plants, annuals, forest trees and, indeed, every branch of gardening being catered for, and we might, if space permitted, easily fill a whole issue of THE GARDEN with the many good things noted. It must suffice, however, for the present if we repeat that there is no branch of gardening overlooked by this firm, and that gardens of all descriptions have been laid out by them in all parts of the United Kingdom.

THE GREENHOUSE.

WINTER IN THE GREENHOUSE.

WITH a little care and attention to details the greenhouse may be made as interesting during winter as it is in the summer. Perhaps it will not contain the unlimited supplies of flowers which summer enables it to produce, but those which it does yield will, by reason of having no outdoor competition to contend with, appear doubly beautiful.

Cleanliness.—This is the first point to be rigidly enforced—in fact, it may almost be said to be the golden rule of greenhouse winter management—as plants are then grown under entirely unnatural conditions, and need all the assistance possible to enable them to make a creditable struggle against these.

Before the inmates are brought into the house, that house should be fittingly prepared for their reception by having its walls, woodwork and glass well washed and scrubbed with warm soapy water, forcibly syringing this into every nook and cranny. The walls should also have a good coating of hot lime-wash with a handful of size or cement added to each pailful to make it adhere; be careful that none of this wash gets on the painted woodwork, as it is injurious to paint. In cleaning the glass of the roof or sides, an old zinc label, flattened wire or something similar should be used to remove the accumulations of dirt and slime from between the laps. Do not forget to thoroughly clean beneath the stages of the house and sprinkle soot and lime upon all

ground surfaces where pot plants may ultimately rest.

After bestowing so much labour upon the house it would, of course, be folly in the extreme to bring into it dirty pots or plants; therefore scrub all the former and well syringe the latter before housing them. This will give the cultivator a clean bill of health to start with, and, if a short time is allowed each week afterwards to clean up a little the plants and house, both will be a credit to the owner. This weekly clean up cannot be too strongly insisted on, as much good results from it. Saturday is generally set apart for it in good gardening establishments; there the "young men in the houses" pick off all dead leaves and flowers, sweep down all staving and generally rearrange the plants so that the houses present a fresh appearance, which is good for the plants and for the employers. After the young men have finished, the boys are turned on with tubs of water, syringes, brushes and brooms, and all glass doors are washed and scrubbed, door-handles polished, and the floors of the houses thoroughly scrubbed. The result is a very smart appearance of the houses on Sunday.

Disposition of the Plants.—This is naturally a harder problem for the person who possesses but one house to solve than for he who has several of varying temperatures. Much, however, can be done by a little management in the way of accommodating plants according to their requirement. A few easily-affixed hanging shelves will be found of great assistance where the number of plants to be housed is in excess of the normal house-room. They may be used for wintering boxes of Geraniums, Mesembryanthemums, Lobelias and similar plants which will not need much attention in the way of watering, or for Cacti and succulents generally. Where hanging shelves are not available, all the plants mentioned, with others such as Crinum, Hippeastrums, Vallotas, Fuchsias, Heliotropes, Plumbagoes, Allamandas, Abutilons and many more which will suggest themselves, should be placed on the top shelf of the stage or in any position where watering is difficult.

Achimenes, Begonias, Crinum, Fuchsias, Caladiums, Cannas, Gloxinias, Hippeastrums, Vallotas, Gesneras, and even Maidenhair Ferns and Streptocarpuses (these two should be stood upright) may all be stored beneath the stages for the winter. Care should be taken that the pots are not placed too near the hot-water pipes, and that none of them are subject to a constant drip from the occupants of the stage above them. The pots may be arranged in tiers to any desired height, and a monthly examination will be all they require until growth commences in the spring.

The warmer end of the house, *i.e.*, the one farthest from the door and nearest to the stove-hole, should be given over, as far as possible, to the more tender plants, of which there are frequently a number, such as Coleuses, Eucharises, Dracaenas, winter-flowering Begonias, Saint-paulias, Cyclamen, double Primulas, Bouvardias, winter-blooming Zonal Geraniums and India-rubber Plants.

The end near the door may be used for accommodating the bulk of Arums, Deutzias, Salvias, Eupatoriums, Solanums, mollis Azaleas, forcing bulbs and Spireas, which may be transferred to the warm end as they are required to furnish flowers or decorative plants. In the intermediate portion of the house the general sorts of greenhouse plants may be placed, such as Primulas, Cinerarias, Pelargoniums, Clivias, Calceolarias, Hydrangeas, Campanulas, Genistas, Indian Azaleas, Rhododendrons, Camellias, Anthericums and so forth, which, while liking plenty of fresh air, will not tolerate cold draughts. If a number of the plants are stood upon inverted flower-pots a free circulation of air will be ensured and flatness avoided.

J. K. E.

(To be continued.)



IN THE ROCK GARDEN IN MESSRS. BACKHOUSE'S YORK NURSERIES.

TREES AND SHRUBS.

BERBERIS (MAHONIA) ARGUTA.

TO the somewhat numerous Berberis family this new species makes a distinct and welcome addition, being named from a plant flowering at Glasnevin Botanic Gardens. This plant has been in the gardens for a number of years, but the source from which it was obtained has been lost, though it is thought to be a South African species. It is growing in a pot and is a straggling specimen about 5 feet high. As there is only one specimen, its hardiness has not been tested, but through the summer it is plunged outside, and it is wintered in a practically cold house.

Though the habit of this specimen is rather ungainly, yet when in flower during June and July the shoots are most graceful. The flowers are a pleasing shade of light yellow, and are borne on pendulous racemes 1 foot and sometimes more in length, and in some cases the pedicels bear two or three flowers. The main stem is very slender but of a wiry nature, and bears about thirty bracteate flowers, each measuring three-quarters of an inch in diameter. The seed is not produced very freely, even when the flowers are artificially pollinised.

The internodes of the stem are short, so that the leaves seem crowded at the top of the stems. The pinnate leaves have a yellow main rib bearing five to six pairs of leaflets. These leaflets are very stiff in texture, light green in colour, lanceolate in shape, ending in a sharp point. They also have a distinct cartilaginous margin, a few bearing spines but usually without, while the reticulate venation is strongly marked and prominent. The photograph shows a terminal shoot of this specimen and the free manner in which the flowers are produced. C. F. BALL.

HARDY HEATHS IN FLOWER.

THE Heath family does not consist of a very great number of species, yet it is remarkable for the length of time over which its flowering season extends, for, to begin with the new year, we have that delightful hybrid *Erica mediterranea hybrida*, which often blooms throughout December and continues bright and effective till the end of March or nearly so. Following closely comes the dwarf-habited *Erica carnea* or herbacea and its white variety. The next to expand their blossoms are the large-growing *Erica lusitanica* or codonodes and the still larger *Erica arborea*, with that valuable hybrid between the two, viz., *Erica Veitchii*. By March, too, the several forms of *Erica mediterranea* put in an appearance and last for a long time. This staying power of the Heath family is remarkable, for most of them remain in good condition for three months or thereabouts from the opening of their earliest blossoms. The middle of September by no means sees the finish of the different hardy Heaths, for in looking over an extensive collection at that date the following were all bright and attractive: St. Dabeoc's Heath (*Dabecea polifolia*), represented by the typical plant with rosy purple blossoms, as well as the white and parti-coloured varieties; from spring till autumn this Heath continues to flower. The Gray Heath (*Erica cinerea*), whose varieties are numerous, had been in flower since midsummer, yet it, and particularly the rich-coloured forms, made a goodly show. Much the same, too, might be said of *Erica Tetralix* and *E. ciliaris*, with its variety *maweanae*.

Of those commonly regarded as autumn-flowering sorts, the first place must be assigned to the common Ling or Heather, whose varieties are very numerous. A popular idea is that the white Heather is extremely rare, but as a matter of fact it is not so; indeed, there are several distinct forms with white blossoms. In addition to these, many other varieties are remarkable for

the colour of their flowers, and some for their habit, while the yellow-foliaged sorts are, when in good condition, very striking. The Cornish Heath (*Erica vagans*) is a vigorous plant, and forms a dense mass of shoots thickly clothed with foliage. These shoots are now terminated by dense racemes of pinkish purple blossoms. It is less bright than some of the others, but for all this it is one of the best. A near ally of this last is *Erica multiflora*; but it is altogether a smaller subject than *Erica vagans*. The flowers, too, are decidedly paler. From this it may be gathered that the display furnished by the various hardy Heaths, even in the middle of September, is by no means a meagre one, and I may perhaps be pardoned for again advising the free use of these plants for filling large beds, forming clumps in front of the shrub border or for edgings to beds filled with taller shrubs, as in such positions the plants are seen at their best, and are capable of affording considerable pleasure to their owners. H. P.



THE NEW BERBERIS, B. ARGUTA, IN THE GLASNEVIN BOTANIC GARDENS.

THE FLOWER GARDEN.

GOOD AUTUMN FLOWERS.

FORTUNATELY there are a host of beautiful plants which keep the garden gay during the autumn months, and these are continually being added to by the introduction of new things, or the reintroduction of old ones. At the time of writing, however, I question if there are many things which can surpass the plants mentioned below.

First, there is *Tritoma Uvaria* (aloides) and its numerous varieties, the best of which, I think, is *T. nobilis*. This is a fine, bold, free-flowering plant, much superior to the type. The flower-head is much longer and stouter and of finer colour. A most noble plant, worthy of a select place in the garden. Then there is *T. lachesis*, a beautiful yellow or orange yellow type, with long, well-formed flowers. Perhaps this is not quite so hardy as the above-mentioned forms, but is worthy of any little trouble in the way of protection during the winter. *T. Pfitzeri* is another bold variety of splendid colour and free-flowering propensities. *T. Macowani* is a delightful plant; a pigmy alongside the others, but of a beautiful orange scarlet colour, the spikes being produced in the greatest profusion. These four are really splendid autumn plants for the garden.

Just now *Montbretia crocosmaeflora* is a most beautiful as well as a most useful plant, and associates most pleasantly with the above plants. If this is divided every second year and the bulbs graded, the soil thoroughly prepared by deep cultivation, and some well-decayed manure and wood ashes incorporated with the soil as the digging proceeds, good results may be confidently looked for. If the work is done during the winter, care should be taken to place some covering on the surface as a protection against frost, but I have had quite the best results when the planting has been deferred until March, the soil having been prepared during the winter. A mistake frequently observed is leaving the plants in one place too long, when they become crowded and the soil exhausted, thus causing the plants to become too weak to flower satisfactorily. George Davison is a splendid yellow variety, just now in full flower, and makes a fine companion to *Tritoma Macowani*.

Amaryllis Belladonna is a plant which should be grown wherever there is a suitable place, viz., at the foot of a south wall. I do not suppose it would succeed as an ordinary border plant, at least, in the Midlands, not on account of its doubtful hardiness, but because the bulbs require a thorough baking after they have finished their growth. If there is a plant in cultivation which requires deep and good cultivation superior to another, this is the one. The soil should be from 2 feet to 3 feet in depth and of the best. Good sound turfy loam, a little good peat, a liberal amount of dried cow manure and coarse sand is what this splendid plant likes, and it will well repay the trouble of making a good border, and liberal waterings when in active

growth, which is spring and early summer. Sometimes this plant will cast its flower-buds prematurely, a sign, I think, of poverty, which is sometimes brought about through the bulbs being overcrowded. The only remedy is, of course, lifting, grading and replanting. There are several forms of this plant, the Kew variety being, I think, the best. We have two forms growing here, one vastly superior to the other and somewhat earlier.

THOMAS ARNOLD.

The Gardens, Cirencester House.

THE ITALIAN WINDFLOWER.

(ANEMONE APENNINA.)

THIS is the wild Anemone of Italy, taking the same place in that country as our own Wood Anemone in our copses and brakes. It is a pretty little plant with downy leaves divided somewhat like those of *A. nemorosa*, and of a tender green tint. The flowers are sky blue in colour on the inside and paler on the outside,

It is, however, only when naturalised in the grass that its charms are displayed to the best advantage. The sight of a colony of these flowers clothing a grassy knoll at the foot of a giant Oak or Elm with a veil of blue is a delightful picture on a morning in early spring, the colour-effect being enhanced if Lent Lilies in quantity are associated with them, the pale yellow of the Narcissi forming, with the azure of the Anemones, the varied greens of the grass and of their respective foliage, a colour-harmony exquisite in its gradation of tints. Such glimpses as these, obtainable in almost every garden at a trifling cost, are far more satisfying to the eye than are the infinitely more expensive and less natural breadths of gaudy bedding plants to which, later in the season, the greater part of many a garden will be devoted.

A. apennina has been naturalised in numbers of English woods, so much so that by some it is considered to be a native plant. Where it is happy and the soil is to its liking, it spreads

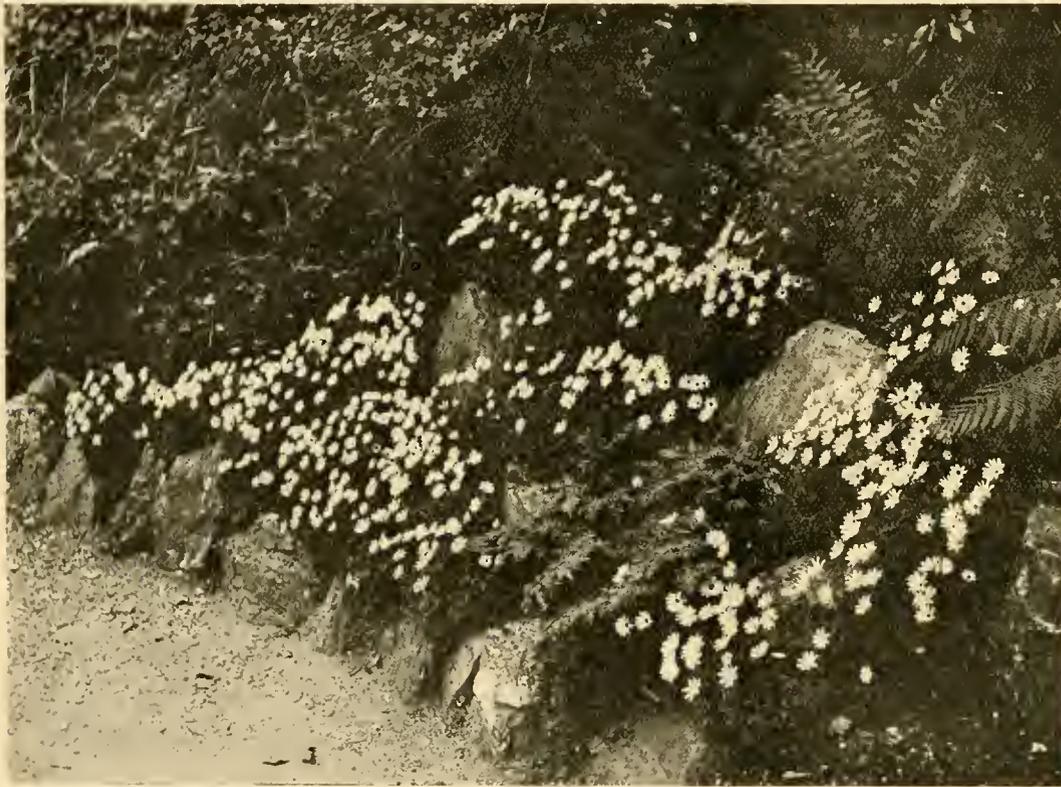
the surfaces shimmering, and they are remarkable for their great size. The group has proved a puzzling one to the cultivator, and there is yet much to learn and something to unlearn before we can treat them properly. Various methods of culture have been tried and found deficient of the one essential element that assures free, vigorous growth that will flower freely. After considerable experience it was considered that lime was the one thing needful; but, so far as my experience goes, they grow infinitely worse in soils dressed with materials containing lime than they did in the natural loam. That lime may prove beneficial for soils mainly of vegetable composition is undoubted; but I think the natural loams provide sufficient lime for any garden plant, and that the *Oncocyclus* Irises find the lack of heat and, to them, the fitful climate of the British Isles far too much for their well-being.

We must consider the great difference between the climate of Syria, partially surrounded by a rainless desert and with a mean annual temperature of 65° to 70° Fahr., whose winds are hot and dry and whose plants are accustomed to prolonged periods of drought, and the climate of England, with a mean temperature approximating 50° Fahr., and so variable that the occurrence of ten consecutive fine days is heralded as phenomenal, while our summers are normally dry and our winters wet, the reverse prevailing in most dry regions. The one principal point in the cultivation of dry-region plants is that of drainage, choosing for them a wind-swept slope or the base of south walls. Soils for such plants should be pure loam with sand and coarse rubble added, and if they have permanent roots they invariably penetrate deeply. To help these roots the soil should be deeply dug and rough stony rubble or small boulders buried to form well-drained surfaces, upon which the roots can run as deeply as they will. Plants so treated rest quietly, and, the feeding extremities of their roots being low down, they are not likely to respond to every slight rainfall and thus produce young growths before winter, while a further provision against excess of moisture would be the free use of small conifers on rockery slopes, whose roots would absorb superfluous moisture and the soil around which would form excellent sites for the planting of these Irises; furthermore, the sinking of holes with a crowbar around plantations of valuable Irises of this group will do much to help drain them dry and induce them to rest. Indeed, we should be able to grow many beautiful dry-region plants if we borrowed a leaf from Nature's note-book and used one type of plant to produce the conditions necessary for the well-being of another, making it a kind of protective host plant. It is much to be regretted that so many fine plants have been lost because we have not known how to treat them, and the stocks of such beautiful plants as *I. Gatesii* and *I. Lortetii* are not only very low in cultivation, but they are now becoming scarce in their native habitats. All the Irises of this group require protection from rainfall from July onwards.

I. atrofusca is a singular-looking plant from Palestine, with rounded, glossy, black-brown standards and black hairy falls, each 2 inches across; the whole flower spans 4 inches. Its growth is but moderately vigorous and it requires to be thoroughly dried off after flowering.

(To be continued.)

M.



THE ITALIAN WINDFLOWER, ANEMONE APENNINA, GROWING ON A BANK.

with from ten to twelve star-like divisions, which are narrowly elongated and surround a cluster of whitish stamens. It flowers in April and flourishes in open woods and shrubberies. It succeeds best in a porous soil rich in humus. There is a white variety and one with dark violet flowers, as well as a double form, but none are as beautiful as the clear blue type.

It is now to be obtained very cheaply in quantity, so that there is no reason why it should not be planted extensively in autumn. To dot it about in small clumps in the beds is a poor way of growing it, but by planting it in the grass we see it under conditions similar to those it luxuriates in on the Italian sward, and it creates a delightful effect. There are spots in most gardens where this Anemone could be planted and left to take care of itself, when, after a few years, lovely pictures, growing in beauty season by season, would result. In thin plantations, where the sun can reach it, charming pictures may be obtained.

rapidly, both by seed and by underground stolons, and soon occupies a large expanse of ground. In the rock garden it seems as much at home as when nestling at the foot of some monarch of the glade, and, blooming among the curtains of the white Arabis, it is one of the prettiest features of the spring. In the accompanying illustration it is shown growing at the foot of a steep bank at the end of a wood, where a few corms were planted many years ago. These have increased to such an extent that they now occupy the whole ground space at their disposal, and are a pretty sight when in flower in the spring.

S. W. FITZHERBERT.

NOTES ON IRISES.

ONCOCYCLUS IRISES.

THIS is a race of remarkable Irises, mainly from the Holy Land and countries round about, whose flowers are wonderfully coloured, either sombre-tinted or in blends of grey, rose, white and blue,

SWEET PEA NOTES.

SWEET PEAS IN TUBS AND POTS.

ALTHOUGH these lovely flowers are grown so extensively in clumps and rows in the garden, in flower-beds and borders, we do not hear of them being grown as decorative plants in pots or tubs so much as they deserve. There are many advantages in growing them in this way. They can be got to flower earlier, as they can be placed, when in tubs or pots, in a warm, sunny, sheltered position until they begin to show their buds, when they can be moved to other places where it would not be convenient to have them planted in the open ground.

We grew plants in about twenty tubs in this way this year, the seed being sown last October, five seeds in a 6-inch pot, and the latter placed on a bed of ashes in a quite cool frame. The seedlings were allowed all the air possible after germination, the lights being kept tilted at one end unless the weather was very severe, and twiggy sticks were used for support when the plants were about 6 inches high. They do not require much water through the winter months, being best kept just on the dry side.

In early March we stand them outside on a bed of ashes in a sheltered place, putting up a temporary framework of a few strips of wood over them, on which are placed sheets of corrugated iron during heavy rains or sharp frosts; they are left in this place until April, when they are planted in the tubs. Suitable tubs for this purpose can be procured from any fruiterer for a few pence each. The ones we use are those in which the Canadian Apples are sent over, these being cut down to 18 inches or 20 inches and painted outside a nice shade of green.

A suitable soil for filling them is a good stiff loam, a little well-rotted cow manure, leaf-soil, mortar rubble and a sprinkling of bone-meal and superphosphate of lime, the tubs being filled to within 3 inches of the top, placing about 3 inches of well-rotted manure in the bottom first. This filling should be done a fortnight before planting, and the soil left during that time to sweeten and settle down. Our Peas treated in this way were showing buds on May 14.

For support nothing beats ordinary Hazel Pea-sticks about 5 feet or 6 feet high, selecting the thinnest for this purpose to avoid their being unsightly. When the buds begin to show colour liquid manure can be given freely, using it rather weak at first and increasing its strength gradually. Cow manure and soot water are splendid for them. If artificial manures are used, care should be taken not to use too much those containing nitrates, as this, of course, causes a rank, sappy growth at the expense of good blooms. Clay's Fertilizer and Canary Guano are good, also the special Sweet Pea manures.

Some of the best varieties for this form of culture are: Helen Lewis, Etta Dyke, Lady Grisel Hamilton, Mrs. Hardeastle Sykes, King Edward VII., Sybil Eckford, Mrs. Collier, Evelyn Hemus, George Herbert, Audrey Crier, Dainty, Princess Victoria, Miss Willmott,

Sutton's Queen, Dorothy Eckford, Mrs. Alfred Watkins and Lord Nelson.

EDWIN G. JACKMAN.

Aberdare, South Wales.

CROSS-FERTILISATION OF SWEET PEAS.

I WOULD like to say a few more words on this subject, even at the risk of being thought obstinate. After the very able letter from "D," published in THE GARDEN for August 22, one might think that I would give up all idea of outside fertilisation; but there are several things which do not seem clear to me still. I

as W. Booth seems to suggest. In "Mendel and His Principles of Heredity," by R. C. Punnett, is this significant passage concerning Sweet Peas: "In a row of normal plants we come across some healthy ones bearing very few or no seeds. The anthers in the blooms of these are sterile, with a very little poor pollen. Any seeds which do form owe their origin to insects, for the stigma or female part is quite normal and readily sets when crossed. These seeds give normal flowers, and in the next generation flowers with sterile anthers reappear in the proportion of 1-3. This case of sterile Sweet

Pea is interesting from its bearing on the problem of sex; we have here a unisexual flower — a female — suddenly arisen from the normal hermaphrodite form by functional suppression of the male organs. It suggests that in cases of flowers where the sexes are separate this condition may suddenly have arisen from the hermaphrodite form."

From such an authority we must admit there is considerable food for thought in this. I believe that if we knew the life-history of every plant we would find that they were all hermaphrodite in their early stage before they were to a certain degree developed; and who knows but that that degree is developing in the Sweet Pea even now? Of those people who pooh-poo the idea of fertilisation by insects I would respectfully

ask: Why is the Sweet Pea strongly scented and highly coloured? It is generally accepted by botanists that the principal objects in the life of a plant are self-preservation and the reproduction and multiplication of its kind; that Nature will only tolerate self-fertilisation for a time; and that, where there is a choice between the two ways, cross-fertilisation is generally preferred. Now, if the scent and colour are not to attract insects for the purpose of crossing, of what use are they? They are certainly not there for the use of the insects without

getting something for it. Even before Darwin's time Andrew Knight, a noted botanist of his day, after experimenting on the edible Pea, which, be it noted, has neither the scent nor the colour of its relative, gave it as his opinion that self-fertilisation could not go on permanently. In conclusion, let me endorse all that "D." says about the desirability of some independent authority taking the

matter up and experimenting or testing in the way he suggests, which I think a very good one indeed.

Leeds.

J. F. BARWISE.

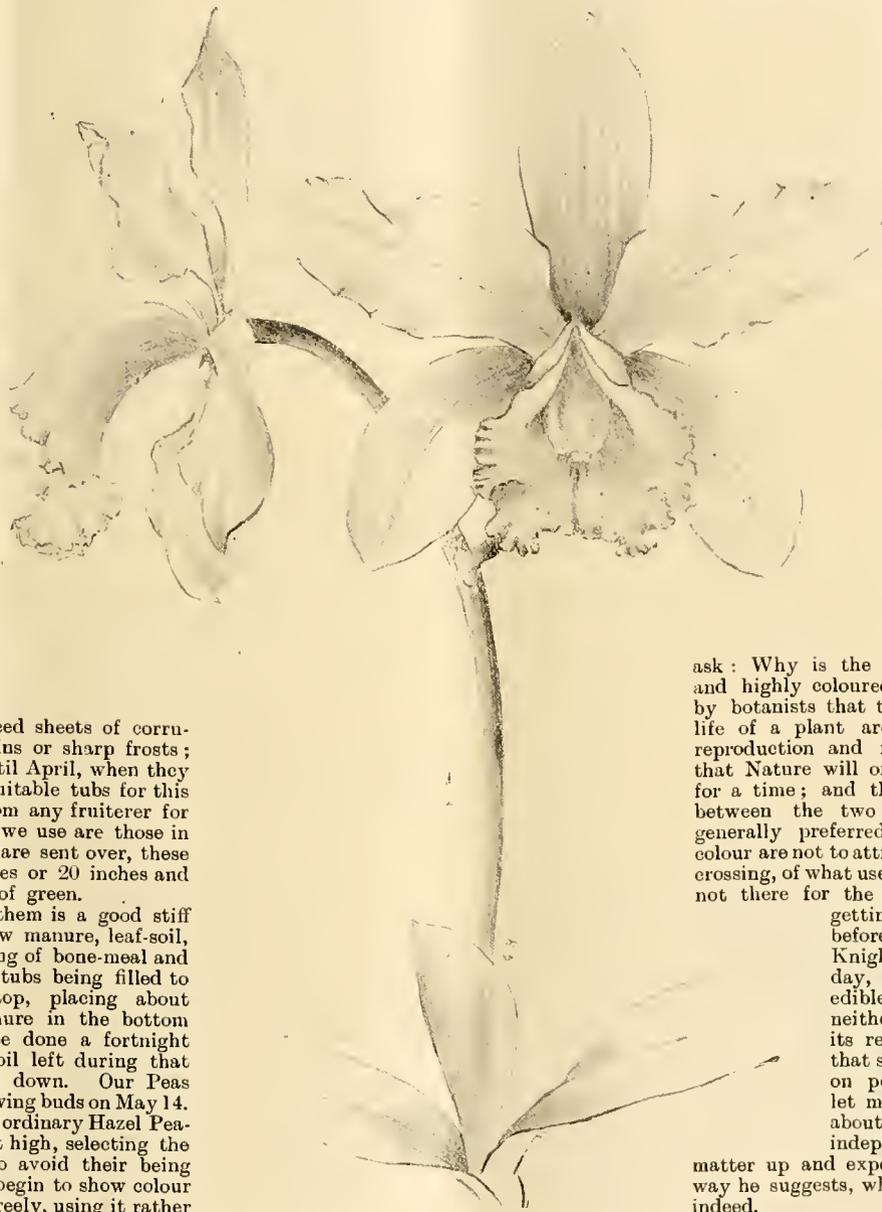
CATTLEYA HARRISONÆ ALBA STANLEY'S VARIETY.

(Reduced about one-sixth.)

cannot see why the introduction of the waved type should make such a wonderful change in the trueness or otherwise of their progeny if my suggestion is not the correct one. We have heard a lot lately of Mendel and his principles of heredity, and one might almost think that it was something newly discovered; but we may be sure that the late Henry Eckford was familiar with these principles before most of us were born, and I cannot admit that it clinches the argument,

CATTLEYA HARRISONÆ ALBA STANLEY'S VARIETY.

THIS beautiful Cattleya was fully described on page 475 of THE GARDEN for the 26th ult. The flowers are pure white, with the exception of a pale lemon-coloured zone on the lip. It was shown by Messrs. Stanley and Co., Southgate, London, N., before the Royal Horticultural Society on the 15th ult., when it received a first-class certificate. It is the best of its class that we have seen.



GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE FLOWER GARDEN.—Roses may be propagated by cuttings at the present time with the greatest success. I select fairly strong, well-ripened growths of the present season some 8 inches in length, and insert these in carefully-prepared sandy soil in a shady border in rows about 9 inches apart and a few inches asunder in the rows. Trim off the lower leaves of the cuttings with a sharp knife, cutting through the stem immediately below a joint, and insert them about 3 inches to 4 inches deep, pressing the soil firmly to the base of each one. Bulbs of the showy Tigridias should now be lifted. I tie them in bundles of a dozen or more bulbs in each, subsequently hanging them in a cool room or shed to dry off and ripen. The Montbretias succeed better when planted in the autumn, and for this reason should be dealt with forthwith. In heavy soils it is better to make up a bed of lighter soil. A mixture of light loam and leaf-mould, together with some well-rotted manure, makes an ideal compost. I take out soil at intervals in the border, filling in with the prepared material. The corms should be planted 3 inches deep and 3 inches apart, and if placed in fairly large colonies the effect in July and later is very pretty and attractive.

The Greenhouse and Conservatory.—From this time forth the cool greenhouse will benefit by a little artificial heat from the hot-water pipes. In potting up bulbs and other subjects be particularly careful always to use clean pots and crocks. Old pots should be soaked and washed quite clean, and new ones placed in a vessel of clean water to absorb moisture by these means. After a time they should be taken out and allowed to drain dry. Tender flowering and foliage plants that have been used for beds and borders outdoors should be removed to the

greenhouse or conservatory without delay. We may have a sharp frost at any time in the near future. That full advantage may be obtained from light and sun during the late autumn and winter months I am removing all permanent shadings from the glass.

The Vegetable Garden.—I am gathering the last of my outdoor Tomatoes, as frost may be expected at any time now. Small weeds are giving trouble in beds that were recently sown with Onions, Turnips and other things. These are being hoed over on fine days, in this way keeping the weeds under control. My best lot of Celery is just having its final bleaching operation carried out. I am continuing to plant hardy Lettuce on well-drained soil in sunny aspects. These plants will stand the winter well. Beetroot should be lifted as soon as convenient and stored in sand in a cool, dry cellar or other quarters. The roots have finished growth by this time, and if they are lifted with care and not bruised they should maintain supplies for a long time.

The Cold Frames.—Violets should have been planted in frames some time since; but if this has not yet been done no time should be lost in dealing with them. Old Cucumber or Melon beds in frames should be cleared and made sweet and clean, subsequently levelling down the soil preparatory to planting. Should there be the slightest suspicion of red spider, a burning of sulphur in the frames will speedily eradicate the pest. Do not plant thickly; 1 foot between the plants usually answers very well. Ventilate freely when the weather is favourable, and protect from frost when this is indicated by the atmospheric conditions at the time. Such plants as the fragrant Lilliums that have ceased flowering may be stood in the cold frame forthwith.

Hardy Fruit.—The work of the beginner at the present period is to mark out quarters it is intended to plant with fruit trees during the next month or two. A good conception of what is required is an important factor when the actual planting has to be done. My Raspberries are now receiving attention. Old canes are being cut out and the new ones reduced to about four of the strongest. It is a mistake to retain more than four canes to each stool. Subsequent to this operation give the quarters a heavy mulching with some good lasting manure. Suckers from Plum trees are frequently left undisturbed too long. I make a rule to remove them in good time before they attain much size. Beginners are often puzzled to know why vigorous-growing fruit trees bear no fruit. The real reason is they need to be root-pruned, and this should be done forthwith. When gathering fruit see that it is perfectly dry and the baskets in which it is placed are lined with some soft material. No definite time can be given for gathering and storing fruit, this being entirely dependent on seasonable influences. D. B. C.

HOW TO RETAIN OR SECURE BUDS OF CHRYSANTHEMUMS.

This is a matter that has given much concern to novices in the cultivation of the Chrysanthemum. Loose terms are often used when speaking of retaining or securing buds of the "Autumn Queen," and many growers have done what is quite wrong in consequence. The individual who coined the oft-repeated phrase, "taking the bud," has much to answer for, the misleading character of the term having induced beginners to do just the opposite to what was intended. There are many who have literally



2.—A "CROWN" BUD PROGRESSING SATISFACTORILY FIVE OR SIX WEEKS AFTER BEING RETAINED.

"taken" the buds from their plants by removing every one, in consequence of which no further buds have evolved and no flowers have developed on them. To "take" the buds is really to retain them, i.e., they are left on the plants. This is simple enough, but to appreciate the true significance of the term it is necessary to call attention to the different kinds of buds that each Chrysanthemum develops in the course of a season's growth. The natural functions of a Chrysanthemum plant in regard to bud production are several and interesting, and may be described as follows: Each plant produces what is more generally known as a "break" bud. The "break" bud is usually developed in late spring or early summer, and has the effect of causing the plant to break into or evolve a number of fresh shoots, in this way ensuring a more bushy plant. To the uninitiated this "break" bud would hardly be noticed.

In due course, especially in the case of plants for exhibition purposes, another bud is developed on each plant. This is known as a first "crown" bud. It is the "crown" buds that invariably worry the beginner, as he is usually at a loss to understand what is meant by the term and the character of the buds as they are evolved. As a matter of fact, the character of a "crown" bud is very similar to the "break" bud already described. By its development a "crown" bud causes the plant to break into fresh young, non-flowering growths immediately around it, and unless the "crown" bud be secured or retained (this latter is the better term to use), the bud soon becomes worthless for producing large and handsome blooms. Fig. 1 serves the purpose of explaining the character and development of the "crown" bud. It is not easy to photograph or illustrate in its early history, as this kind of bud is usually hidden among the young shoots that are evolved at the same time. In the illustration alluded to the first "crown" bud can be seen at the apex of the growth, with a narrow attenuated leaf or



1.—THE DEVELOPMENT OF A FIRST "CROWN" BUD. NOTE THE BUD ENFOLDED IN A LEAF AND THE YOUNG SHOOTS IN THE AXILS OF THE LEAVES.

bract enfolding it. Fresh young shoots will be observed around it, each one developed in the axil of a leaf. What the beginner must do in such circumstances is determined by what his requirements two or three months hence may be. As a rule first "crown" buds are developed in May and June, and sometimes earlier. First "crown" buds, as a rule, produce the largest flowers, although the latter are sometime devoid of the best and richest colours. Frequently these early buds, if retained, would produce their flowers too early for the grower's purposes, so that there are two or three considerations to be observed when determining whether or not to retain the first "crown" buds when they are evolved. This question of suitability of time of flowering is a matter that each grower has to determine for himself, so that we cannot advise him. Assuming he wishes to retain the first "crown" bud, the grower must proceed to remove the small shoots that surround it. In their earliest stages the fresh young growths are very brittle and break out from the axils of the leaves with the greatest ease. When the last growth is removed the bud is then retained, and stands at the apex of the older shoot quite alone. In consequence of this treatment the whole of the sap of this branch is diverted to the bud, and this latter begins to swell and expand, thus giving promise of producing a large flower in the flowering season. In Fig. 2 a first "crown" bud, which we here remark differs very considerably in the numerous varieties in cultivation, is shown progressing very satisfactorily; in fact, within a week or two it will be necessary to place such plants under glass as a protection against frost.

The beginner may now ask, What is a second "crown" bud? Second "crown" buds are almost identical with first "crown" buds, the only difference being their naturally later period



4.—HOW TO ENSURE A GRACEFUL SPRAY OF BLOOMS. NOTE THAT SUPERFLUOUS BUDS HAVE BEEN REMOVED.

of development and the beauty of their form as the flowers are developed. How are second "crown" buds developed? may be asked. When second "crown" buds are to be retained it is necessary to remove the first "crown" bud as soon as it is evolved and grow on one or more of the fresh young shoots that surround it. These will in due course—generally from a month to



3.—A SPRAY OR CLUSTER OF "TERMINAL" BUDS.

six weeks—evolve their second "crown" buds, and these should be treated in exactly the same fashion as was recommended for first "crown" buds when they were retained.

Now, for decorative uses many growers prefer what are known to the initiated as "terminal" buds. These "terminal" buds are always evolved, sooner or later, on plants that have been grown on unhindered. They mark the termination of the plant's growth, and hence are described as "terminal" buds. "Terminal" buds are developed in clusters, and if all the buds are allowed to develop very beautiful sprays of blossoms are ultimately evolved. It is inconvenient in some instances to permit this, however. Sometimes the clusters of "terminal" buds are too densely crowded, so that it is impossible for the flowers to do themselves justice. Fig. 3 is a fair illustration of a spray or cluster of "terminal" buds. This is less crowded than many, but, were all these buds allowed to develop the beautiful flowers might unduly crowd one another. Readers should note that there are no young shoots surrounding these buds, as were observed in Fig. 1. More interesting and prettier sprays of blossoms may be brought into effect by reducing the number of "terminal" buds in each cluster. Fig. 4 shows how this may be done. The number of buds has been reduced to three, and these are left as nearly equi-distant as possible. By these means each individual bloom will have room to develop without overlapping its neighbour, and a charming spray of blossoms be developed in consequence.

There are readers, doubtless, who prefer to have one large bloom on each shoot that produces the "terminal" buds. Should this be so, all the smaller buds must be removed and the largest and best-shaped one in the cluster retained for this purpose. Fig. 5 shows a "terminal" bud treated in this fashion.

PROTECTING DAHLIAS.

It is a pity that these plants do not withstand frost, as herbaceous plants are at this season becoming weaker in the production of flowers; indeed, the majority of them have quite ceased to blossom, and border Chrysanthemums with Michaelmas Daisies are the only kinds that can compete with the Dahlia, but, unlike the latter, they are not spoiled by early frosts. The single-

flowered, Pompon and Cactus Dahlias are very useful for cutting for the decoration of the dwelling-house as well as for other purposes, and when the plants are destroyed a serious shortage of flowers occurs in many gardens, so that extra precautions should be taken to prolong the supply. Early frosts are usually not so searching as those that prevail later, so that a top covering will do much towards the preservation of the blooms. Where the plants are grown close together in blocks or in rows in the borders, it is a very easy matter to protect them by driving in a few posts strong enough to bear some cross-laths and mats or scrim. The latter need only be put on at night, and can be removed every morning about nine o'clock. Where the plants are grown singly a few of the best should be selected for protection. Three stakes and a single mat will be sufficient for each plant. Earwigs are very troublesome and soon mar the beauty of the flowers. They may be trapped in flower-pots partially filled with moss or hay, between two pieces of dry boards and in Broad Bean stalks. If Vaporite or Alphonol are used according to the directions supplied with them, earwigs will be beaten.

AVON.

A CATCH CABBAGE CROP.

THE amateur's garden is often without green vegetables early in the spring, and the deficiency is felt for a considerable period after; much of the garden may, in consequence, be unproductive. This to a great extent may be avoided by having a good supply of plants for later cropping. Young, small, sweet Cabbages are at least nine months out of the twelve profitable and palatable. By the term young, small, sweet Cabbages I mean those free from coarseness and having compact hearts. These are the sorts I advise the amateur to sow during September and early October, as if sown thinly on a well-drained exposed border the plants will winter well and give a succession of planting material from February to May. Thin sowing is, however, a most essential detail, because plants which are crowded in the seed-bed winter badly and are weak and unprofitable. Veitch's Earliest, Sutton's Favourite and Carter's Early Spring are all good varieties for this sowing.

G. W. B.



5.—THE LARGEST AND BEST SHAPED BUD OF THE "TERMINAL" CLUSTER RETAINED TO FORM A LARGE FLOWER.

THE TOWN GARDEN.

BULBS IN GRASS.—It is unfortunate that comparatively few town gardens afford much scope for the cultivation of bulbs in grass such as one sees in our public parks and gardens, for there is no system that is equal to it in charm. Wherever it is possible to have even a few Crocuses, that will be better than nothing at all, but it is only when accommodation can be provided for Daffodils, Tulips, Snowdrops, Dog's-tooth Violets and others that the full delight of the culture is ensured.

It is imperative that the utmost care shall be taken in the manner of planting, for if the bulbs are put in formal rows the effect will be the reverse of natural and attractive. The easiest method of placing the bulbs for planting is to take up a stand in some convenient spot and thence throw handfuls of bulbs in all directions, and wherever these stop after their travels let them be planted. There can then be no suspicion of systematic setting, and the picture when the plants are in bloom will be far more delightful as a consequence. If the bulbs all fall singly, planting should be done with the aid of one of Barr's excellent planters, as these readily cut through the turf, lift out this with the soil beneath and permit the bulb to be placed at any desired depth; as soon as it is in position the soil and turf are replaced and made as firm as the surrounding grass. It is, however, highly probable that some of the bulbs will run together in clusters, in which case a piece of turf of sufficient area should be lifted, the soil beneath taken out, the subsoil loosened and enriched with a little manure if necessary, some of the good top soil put back, the bulbs set in position and then the soil and turf replaced again, taking care to see that it is made quite firm.

One of the principal disadvantages of the cultivation of bulbs in grass is that one cannot cut the grass until the foliage of the bulbs is dead, for the simple reason that if this is done the bulbs will steadily get weaker and weaker and in the end fail to develop flowers at all. One would not, therefore, put bulbs in the more conspicuous portions of the lawn, but choose corners where the little inevitable untidiness would not prove too much of an eyesore to the ultra-fastidious visitor.

BULBS IN WINDOW-BOXES.—To finish a house the amateur gardener must have window-boxes, and, having them, must furnish them so that they will be attractive at practically all seasons of the year. It is, of course, obvious that he cannot have them a blaze of floral beauty during the winter months, but he can then have one or two small conifers, which will relieve the flatness and monotony, and in the meantime the bulbs that have been put in for the spring display will be coming along splendidly. An excellent system on which to work, if only one box is at command, is to fill it with really good soil in the spring for the summer plants, and when these are over to remove them and place the conifers and the bulbs in the same soil, or merely add a little fresh in which to place the roots. For the majority of boxes I think that nothing equals a light blue Hyacinth, such, for example, as Grand Maitre, with Sir Watkin Narcissi; but it is easy for anyone to choose selections of one, two or more kinds or varieties to his own taste. The bulbs should be set as low down as the depth of the box will permit, and it is advantageous to surface over with a thin layer of Cocoanut fibre refuse. It is much better, where it can be made convenient, to have two sets of boxes for each window, as one can then be brought on in the garden while the other is in beauty, and fresh soil suitable for the plants grown can be put in when required. The winter course is then to fill the summer box with handsome little shrubs, place the bulbs in the reserve box, and put it into position when the plants are well advanced for flowering.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

ALITTLE more fire-heat must now be supplied when the weather is dull and the nights cold, or plants may suffer from damping. This can be avoided by judicious watering, airing and firing—three great points in successful plant-growing in winter. All plants of a tender character should now be brought under cover.

Cyclamen should now be placed in pits that are heated and carefully watered. Allow plenty of room between the pots so that there is a free circulation of air. Primulas may be placed in dryer quarters; these do very well on shelves in greenhouses or in low pits, and fancy Pelargoniums should be stood in a similar position. Zonals which are to give flowers all the winter should be brought inside and placed in a light structure near the glass and where the heat can be when necessary kept up to 55°.

Chrysanthemums.—Continue to house these, but be careful not to overcrowd or mildew will put in an appearance, and watering should be done early in the day to avoid water standing about at night.

FRUIT HOUSES.

Melons.—Ripen off these as soon as possible, as they will not be much in request now the weather is cooler.

Peaches and Nectarines.—Keep these trees well supplied with water and syringe daily till the foliage begins to drop. In the early house, where the leaves are ripe they may be brushed off and the house used to store more plants. Heat, however, must not be used.

THE HARDY FRUIT GARDEN.

Many varieties of Apples and Pears will now be ripe and should be most carefully gathered. The choicer varieties grown on walls and bushes should be gone over several times, as in most cases they will not all be ready at the same time. Pears require very careful handling, or they become bruised quickly. They should be lifted gently in a horizontal position, and, if ripe, they will part readily from the spur, when they should be placed on some soft wood wool and conveyed to the fruit-room; the above remarks apply with equal force to Apples. Later varieties ought to be left on the trees for some time yet. Early-fruited varieties may now be lifted or root-pruned, as may be necessary.

KITCHEN GARDEN.

Cucumbers.—These should be top-dressed little and often and be kept in a growing medium of about 70°. Do not let the plants bear too heavily at the start, as it is useless to grow more fruits than are wanted, and the plants will bear longer if gently cropped. The second batch of plants should now be ready to fill the places of the old ones, as it is from these plants we expect the winter supply.

Potatoes, if not all lifted, should be taken up at once and stored as recommended in a former calendar. If any disease is prevalent, burn all the affected haulm.

Carbiflowers sown last month must now be pricked out, some being put into cool frames and others on a warm border under a wall. Cauliflowers are much hardier than many people suppose, and if brought up hardy are much more useful and produce better results.

Mushroom Beds.—Collect material for making up these beds. Good fresh droppings from corn-fed horses are the best for the purpose.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

COELOGYNE CRISTATA.—This is one of the most useful and easily-managed Orchids we have, and with very little experience any lover of Orchids may with ordinary care succeed with it. As this beautiful species naturally flowers early in the year, it is advisable to have the means of maintaining a genial temperature of 55° to 60° at that period, in order to enable the blossoms to expand freely; but during the greater part of the year it thrives under perfectly cool treatment, and an ordinary greenhouse suits it well.

Cyclamen.—Full exposure at night, with the accompanying dew, is now making these grow apace, and every means should be taken to still further encourage their growth. A light top-dressing should now be given. Clay's Fertilizer and Thompson's Manure applied in equal proportions and mixed with sifted soil suits them well. Very little shading, if any, will be required from this time onwards, but abundance of air will at all times be needed.

HARDY FRUIT.

Planting Raspberries.—It is far better to plant in October, if this is possible, than to leave such important work until spring, for the plants will become rooted before the winter and start away vigorously in the spring. Rows of Raspberry canes should not be less than 6 feet apart, and the plants in the rows require a distance of 18 inches between them. The most satisfactory method of training the plants is to have two wires stretched between poles, the lower one about 18 inches or 2 feet and the upper one 3 feet or 4 feet away from the ground.

FRUIT UNDER GLASS.

Late Vines.—The most important work with late Vines will be preserving the fruit. To get bunches of the best quality all through the winter it will be necessary to give some warmth to raise the night temperature and dry up excessive moisture. A very little fire-heat will arrest decay. It often happens that vineries are used to shelter Chrysanthemums and other plants, and with continued supplies of moisture to the latter the Grapes are injured. In such cases I advise cutting the crop and bottling it.

KITCHEN GARDEN.

Spinach for Late Spring.—Where Spinach sown in the ordinary way—that is, in July or August—has proved a failure, I advise sowing now. Though there is no produce during the winter, there will be a grand supply in March and later, when vegetables are scarce. Spinach sown late does not get killed by frost. Sow thinly and do not thin till early spring, when the plants may be cut out for use as soon as large enough to handle.

Endive and Lettuce.—Plant out the last batch of Endive, also some more Lettuce. A good batch of Paris Market Lettuce planted out now in a cool house or roomy pit will afford some delicious and useful hearts about Christmas.

FLOWER GARDEN.

Violets.—These are often, through press of work, left out in the border later in the autumn than they should be, and consequently do not get established in their new quarters early enough. This makes all the difference to the flowers during the winter. As a rule, particularly in Midland and Northern districts, the end of September, or, at the latest, the first week in October, is late enough for placing the plants in frames.

Outdoor Chrysanthemums.—See that the plants are properly supported with neat stakes and ties, but avoid bundling them up too closely or tightly.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

THE LATE MR. GEORGE NICHOLSON.

AS briefly noted in *THE GARDEN* last week, the death of Mr. George Nicholson, ex-curator of the Royal Gardens, Kew, occurred on Sunday, the 20th ult. By his death horticulture and botany have lost an ardent disciple, while a large number of people in many walks of life have lost a devoted friend. In one position or another Mr. Nicholson was connected with Kew for a period of twenty-eight years, during which time he endeared himself to all with whom he came in contact. He was the son of a Yorkshire nurseryman, and commenced his horticultural career in his father's nursery at Ripon, subsequently moving to Messrs. Fisher and Holmes' at Sheffield, Messrs. Low and Co.'s, Clapton, and La Muette, Paris. He entered Kew in 1873, at the age of twenty-six, as clerk to the curator, the late Mr. John Smith, and succeeded to the curatorship in 1886, a position he was forced to relinquish in July, 1901, on account of serious heart trouble.

As a boy Mr. Nicholson is recorded as being "a brilliant student," and this trait in his character was more fully developed in after life. As a horticulturist and botanist he combined the two phases as few people can, and was excellent in both; nor were these the only subjects of which he was master, for he had an exceptionally wide knowledge on a great variety of subjects.

He had the reputation of being one of the leading British botanists in the country, and at one time he possessed a very complete collection of dried British plants. His knowledge of cultivated plants was also phenomenal. His special forte was hardy plants, and it was difficult to take him a specimen that he could not name at once or suggest its affinity, while in many instances he could quote references off-hand. The result of his great knowledge was presented to horticulturists at large in the encyclopedia of plants published in 1888, which has acquired world-wide fame under the title of "Nicholson's Dictionary of Gardening." This work he edited, and it is without doubt one of the most valuable books the student of horticulture can possess. In addition to this, he prepared numerous articles and monographs on trees and shrubs, two of the most important being monographs of the genera *Acer* and *Quercus*.

In 1893 Mr. Nicholson served as a judge for the horticultural section of the Chicago Exposition, and he spent several months visiting the leading gardens in the United States. Notes of his journey may be found in the *Kew Bulletin* for February, 1894. In recognition of his scientific work Mr. Nicholson was made an Associate of the Linnean Society in 1886, and he became a Fellow a few years later. In 1894 he was awarded a Veitchian medal, and he was one of the first to be awarded the Victoria Medal of Honour by the Royal Horticultural Society. In 1895 Vol. XLVIII. of *THE GARDEN* was dedicated to him, while in 1901 he was the distinguished Kewite selected to occupy the post of honour in the *Journal of the Kew Guild*. Although such an ardent worker Mr. Nicholson found time for recreation, and until the breakdown of his health he was an expert swimmer and mountaineer, while he was also a good tennis player.

After his retirement in 1901 he intended to revise "London's Encyclopædia of Trees and Shrubs" or prepare another work on similar lines, but was forced to abandon the idea through the extension of his malady. During the convalescent periods of his seven years' retirement he took in hand the compilation of a list of the flora and fauna of the Royal Gardens, Kew, his attention during the last two or three years being given almost entirely to butterflies and moths, and he was a familiar figure sauntering about with net and poison-bottle. For the last six months he had been a confirmed invalid,

and had been rarely free from pain. Until a fortnight before his death, however, he was able to be taken into the gardens in a bath-chair, where he keenly appreciated the sight of the trees and flowers he had known and loved so long.

A funeral service was held on Wednesday, the 23rd ult., at Christ Church, Richmond, after which the body was removed to the Woking Crematorium. The service was attended by the Director and most of his old colleagues at Kew, while numerous friends were present. As a tribute to his memory and work the Director and staff at Kew sent a wreath composed of coloured foliage of Oak and Maple, intermixed with sprays of Michaelmas Daisies.

The sympathy of all friends is with Mr. Nicholson's son and with his brother and sisters,



A RECENT PORTRAIT OF THE LATE MR. GEORGE NICHOLSON.

and especially with his sister who had been his devoted companion since the sad death of his wife, which occurred within a few years of their marriage.

THE EDITOR'S TABLE.

SWEET PEAS FROM WRENHAM.

Mr. G. Aitkens, Erddig Park, Wrexham, sent on the 14th ult. a very fine lot of Sweet Peas, many of them possessing stout stems 15 inches to 18 inches long. The blooms, too, were quite as large as those seen in July and the fragrance was most welcome. He writes: "I am sending for your table a few flowers of Sweet Peas gathered on September 14 off plants that were sown in January, and maybe you will gather from them how well these great favourites compensate us for the trouble bestowed upon them. I believe, should we get anything like good weather, with a few days of sunshine, there would be as fine flowers as any we have cut this year."

AUTUMN FLOWERS FROM DUNS.

Dr. McWatt of Morelands, Duns, N.B., sends us a splendid collection of autumn flowers, which we specially welcome now that the gardens are beginning to look shabby. Among them we notice some very good hybrid Delphiniums,

which Dr. McWatt has raised from seed sown in February of this year. These include dark blue and white forms. *Perovskia atriplicifolia* is a Himalayan plant that we do not often see, and of which Dr. McWatt sends a fine spike, the blue flowers being particularly pleasing, and reminding one very much of a *Spiræa*. Among the Heaths sent we notice the white *St. Dabene's* (*Daboecia polifolia alba*) and the red, white and pink flowering forms of *Calluna vulgaris*, and also the golden-foliaged one, all of which are very handsome at this season. The other flowers included *Erigerons* of several species, such as *speciosus*, *glaucus* and *mucronatus*, and also the pretty little *Lobelia angulata*, which, with its small white tinged blue flowers, is a fine plant for carpet beds or for edges.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.*

FLOWER GARDEN.

Information about bedding

Fuchsias (*Miss D.*).—It is now too late to strike cuttings of Fuchsias taken from the open ground, but with a little care the old plants may be kept safely through the winter, and these will flower more freely out of doors next season than the young ones would. The best time to lift them is towards the end of September. Any very long shoots may be shortened back for the convenience of handling, but they should not be pruned more than is necessary for this purpose. The lifting must be carefully done, and the plants be at once potted, using pots only sufficiently large to take the roots comfortably. After potting, the plants should be stood out of doors and given a thorough watering through a rosed water-pot, sufficient, in fact, to settle the soil in its place. Then, after being allowed to drain, they may be taken into the conservatory, where they should pass the winter safely. At that season an occasional watering, say, once a month, will be sufficient for them. As your conservatory is unheated, the better plan during severe weather will be to stand your Fuchsias on the floor, as far away from the glass as possible, and cover them with sheets of paper. This will keep out several degrees of frost. For the convenience of covering they may be stood closely together. On no account water them during frosty weather. This treatment is preferable to keeping them quite dry in a dark place. In spring, before growth recommences, the shoots may be shortened back sufficiently for the plants to form shapely specimens, but they should not be hard pruned.

Violet runners, Tulips and Wallflowers

(*E. M. L. B.*).—The runners you desire to plant in September would be no use whatever for flowering during the ensuing winter, but would make extra large plants for planting in open beds next April and for flowering during the winter following. It would be far better, if winter bloom is the aim, to plant the fine examples of Princess of Wales in the frame in the month named, and divest them at that time of all superfluous runners. Treat the latter as cuttings in a cold frame, and plant them in well-prepared soil in April, 1909. These unflowered runners may be put in boxes or pricked out under a hand-light. The best white-flowered plant we know for the Tulip-bed is the double white *Arabis*, which, flowering a little later than the single form, is

usually just in flower with September-planted Tulips, and, if the latter be of a scarlet or red tone, the effect will be excellent. The Arabis should be pricked out freely over the surface as soon as the Tulips are planted. The Alyssum, we fear, will not flower early enough even if autumn-sown. Provided the Wallflower seedlings have room for development, they will be all right till required for their permanent positions. If the plants are becoming drawn, remove the points of the shoots. Dwarfness, however, is more dependent upon the variety than any subsequent treatment, while thin sowing of the seeds or early transplanting of the seedlings will materially assist in keeping them true to their type in this respect.

ROSE GARDEN.

Tea Roses for autumn planting (*Robert L.*)—You cannot do better than ask for the plants on the seedling or cutting Briar. Own-root plants would be best, but they are not easily obtained, and when they are they would be pot-grown and only fit to plant out in the late spring. As a rule, Tea Roses on the Briar give every satisfaction, especially if the soil is prepared for them. There should be at least 2 feet 6 inches depth of good soil, in which some well-decayed manure and half-inch bones are incorporated. If the soil is light, add cow manure liberally; if heavy, add some gritty material. The beds in both cases should be raised a few inches higher than the ground level. A few varieties of Tea Roses that would grow well in a northern garden are Mme. Lambert, Marie van Houtte, Anna Olivier, Marie d'Orleans, Souvenir de Wm. Robinson, Hon. Edith Gifford, Mme. Hoste, Souvenir de S. A. Prince, Francisca Kruger, Dr. Grill, G. Nabonnand, Lady Roberts, Mme. Antoine Mari, Mme. Jean Dupuy, Maman Cochet, Peace, Souvenir d'un Ami and White Maman Cochet. A few good crimson Hybrid Perpetuals are Hugh Dickson, Commandant Felix Faure, Charles Lefebvre, Ulrich Brunner, Ella Gordon, Dr. Andry, Mme. Victor Verdier, Eugene Firist, Duke of Connaught and Earl of Pembroke.

Roses budded in June (*Amateur*).—As the budding was done so early it is quite natural for the buds to start into growth in such a season as we have had. We should allow them to grow, merely pinching off the flower-buds, but do not cut away any Briar growth. Such precocious buds are rarely any good the first season, and we always cut them back to one eye in February, when we remove the Briar growths. Seedling Briars are equally as easy to bud as Briar cuttings, the bud being inserted where the root-stem commences just beneath the branches. So long as the germ of the bud is intact the inside need not be perfectly level. If you cut the wood rather thinly it will come out easily without leaving any indentation near the bud.

Roses for exhibition (*E. W. C.*)—On the whole your list is a good one, but we think it would have been best if you had had fewer sorts and more plants of the very best. One hundred varieties constitute a very ambitious collection, unless you mean to go in for showing largely. Among the Hybrid Perpetuals, A. K. Williams, Horace Vernet and Xavier Olibo would need to be budded annually in order to obtain their blooms of exhibition standard; indeed, you would do well to plant some Briar cuttings and bud a few of several sorts, in order to prolong the season of flowering. Instead of Mlle. Eugenie Verdier we recommend Pride of Waltham, and instead of Jean Liabaud plant Victor Hugo, and Sultan of Zanzibar should be replaced by Commandant Felix Faure. You have got the Hybrid Teas and Teas very much mixed, and Boule de Neige belongs to neither class; this is a Hybrid Nuisette. Instead of Betty, Viscountess Folkestone, Boule de Neige, Francisca Kruger, Homere, President and Etoile de Lyon we recommend Melanie Soupert, Rene Wilmar Urban, Tennyson, Medea, Sylph, Celia and A. H. Gray.

Rose Baby Dorothy as a pot plant (*R. E. D.*)—This pretty little pot plant should be reported as soon as the blooms are over. As a rule, the growers produce them in very small pots compared to the size of the plants, and they would certainly need repotting now, so that the pots are well filled with new roots before the winter. As the plants are now in 5-inch and 6-inch pots, we advise repotting them in 7-inch and 8-inch pots. The best compost would be two parts thorough loam and one part well-rotted manure—some that has been laid by for twelve months. A few quarter-inch bones (about a 6-inch potful to a barrowload of compost) would add much to the quality of the bloom, although in the case of Baby Dorothy it might be preferable to keep them as small as possible. After repotting stand the plants in a bed of ashes in full sun, watering them when required, which will not be very often. A spraying over in the evening would be beneficial. If you have a heated greenhouse, you could bring the plants in about November or December and prune them, and in about three months' time they would be in flower in a moderate

temperature of about 50° to 55°; but if you have only a cold greenhouse, do not start them into growth before February. Pot Roses should be started very steadily at first, affording them a temperature of about 45° by night and an increase of about 5° by day; but when growth is active, then the temperature may be considerably increased. Some other interesting Roses suitable for pot culture of the same class as Baby Dorothy are Mrs. W. H. Cutbush, Mme. M. Levavasseur and Rosel Dach.

FRUIT GARDEN.

Melon leaf spot (*H. C. Wood*).—In the absence of specimens it is impossible to say definitely to what to attribute the spotting of the leaves, but from the symptoms described it seems probable that it is due to the fungus *Cercospora melonis*. This fungus has done a tremendous amount of damage, both to Melons and Cucumbers, in many parts of the country during recent years, and it appears to attack plants which have soft foliage much more readily than those that have been grown with more air and a slightly drier atmosphere. When once started the disease spreads rapidly and will cause the death of plants badly attacked in a very short time. The admission of as much air as is practicable during the day, and occasionally damping the paths with a solution of Calvert's No. 5 carbolic acid, one pint to five quarts of water, appear to be the best remedies, but great care must be exercised in the use of the carbolic acid, since if any fall on the foliage it will be killed, and too great a quantity in the air will do irreparable harm.

Seedling Oranges (*Orange Tree*).—As your seedling Orange plants grow so slowly, it would seem as if the soil they are in is rather poor. Being kept in a small room where probably there is none too much light and air does not induce strong growth. The plants need to be in a greenhouse or frame or under a hand light. Not that they will not do in a warm position out of doors for a time, but being under glass growth is assisted. Keep the plants quite clean from dust and insects. Very likely the adding to the soil in each pot, and just stirring it in, of half a teaspoonful of guano, to wash into the roots with the usual waterings, would materially help the plants. Do not overwater. Several years must elapse before they will produce fruit.

Growing Melons in a pit (*Salop*).—If you provide such bottom-heating power in your proposed Melon pit as would be furnished by two 4-inch hot-water pipes, how can you utilise that heat if you have filled the pit with manure? If that manure gave you some warmth at the first, it would be very temporary, and when once cold and covering up the hot-water pipes, how could the Melon roots benefit by the pipe warmth, which would be lost in the manure? Would it not be far wiser to have your bottom-heat pipes fixed 3 feet apart on a level in the pit, yet low enough down to enable stont wood-slabs to be laid across the pit 10 inches to 12 inches above the pipes? On those use pieces of turf turned upside down, and on the latter a few inches of good loam, but 6 inches deep in the centre. Too much soil, and especially rich soil, is bad for Melons, as it leads to too much leaf and canker. With your two 3-inch pipes for top-heat, the flow in front and the return at the back, you would have ample warmth to ripen Melons well.

MISCELLANEOUS

Situation in a garden (*C. E.*)—Unless you have been a few years in a garden and thus obtained some practical knowledge of gardening, we fear, being at the age of eighteen, that your chances of being taken on in a garden or nursery as an improver are rather poor. If, on the other hand, you have had such practical experience and desire to get into Messrs. Veitch and Sons' nursery, your best way would be to write a letter of application to that firm for leave to enter their nursery as an improver, and to get some gardener who deals with the firm for seeds or plants to back your application. We know nothing as to the wages paid by the firm or the chances of getting employed by them. No doubt they have scores of similar applications.

Various questions (*G. Grahame, Italy*).—We do not know any Sedum called London Pride, and imagine you are thinking of *Saxifraga umbrosa*, the common name of which is London Pride. The *Salvias* are frequently referred to, and young plants may be obtained from Messrs. Cannell, Swanley, Kent, or Messrs. James Veitch and Sons, Limited, Chelsea. The *Wistaria* would be quite suitable for the pergola pole, but it does not ascend so quickly as some other species. The *Lithospermum* will succeed quite well if planted in peat and loam in equal parts and not given too dry a position. For the other portion of the Rose bed we think the beautiful and fragrant white-flowered Kaiserin Augusta Victoria would do. If, however, you desire to have a variety to balance the vigour of Caroline Testout, you will find the cherry red Ulrich Brunner a good bedder. The first-named is very charming, of good size and considerable freedom.

Mrs. W. J. Grant is a very good Rose, and the new scarlet Richmond is also very beautiful.

Names of fruit.—*D. Faulkner*—1, Worcester Pearmain; 2, Duchesse Favorite.—*J. M. G., Frome*.—1, Colonel Vaughan; 2, Cox's Orange Pippin.—*J. D.*—Warner's King.—*W. Martineau*—1, Peasgood's Nonesuch; 2, Warner's King; 3, Irish Peach.—*J. N. Bell*.—1, Wiltshire Defiance; 2, Old Hawthornden; 3, Sandringham; 4, Brandy Apple; 5, Yellow Ingestre; 6, Cellini. The Plum was smashed to pulp.—*J. T. L.*—1, Crimson Queen; 2, Cox's Pomona; 3, Duchesse of Oldenburg; 4, Worcester Pearmain; 5, Mack's Codlin; 6, Queen.—*C. Tibbles*.—1, Cox's Orange Pippin; 3, Northern Greening; 4, Queen Caroline; 5, Ribston Pippin.

Names of plants.—*A. E. C.*—The name of the flower enclosed is *Lobelia Firefly*. It should be quite hardy with you, so that you can leave the plants in the beds till the spring; then, if necessary, lift, divide and replant them. If your garden is much exposed a mulching of partially-decayed leaves will help to make them safe in the winter.—*E. A. P.*—1, Clematis, too shrivelled to recognise; 2, *Licaria vulgaris*; 3, *Malva moschata*; 4, *Achillea Ptarmica* The Pearl; 5, *A. P. flore-pleno*; 6, *Eoconia cordata*; the *Spiraea* is *S. japonica* Anthony Waterer. All these were much bruised and could only be named with great difficulty.—*H. Rolson Hindmarsh*.—The shrub is the common Barberry (*Berberis vulgaris*); it is a native of this country.—*F. H. O. Pease*.—*Cypripedium barbatum*.—*Amateur*.—*Solidago lanceolata*.—*K. R. J.*—We believe the Rose to be one of the old *Noisettes* named grandiflora, but the blooms were much faded when they reached us and we are unable to name it with certainty.—*N. G. I.*—Roses; 1, Mme. Jules Gravereaux; 2, William Allen Richardson; 3, Duchesse d'Anerstædt; 4, Bouquet d'Or.—*N. Prunrose*.—1, *Selaginella uncinata*; 2, *Blechnum* species; 3, *Chlorophytum elatum variegatum*; 4, *Hamantus tigrinus*; 5, *Passiflora decaisneana*.—*E. R.*—*Verbena Aulostoma*.—*Chequer*.—1, *Pyrus torminalis* (Wild Service Tree); 2, *Crataegus punctata*.—*A. E. C. I.*—1, *Polygonum affine*; 2, *Crataegus plumaginoides*; 3, *Coronilla Emerns*; 4, *Leycesteria formosa*.

SOCIETIES.

NATIONAL CHRYSANTHEMUM SOCIETY.

The first executive committee meeting of this society for the present season was held on Monday evening, the 14th ult., at Carr's Restaurant, Strand, when Mr. T. Bevan presided. Upon the application of the Royal Agricultural and Horticultural Society of Guernsey to be admitted in affiliation, the same was granted. It was reported that in answer to an enquiry of the authorities of the Franco-British Exhibition, no Chrysanthemum show was intended to be held there in connexion with the series of temporary flower shows. The committee appointed to consider the question of holding the National Chrysanthemum Society's shows in the Horticultural Hall, Vincent Square, reported that they could not advise any change for the present. The secretary reported also that the show of market varieties would not be continued this season, and a communication on the subject of the balance in hand was decided to be addressed to the chairman of the market show committee. The annual dinner will be held, if convenient to the president, on November 26 at the Holborn Restaurant, and a small committee was nominated to carry out details. For the purpose of judging the various miscellaneous exhibits at the October, November and December shows, the following judges were appointed, viz.: Messrs. D. B. Crane, C. H. Curtis, E. F. Hawes and D. Ingamells. The election of the judges for the October show then followed, with the result that Messrs. W. Howe, W. Wells, Cull, Eric Such, Emberson and Gower were elected. The meeting closed with the election of several new members.

CROYDON AND DISTRICT HORTICULTURAL MUTUAL IMPROVEMENT SOCIETY.

RECENTLY, at their rooms, Sunflower Temperance Hotel, a large attendance of members put in an appearance for the usual fortnightly meeting. The lecturer for the evening was Mr. M. E. Mills, Coombe House Gardens, who has on several occasions delivered some very useful and interesting discourses relative to plant culture. His subject was "Flowering Annuals," and to illustrate some of the varieties under notice he had the aid of lantern slides. In undertaking such a huge subject as this, he said, unfortunately, there appeared no real classification of these flowers, for oftentimes what one sees described as annuals are biennials or perennials, and, misleading as this description is, it makes it difficult to compile a list. The cultivation required is rich soil, deeply dug and pulverised by winter frosts. Soil of a light nature is best. For the hardy kinds seed may be sown in the open from March to the end of May, and what he particularly emphasised was the advisability of sowing thinly and gradually thinning out the seedlings. They are mostly branching, and if left too thickly together weedy plants will be the result. Seeds should be only slightly covered, especially the small ones. Being such a large field, it was impossible to go into the special culture of each one. However, he very kindly promised to continue his remarks on some future occasion. Owing to lack of time, the discussion following was rather limited, but a few remarks from several present aided interest to the evening. A very hearty vote of thanks to Mr. Mills concluded an instructive evening.

THE GARDEN

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OCTOBER 10, 1908.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ROSE ENEMIES.

RED RUST, or orange fungus, reminds us of the many enemies of the Rose, and in this number, which is largely devoted to the flower, a few notes on the subject will be helpful. We have received from correspondents in various parts of the country leaves badly infested with the winter form of the red rust, and it is from the black spores that the rust appears next season. Foliage thus affected should be collected and burned; and we have noticed that plants on hot and very dry soils have suffered more severely than those under opposite conditions. If the plants are carefully gone over and the leaves burned as suggested, the rust, we think, will be kept in check another year; but a good syringing, when the leaves are just appearing, with sulphide of potassium will probably prove an entire cure. It has been suggested that such plants should be transferred some time this month to another part of the garden. Fortunately, the general experience is that the rust inflicts no permanent injury, although the rosarian can do very well without it. The frequent use of the hoe will assist in keeping down fungoid pests, if a deep soil is provided in the first place; also prune the shoots hard back next spring.

Grubs and Caterpillars.—These and several other pests are dealt with by Mr. E. Mawley in "Roses for English Gardens." It is there mentioned that the Rose maggot and several other equally destructive leaf-rolling grubs and caterpillars are generally the first pests to attack the Rose in the spring. They will be found curled up in the young foliage, and must be sought for every few days and crushed between the finger and thumb, or much damage will be done. This is not a pleasant occupation, but, unfortunately, there is no other remedy, except it be to pick off the affected leaves and afterwards burn them or throw them into a strong solution of salt and water.

The Frog-hopper, or Cuckoo-spit.—The next enemy to appear will be the frog-hopper, or cuckoo-spit, a little pale green or pale yellow, frog-like insect, which will be found hidden in the centre of a small patch of froth deposited either in the axils of the leaves or on the leaves themselves. This, again, must be hunted out and destroyed by means of the thumb and finger, or removed with a small brush and deposited in the salt and water solution before mentioned.

The Boring Grub.—Holes will be often noticed in the tops of the stems of standard Roses; these are made by this pith-boring grub. As a preventive the ends of standard Roses should be painted with "knotting" at planting time, and the same precaution should be adopted with

the standard stocks. If the holes have been already made, a piece of copper wire thrust sharply down them will destroy the grubs; a little putty is used to close the holes afterwards. The same grubs also occasionally pierce the shoots of Roses, and seem especially fond of those made by standard Briar stocks. In this case, as soon as observed, the hollow ends of the shoots should be squeezed until firm wood is met with and then cut off. In this way the boring-grub will be crushed and the affected part of the shoot removed.

The Rose Aphis, or Green Fly.—In some seasons these tiny creatures are very numerous and troublesome, and if not frequently destroyed increase very rapidly. Most exhibitors keep green fly under entirely by the skilful use of the thumb and finger. This only shows how easily such pests may be kept in check if attacked directly they make their appearance and never afterwards allowed to congregate in any great numbers. Occasional sharp syringing with a garden engine with clean water will be found in most cases sufficient. Should this, however, prove ineffectual, the following well-known remedy may be used instead: Take 2oz. of Quassia chips and boil them in a gallon of water, adding a table-spoonful of soft soap before the mixture becomes cold; or one of the many insecticides on the market may be tried, keeping strictly to the directions supplied with the bottle.

Thrips.—These tiny creatures often injure Rose blooms in hot and dry weather, especially those of the Teas, by giving the petals a bruised and brown appearance. Spraying or syringing with clean water is the best remedy to employ, even at the risk of spoiling some of the existing blooms.

Red Spider.—This is another dry-weather enemy, and so small as not to be detected with the unaided eye. It generally attacks the lower sides of the leaves, and if not kept in check causes them to fall from the plant prematurely. The same remedy as for thrips is advisable.

Mildew.—Of all the insect and fungoid enemies of the Rose, this is, as a rule, the most troublesome to deal with. It appears as a white mould on the foliage, and if not promptly dealt with will quickly spread from one plant to another over the whole collection. It occurs at all seasons, but principally in autumn, when, if not checked, it will prevent the plants from flowering so freely as they otherwise would. Flowers of sulphur is a sure preventive, but each attack must be dealt with on its first appearance and the application repeated until a cure is effected. A very simple way of applying the sulphur is by shaking it lightly over the affected plants by means of a fine muslin bag on the first calm evening after the

mildew is detected. Although only the upper surfaces of the leaves are dusted over, it will be found in practice that the action of the sun will vaporise the sulphur and cause the surrounding atmosphere to be impregnated with it. Syringing or spraying with the following liquid will also prove effectual, more especially if the under sides of the leaves can be wetted with it. To make this mixture, half an ounce of sulphide of potassium should be placed in a gallon of hot water, well stirring it until the sulphide is dissolved. When cold the liquid will be ready for use. Warm days, followed by cold nights, are the most frequent cause of this pest, also a close, muggy atmosphere.

PRIZES FOR READERS. OCTOBER.

THE WINTER PRUNING OF HARDY FRUIT TREES AND BUSHES.

A First Prize of FOUR GUINEAS,

A Second Prize of TWO GUINEAS,

A Third Prize of ONE GUINEA,

And a Fourth Prize of HALF-A-GUINEA

are offered for the best essays on the above subject.

The object of this competition is to draw special attention to the important winter work of pruning in the hardy fruit garden. Special attention should be given to the reasons for pruning and the benefits to be derived therefrom, as well as to the actual work. Various types of trees and bushes should be dealt with, and root-pruning may or may not be included at the discretion of the essayist.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The essays must reach this office not later than Saturday, October 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

October 13. — Royal Horticultural Society's Exhibition of Flowers, Plants, &c., 1—6 p.m. Lecture at three o'clock by Mr. Cecil H. Hooper, F.S.I., on the "Influence of Geology on Horticulture." Admission 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

October 15 and 16. — Royal Horticultural Society's Exhibition of British-grown Fruit, Vincent Square, Westminster, S.W.

A rare and excellent early Apple.

Mr. George Frankum sends us from Woolhampton, Berks, one of the most delicious Apples we have tasted. It is called Miller's Seedling, and a variety we cannot find mentioned in the fruit-books of to-day. It reminds one of Irish Peach; but it is larger, clear yellow, striped and flushed with a peculiarly pretty shade of rosy red, and the flesh is firm without being unpleasantly hard; the flavour is delicious, possessing the sweetness of Irish Peach with something like that of Cox's

Orange Pippin. It is strange such an Apple as this is not better known. Mr. Frankum writes: "It is a local-raised Apple by an old-established nurseryman at Speenhamland, close to Newbury; the raiser's grandson now has the nursery. It is not generally known, but it is highly appreciated in the neighbourhood and always realises a good price. Mr. Tom Clarke, a large grower for market at Blenbury in the north of Berks, goes so far as to say that only three sorts of Apples should be grown, namely, Blenheim Orange, Cox's Orange Pippin and Miller's Seedling."

Interesting gathering at Messrs. Cheal's.—Messrs. J. Cheal and Sons, Lowfield Nurseries, Crawley, entertained their employees, with their wives and families, recently, on the occasion of the marriage of Mr. and Mrs. J. Cheal's daughter (Miss H. M. Cheal) to Mr. E. Wright. About 250 persons were present, and all enjoyed themselves very much.

Royal Horticultural Society's examinations in horticulture.—On the invitation of the Government of the United Provinces of India, the "general examination" of this society in the Principles of Horticulture is to be modified so as to fulfil the local requirements, and a first examination will be held in April, 1909, at Saharanpur. This suggests that possibly other countries and districts may feel it desirable to enter candidates for a similarly modified examination, in which case the council would doubtless be prepared to organise it. The examiners are leading horticulturists in England, and for examinations abroad will be assisted by suitable experts acquainted with the special horticultural conditions of the various countries desiring to adopt the society's tests. Other details arranged will be communicated on application being made to the secretary, Royal Horticultural Society, Vincent Square, Westminster, London.

Wisley School of Horticulture.

The following is a copy of the report of H.M. Inspector on the Wisley School of Horticulture for the year 1907-8: "Provision is made for the training annually at this school of about thirty young men as scientific gardeners, and a diploma of the Royal Horticultural Society is awarded to the successful students at the end of the period of training. The course of instruction is designed to cover two years; but as yet only the first year course is in full operation. The course is extremely well planned, and is carried out by an efficient staff of instructors. The gardens of the Royal Horticultural Society are extensive and contain a very large variety of plants, both in the open and under glass. There is also a very well-fitted laboratory with good equipment for instruction in the sciences bearing on practical horticulture. The laboratory is under the charge of a well-qualified and skilled instructor, and the students receive a very thorough training in the scientific side of their craft. This instruction has, at present, to be made very fundamental and, in some respects, very elementary, as few of those admitted to the course of instruction have received a satisfactory training previously in the rudiments of science. When the second year course is in full operation it will be possible to do some fairly advanced work. Originality and thought on the part of the students are encouraged by weekly discussions in the evening, when selected students read papers which are criticised by the other students, and additional experience is gained by the students in acting on small committees in connexion with the arrangements for the society's shows in London. On the practical side, students appear to have a unique opportunity of acquiring a knowledge of the cultivation of all the plants that they are likely to meet with in the course of their employment, and those who qualify for the diploma should have no difficulty in securing remunerative posts. The Royal Horticultural Society is to be congratulated on the step it has taken to encourage the educational side of the craft."

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Sweet-scented Roses.—I wonder if our Editor could find space for an "election" of sweet Roses? It would, I think, be helpful to many GARDEN rosarians now the planting season is upon us. I know several people who intend planting beds of sweet-scented Roses this autumn, and a list of the most fragrant flowers in the Hybrid Perpetuals, Hybrid Teas, Bourbon and others would be welcome.—J. T. STRANGE, *Firlands, Sulhamstead, Berks.* [We thank our correspondent very much for his interesting note. Perhaps our Rose-loving readers will send in the names of the varieties which they consider possess one of the sweetest attributes of the flower—fragrance.—Ed.]

Tea Rose Isabella Gray.—Mr. Edward F. Kemp will find the Tea Rose Isabella Gray catalogued by Messrs. Kelway and Son, Langport.—M. E. B.

Galanthus Olgae.—Bulbs received under the above name, potted on September 12 and kept outside under a north wall, were in full bloom on September 22 and were exhibited at a local show on that date, where they created a good deal of interest. There is no foliage as yet; but I cannot see that the flowers differ at all from *G. nivalis*. I have a suspicion that these bulbs must have been retarded; but perhaps one of your readers may know something about this plant, which is described as a "new autumn-flowering species from Greece."—F. HERBERT CHAPMAN.

Tomato Frogmore Selected.

Perhaps it may be of interest to other readers of THE GARDEN if I state what I have proved to be one of the best Tomatoes for outside and pot culture. It is Frogmore Selected. I think it can be well described as the best for early forcing and outdoor cultivation. The fruits develop to a medium size, very uniform and almost round in shape, solid and unusually firm. They are of a bright red colour with flesh of exceptionally good depth; and I find it also only contains a very small seed space. This Tomato has done exceedingly well with me, and I think it should be much more widely grown. I can confidently recommend it as one of the best.—G. A. LUDGATE, *The Gardens, Heath Lodge, Maidenhead.*

Late Peas.—Carter's Michaelmas is quite the best late Pea we have this season, and it is rightly named, as on Michaelmas Day we could pick quantities of fine pods, and if frost holds off we shall continue to gather much longer. It is a Pea of vigorous constitution and does not develop mildew like a good many varieties. A good plan to adopt against an attack by this pest is to put a double handful of flowers of sulphur into a pail or pot of milk and syringe the plants with it early in the season, spraying it well under the foliage. Ne Plus Ultra, good Pea that it is, grown by its side collapsed some weeks before, though in some gardens it is difficult to surpass, and should always be grown where Peas are wanted as long as possible, as its flavour is of the best.—W. A. Cook, *Leonardslee Gardens, Horsham.*

Blue Hydrangeas.—The blue Hydrangea question is a difficult one to solve; for instance, I have had six plants for seven years, which have always been rose colour until this year, when they have been a deep blue. Now here is where the difficulty of ascertaining cause comes in. I obtained from a neighbouring gardener a few cuttings of a true blue under any cultivation, he having obtained it direct from a large nurseryman in London. The character of growth was very

thin and dark blue in colour, altogether different to the ordinary type of Hydrangea. I saw it in flower and was satisfied I had got a real blue one. Now the ones I had and those that were given me were potted up at the same time and in the same kind of soil. My old rose-coloured plants came blue, and the true blue as I obtained it came red. I should like to hear from any of your readers who are interested in the question the cause of it.—R. KIDD, *The Gardens, Heaton Grove, Bury, Lancashire.*

Layering Carnations.—Reading recent notes on layering Carnations in THE GARDEN, I will give our experience. We layer about 2,000 annually with good results. I find an inch tongue very satisfactory, half under the joint and half above, taking care the knife is well in the centre of the stalk when finishing the upright cut. We find defective tongues more liable to break off when moving than long tongues. I may mention I visited a well-known nursery recently and my attention was called to a man layering Carnations. After making the tongue he cut the lower piece off close to the joint in the tongue. I asked him the reason for this, and his reply was that they root better.—H. HUGHES, *Leicester.*

WHERE THE BRAMLEY'S SEEDLING APPLE COMES FROM.

MESSRS. MERRYWEATHER AND SONS' NURSERY, SOUTHWELL.

SOUTHWELL is famous for its glorious cathedral, old churches, quaint streets and the nurseries of Messrs. Merryweather and Sons, one of the oldest and most respected firms in the British Isles, and who first introduced the Bramley's Seedling Apple to the British public—one of the most toothsome varieties that ever tempted the palate of the fruit epicure. The writer paid his first visit to Messrs. Merryweather's last July, when Roses, hardy flowers and the acres of fruit trees were in summer beauty. There are several nurseries, and from one hilltop, if we remember rightly, where the magnificent orchard of Bramley's Seedling rivets one's attention, a beautiful view is seen of the cathedral. It was a misty day, but a picture of colour and beauty, with the walks of hardy flowers and acres of Roses as a fragrant foreground. We hope shortly to illustrate the Bramley's Seedling orchard to show the remarkable vigour of the trees, which are of historic interest to the horticulturist.

As these notes appear in our Rose Number we will confine them to this flower, and leave further remarks on the trees and shrubs and other features of the nursery for another occasion—before the autumn has quite flown. The collection of Roses is practically complete, and it is a pleasure to see the groups of the most beautiful varieties in the full tide of their summer beauty. A Rose identified with Messrs. Merryweather is the Baby Rambler, which was raised by this firm. We saw it in various phases—in the open garden, in pots and as standards—and in each form it fascinated one with the beauty of its flower colouring. It is well described by the raisers as a charming novelty, "growing outside to a height of about 2 feet; very bushy, branching habit; produces long feathery panicles of flowers in constant succession from June until the autumn frosts. The colour is a pretty bright carmine-pink, shading lighter to the centre; in fact, the colour of Lady Gay. An ideal Rose for bedding and massing. No other Rose is equal to it for decorative use in pots." This sums up the merits of one of the most interesting and useful Roses raised of recent years.

Another Rose that should be much seen in the future is Climbing Liberty. It is a sport from

that well-known Hybrid Tea, possessing the same warm crimson colour with, of course, an additional strength in the growth. We have never seen Hiawatha more sumptuous out of doors. This multiflora variety is increasing in favour every year. We well remember the glorious specimens in pots at the Temple Show, but in the open garden it retains its wonderful brilliancy of colour—crimson, with lighter centre, thrown into strong relief by the dark-coloured foliage. Another charming multiflora Rose is White Pet, and the drifts of spotless white flowers appeared as if a fall of snow had settled on the branches. Helène belongs to the same class, a vigorous climber with carmine buds, which, when expanded, are of a distinct lilac shade.

The rambling Roses are one of the features of this nursery. Fences are covered with them to set forth their usefulness for such purposes, and there are hedges of Roses, too, that delight the eye and drench the air with the perfume of their flowers. A few of the more noticeable of the rambling or climbing Roses were Ards Rambler, Goldfinch, the White Dorothy Perkins, one of the Roses of the future; Stella, Tausendschön, the Penzance Briars, of which Meg Merrilies is one of the most dainty; the wichuraiana hybrids, the richly-coloured rubra in particular; Aglaia, Blush Rambler, Euphrosyne, Lady Gay, Leuchstern, Mrs. F. W. Flight, one of the more recent and beautiful of rambling Roses; Philadelphia Rambler, Psyche, Tea Rambler, The Lion, Trier, Wallflower, a remarkable purple colour; and such sweet old favourites as Alice Gray, Bennett's Seedling, Dundee Rambler and The Garland.

I was delighted to see the favourites of old grown in quantities, which show that they are regaining to some extent their previous position. The writer has them on a pergola, except The Garland, which rambles over an Oak fence, covering it in flower-time with a multitude of white starry blooms with the faintest tinge of pink.

Brilliant and varied colouring came from the many forms of the China or Monthly Rose, the scarlet China veing with a Jacoby Geranium for dazzling beauty; for there is distinct beauty in such crimson splendour. Of recent years, thanks to the raisers of such exquisite hybrids as Mme. Laurette Messimy and Mme. Eugène Resal, this group is in all Rose gardens worthy of the name. The writer has before him a border of grey-leaved shrubs—Lavender, Rosemary, Jerusalem Sage (*Phlomis fruticosa*) and Lavender Cotton—among which are dispersed the China or Monthly Rose, as fresh in colour as a maiden's cheek, and the two hybrids named. One can see them through the latticed window, asking, so it seems, to look inside and fill the house with their delicious colour and subtle fragrance. The clear pink Hermosa, a group of which we remember in the Royal Gardens at Frogmore; Aurore, a mingling of fawn and orange; Cramoisie Supérieure, Ducher, Queen Mab; and Fellenberg we noticed especially, a Rose for the shrubbery which should be more sought after. It is of strong growth, the leaves of a dark colour, and from the first summer days until the winter months there are flowers, not scattered over the

shoots, but almost hiding them in their rich profusion.

The Teas, Hybrid Teas and Hybrid Perpetuals develop their true characters on these sunny slopes. A delightful Hybrid Tea is Marquis de Siney, the colouring unusual and distinct, and this we hope shortly to illustrate as a coloured plate from flowers drawn in this nursery. Of this section we also, for their wonderful beauty, made note of Antoine Rivoire, Betty—a winsome beauty in spite of some unpleasant things that have been written of this variety—David Harum, Dean Hole, Ecarlate, Countess Annesley, Frau Lilla Rautenstranch, George Laing Paul, Irish Beauty, Irish Elegance, Kaiserin Augusta Victoria, Killarney, La Tosca, a noble Rose for grouping; Le Progrès, as rich as a cut Apricot in the colouring of its flowers; Mme. Abel Chatenay—Queen of Roses; Mme. Jules Grolez, Mme. Maurice de Luze, Mme. Ravary, a flower one never tires of; Mrs. E. G. Hill, Mrs. W. J.



THE NEW HYBRID TEA ROSE LADY ALICE STANLEY. (Much reduced.)

Grant, Pharisaer, Prince de Bulgarie, Triumph and Warrior. If these are not in the Rose garden they should be purchased this autumn; they belong to the list of the more recent acquisitions.

Among the Tea-scented varieties, very beautiful were Beauté Inconstante, Billiard et Barré, a Rose for a fence, its flowers of an intense orange colour; Corallina, a warm crimson, strong-growing bedding Rose; Corinna, Dr. Grill, G. Nabonnand, the loveliest Rose in existence in our estimation; Golden Gate, Mme. A. Mari, Mme. Jules Gravereaux, Morning Glow, Mrs. Myles Kennedy, Nellie Johnstone, Papa Gontier, Papillon and Sulphurea.

These lists are not representative; they merely include the Roses that at the time of our visit were unusually beautiful. Want of space prevents, at present, further reference to the horticultural treasures of this nursery. We left Southwell with regret.

THE FLOWER GARDEN.

NOTES ON IRISES.

(Continued from page 482.)

IRIS ATROPURPUREA closely resembles *I. atrofusca*. The standards are brown, shaded rosy purple, the falls darker, with a black signal. Culture of *atrofusca*. Asia Minor.

I. Barnume, a new species, has purple-red flowers, self-coloured and of a satiny lustre throughout, veined a darker purple and furnished with a rich golden yellow conspicuous beard. A pretty plant and not so difficult to grow as many of its brethren. Asia Minor. The leaves are short and sturdy and the flowers resemble small *I. susiana*.

I. Eggeri is a small-flowered plant 3 inches to 4 inches in diameter, coloured rich violet, with purplish shading and as glossy as a raven's wing; a black signal patch adorns the fall.

I. evbankiana is a tall, slender-growing species with glossy leaves and medium-sized flowers, the standards of which clasp each other; they are coloured grey, regularly lined and minutely spotted purple. Falls horizontally poised, marked with a marbled signal patch of chocolate. It is a remarkable Iris, very singular in its angular outline, and inhabits the mountain ranges dividing Persia from Transcaucasia.

I. Gatesii.—Perhaps the most singularly beautiful Iris known to cultivation. The flowers measure 6 inches to 8 inches across, the standards of which are silvery grey, covered with a delicately traced netting of rich rosy purple. The large falls, shaped like elephant's ears, are partially covered with yellowish grey hairs. The surfaces of the petals shimmer under various changes of light, and one could study the flower for hours. The plant is distinctly lime-loving, and grows well in a harsh loam. Manure or a covering of any kind, save a glass light, seems fatal to it. Armenia.

I. Helena.—An Egyptian species of slender growth, the leaves of which are sickle-shaped and very short. The flowers are lilac, purple on the falls, shading to an orange marginal colouring. The signal patch is a black disc of velvet "pile." The root-stocks are slender, and the plants require less ripening than the others.

I. iberica is an old-time species from the Caucasus, the growths of which resemble the last-named plant. The standards are pearly white, of medium size, and the falls purplish brown, very rich in their varying shades; a black velvety signal patch occupies the centre of each. Not difficult to grow if rested well, and it may be grown well in a cool house if exposed to full sunlight.

I. Lortetii is a species from Palestine and a great beauty, agreeing in size and shape with *I. Gatesii*. The standards are pure white with violet tracery, the falls cream tinted, veined and minutely dotted carmine, giving an appearance of silvery pink. The signal blotch is coloured rich crimson purple, varying in degree with different specimens. A coloured plate of Iris *Gatesii*, *I. Lortetii* and *I. lupina* was issued with THE GARDEN of February 18, 1893.

I. lupina, the well-known Wolf's-ear Iris, has sickle-shaped leaves in close distichous tufts and greyish yellow flowers, the falls of which are "shot" with green and furnished with a large signal patch of greenish black. As a garden plant it proves easy to grow on light soils of calcareous formation and in warm situations, but it is hopeless to attempt its cultivation in wet districts. It can be grown well in a cold frame with a full exposure to the sun, but it is always best to lift and store the roots to prevent them starting into growth before winter.

I. lupina robusta is a magnificent Iris of stronger growth, agreeing with the type plant in general colouring, but the standards are "shot" with a bronzy tint, revealing remarkable shades of colour under varying degrees of light. The



STANDARD DOROTHY PERKINS IN THE REV. PAGE-ROBERTS'S GARDEN.

margins of all the petals are delightfully crimped and tinted old gold. Forms of *I. lupina* are widely spread throughout Asia Minor, and those hailing from Southern Turkey in Asia have naturally better constitutions than those from Armenia. *Robusta* can be easily grown with ordinary care.

I. nazarensis, considered by many to be a form of *I. Sari*, has sky-blue standards, veined with purple, and sombre-looking falls coloured slate-grey, veined with black-purple. The signal is coal black. Native of Palestine. Culture of *I. iberica*.

I. nigricans is a miniature of *I. susiana*, with deep black-purple flowers of varying shades; the glistening surfaces relieve the sombre colouring. Culture of *I. iberica*. M.

(To be continued.)

THE GREENHOUSE.

WINTER IN THE GREENHOUSE.

(Continued from page 480.)

TEMPERATURE.—The majority of greenhouse plants are happy with a minimum temperature of 40° and a maximum in ordinary weather of 50°. Slight variations will suggest themselves to growers of various classes whose requirements, perhaps, call for slightly warmer conditions or are supplied by a rather lower temperature. Of course, sun-heat will readily run the maximum up far beyond 50°, but no harm will result from this if the cultivator takes advantage of it to admit an abundance of air. Then, again, dwellers near large towns, where the fog demon enswathes things horticultural and otherwise in his deleterious mantle, will do well to allow the temperature of their houses to rise 5° during these visitations, at the same time keeping all doors and ventilators tightly closed. Should a sunny day follow a foggy one, advantage should be taken of it to syringe the plants, as this will do much to rid them of any deposit left behind by the murky visitant. In contradistinction to these rises in the normal temperature it may be mentioned that although 40° is the best general minimum to aim at, yet 35° during spells of severe weather will be better than 40° maintained by excessive firing and overheated pipes. Even 30° on occasion will not harm many greenhouse inmates. Mind, I am not advocating 30° as a safe temperature, but I do know I have frequently found *Primulas*, *Cinerarias*, *Calceolarias*, *Deutzias*, *Spiraeas*, *Azaleas* and many other plants with their pots frozen to the stage without any harm resulting. Should a frost set in suddenly and catch hold of any of the plants—this they will show very plainly by drooping—run the blinds down as soon as this state of things is noticed and syringe all the plants with cold water not exceeding 35°. Keep the blinds down till all danger of sun reaching the plants is past, when they will be found to be none the worse for their brief encounter with the frost.

Ventilating.—The exercise of care in this particular is necessary, as it is safe to say that more plants are killed by damp in winter than by frost; therefore get rid of superfluous moisture by ventilating on all favourable or not too unfavourable occasions. There are few days in winter when it is not possible to give a little air by one of the top ventilators if these are properly arranged. What are known as hit-and-miss ventilators—made by the replacing of bricks on opposite sides of the houses near the hot-water pipes by sliding boards—are very useful for winter ventilation. The air being admitted by these is warmed before coming in contact with the plants above, and if a slight crack is opened at the top of the house at the same time, any vapour will be carried off, when the ventilators may be again closed. If the weather conditions have been so adverse for several days as to make ventilation a risky proceeding, the pipes may be heated rather above the ordinary degree for a few hours, say, once a week, and

air admitted to sweeten and renew the atmosphere. Ventilation should always be given as far as possible on the side of the house opposite to where the wind is blowing.

Watering.—This must be very carefully performed during the winter months, making sure that a plant is really in need of it before applying water, and above all things taking care not to fill the pots so as to overflow them. Every pot should be tried by tapping it with the knuckles, a stick, pocket-knife or something similar before water is given; and if any doubt is left in the mind of the waterer as to whether the plant needs liquid refreshment, give it the benefit of the doubt by withholding supplies until the next tour of inspection is made. If the water given to a plant does not drain away in a few minutes after the application, the drainage of the pot should be examined and put in order, for that is where the cause of the mischief will be found. On the other hand, should the water drain away as quickly as it is given, press the ball of soil firmly down into the pot, for it will doubtless have parted company with its earthenware associate through a previous sustained period of enforced drought. Watering should be performed in the morning, and half an hour after it is finished all superfluous moisture should be removed by broom or mop from the floor of the house. Pots that are filled with roots, such as those containing Genistas, Spiræas, Cinerarias, Eupatoriums, Salvias and bulbs generally, will need water every other day as a rule, while once a week will suit freshly-potted Primulas, Calceolarias, Cyclamen, Pelargoniums, fibrous-rooted Begonias and Bouvardias until their roots are working freely in the new soil. J. K. E.

(To be continued.)

THE NEW ROSES LADY ALICE STANLEY AND A. HILL GRAY.

THESE two new Roses, of which illustrations are given, were fully described on page 465 of our issue of the 26th ult. The former is a Hybrid Tea raised by Messrs. S. McGredy and Son of Portadown, Ireland; and the latter is a Tea raised by Messrs. Alex. Dickson and Sons of Newtownards. Both were shown at the autumn exhibition of the National Rose Society, and our illustrations are of flowers exhibited there. Each variety secured a gold medal.

ROSE DOROTHY PERKINS AS A STANDARD.

THE illustration from a photograph of Dorothy Perkins gives a fair picture of this good Weeping Rose. I tried to get one of Paul Transon, one of the very best, if not the best, of Weepers. It blooms early and late, and looks well at all times. As far as my experience goes with these striking plants, I would recommend, in addition to the above: Starlight, single-flowered, white, suffused with violet; White Dorothy, a sport from Dorothy Perkins; Evangeline, white, tinged with lavender; Joseph Lamy, flowers semi-double, porcelain white, with light pink edge; Kathleen, large bunches of single carmine rose with white eye; Tausendschön, large bunches of fine soft pink or rose flowers; Trier, semi-double, creamy white, good in autumn; Tea Rambler, coppery pink; Rubin, soft crimson; Ruby Queen, soft carmine rose; Aimée Vibert, white perpetual; Leontine Gervais, coppery red, shaded carmine; Félicité Perpétue, white. I find it is not advisable to use wood stakes; iron are the best. Wood or even Bamboo stakes soon decay, and one tall 8-foot tree is blown down before you are aware of it. If the trees are planted on the lawn, give a large circle not less than 3 feet in diameter for each tree. Grass should never be allowed to grow near the stem. F. PAGE-ROBERTS.

SOME NEW ROSES OF 1908.

WITH the autumn exhibition of the National Rose Society the Rose season of 1908, so far as it is relative to the introduction of new Roses, has been brought to a conclusion. We are now in a

position to review the Roses which have been fortunate in receiving recognition by the National Rose Society either by the award of a gold medal or card of commendation. The new varieties to which were given a gold medal are as follows:

George C. Wand, raised by Messrs. Alex. Dickson and Sons. A Hybrid Tea of good form, medium size, full, remarkable for its shade of colour—somewhat difficult to describe—bright light crimson suffused with orange; upright growth.

Mrs. J. Campbell Hall, a Tea raised by Dr. J. C. Campbell Hall. Cream pink, sweet scented, full and apparently of good constitution.

Simplicity, a Hybrid Tea raised by Messrs. Hugh Dickson. Very large, stout petals, single or almost single, colour pure white. In habit resembling Kaiserin A. Victoria.

White Dorothy, sent out by Messrs. Benjamin R. Cant and Sons. A pure white Dorothy Perkins. If anything it is stronger in habit and with slightly larger blooms than Dorothy Perkins, from which it is a sport.

Dr. O'Donel Browne, a Hybrid Tea raised by Messrs. Alex. Dickson and Sons. An exhibition variety, strong and erect in growth, with very large, full, well-shaped flowers; colour carmine rose, resembling Star of Waltham.

Meta Weldon, raised by Messrs. Alex. Dickson and Sons. A cream-coloured, globular, deep-petalled Hybrid Tea. Not yet in commerce.

Like Meta Weldon, there are other Roses not yet distributed which have obtained a gold medal. To refer to them would be going beyond the scope of these notes; but an exception, however, must be made in favour of a yellow Tea named *A. Hill Gray*. This Rose promises to be a favourite for the garden and suitable for exhibition. The growth is branching but somewhat slender, free-flowering habit, blooms fairly full, colour yellow, shaded white.

Cards of commendation were awarded among others to the following:

W. R. Smith, introduced by Messrs. Hugh Dickson. A robust Tea, colour creamy white, suffused pink, the edge of the petals being outlined with deeper pink, after the manner of Mme. de Watteville. It has all the characteristics of White Maman Cochet, both in habit and form of flower.

Grace Molyneux, a Hybrid Tea raised by Messrs. Alex. Dickson and Sons. Suitable for decorative purposes, owing to its freedom of flowering, but too thin as an exhibition variety. Colour white, shaded cream.

Earl of Gosford, a Hybrid Tea raised by Messrs. S. McGredy and Son. Attractive from its colouring, bright rose red, but apparently lacking in substance.

It should be recognised that the committee appointed by the National Rose Society to adjudicate on new seedlings or sports approach their task under somewhat difficult conditions. To the majority of the committee the Rose under consideration is unknown; they are ignorant of its classification, its parentage, its character as suitable for garden or exhibition. No information is afforded, not even the name of the variety. Thus they are not in possession of the full merits of the Rose before being called upon to make the award. One expresses no opinion on the decisions arrived at in 1908, but it having been the writer's privilege to see almost all the above-mentioned varieties growing in their respective Rose gardens, he is led to believe that on further acquaintance the best Roses of the year will prove to be—placed in order of merit—W. R. Smith, Tea; Molly Sharman Crawford, Tea; Dr. O'Donel Browne, Hybrid Tea; White Dorothy and Miss Cynthia Forde, Hybrid Teas. The first-named, if one is not mistaken, will be almost as popular as White Maman Cochet. Molly, the second on the list, is a creamy white Tea, with high centre, full and beautifully formed, fragrant and suitable for the exhibition stand and garden



THE NEW TEA ROSE A. HILL GRAY.

(Illustration from the photograph taken of the exhibit at the Autumn Rose Show. Much reduced.)

cultivation. The last on the list is strong in growth, giving fine exhibition flowers of the colour of Gustave Grunerwald. It is said to be mildew-proof. JOSEPH H. PEMBERTON.

JAPANESE ROSES.

(ROSA RUGOSA.)

AMONG the very varied tribes of the Rose no race can claim more hardiness or frost-proof qualities than the rugosa or Japanese section, and one is rather puzzled as to why it has not made a greater advance. All who have watched the group from its introduction are convinced that its possibilities in cross-fertilisation are immense, as witness that splendid variety Conrad Ferdinand Meyer, obtained by a compound cross between a Hybrid Perpetual, a Tea Rose and a rugosa. The beautiful and showy fruits of *Rosa rugosa* and *R. r. alba* are just now making our gardens very brilliant. What huge bushes these Roses will develop into if left unpruned, although if the plants are cut down to

the ground each year the seed-pods are much larger, and in this way the bushes do not occupy an undue amount of space. Of course, when employed as a shrub among other deciduous subjects the larger they develop the better. Even in the heart of large cities these Roses will be found luxuriating as no other Rose will do, and they make charming hedges if planted about 2 feet apart in well-trenched soil. It is not advisable to prune the first year, as some recommend; but the second year one or more of the growths may be cut down to the ground, as this will tend to keep the base well furnished. A

free-flowering variety. A very pretty hybrid between *R. rugosa* and *R. multiflora* is named Ywara. It has curious fringed single pure white flowers and is a variety worthy of introducing into any collection of these lovely garden Roses. Mme. George Bruant is tolerably well known, and, although somewhat eclipsed by Blanc Double de Coubert, it is a valuable sort. It is reputedly a cross between the old Tea Rose Sombreuil (a charming old Rose everyone should grow) and *R. rugosa*. The fragrance is delightful and its growth erect. A bed of five or six plants placed a yard apart each way will make

crossing with the Hybrid Perpetuals. We have in Mrs. Anthony Waterer a good crimson, this colour being imparted by the old favourite General Jacqueminot, which has also given to the flower a delicious fragrance for which rosarians are grateful. Mrs. A. Waterer is unrivalled as an early-blooming crimson, and I advocate some bold masses of it in the wild garden or clumps in the pleasure grounds, especially among other bold masses of such early-flowering Roses as Electra, Una, the Dawson Rose and similar types. Another variety, somewhat a rival to Mrs. A. Waterer, is one produced by that zealous rosarian M. Jules Graveraux. It bears the cumbersome name of Rose à parfum de l'Hay. Truly the fragrance is delicious, and for this quality alone it should be grown. The colour is a brilliant red and it is a free and continuous bloomer. With these sorts we are merging the rugosas largely into the Hybrid Perpetuals; in fact, they possess a greater likeness to the latter group than the former, and, of course, we do not obtain the fine showy fruit that gives to the type and its white form their originality. I am inclined to think our aim should rather be to extend the range of colours in the single forms, directing our efforts to bold flowers and distinct colours and retaining the seed-producing habit, which lends to the tribe not the least of its many attractions. In conclusion, I would commend a trial of these rugosa Roses upon standards. They make grand spreading heads of growth that become objects of much beauty when suitably located. P.



THE LITTLE-KNOWN ROSA RUGOSA SCHNEELICHT.

mixture of varieties is sometimes recommended, but personally I prefer one variety, or, at least, one colour. Hedges of these Roses are thick and as impenetrable as anything one can plant, and surely they would be more serviceable and certainly more beautiful than many of the hedge plants now employed.

There seems to be a tendency in this race to produce climbing varieties. The beautiful Schneelicht, of which an illustration is given, is a delightful variety with a climbing habit and producing fine clusters of snow white flowers. What can be more delightful than a clambering mass of such a Rose, with its deep green leathery foliage so immune from mildew? Then we have another very delightful sort in *R. repens alba*, which produces wonderful pendulous growths covered with thousands of snowy stellate flowers, that are charmingly displayed in the form of a weeping tree or falling over a high rockery or rotery. This Rose has the creeping habit of *R. wichuraiana*, and is possibly a cross with the same. The two groups apparently blend most effectually, and there are at Kew some most interesting crosses, one especially I noted having the glistening foliage of *R. wichuraiana* and its creeping habit, but of quite the leathery texture of *R. rugosa*.

R. microphylla × *R. rugosa* has delightful Azalea-like flowers, these being white, edged with pink. *R. humilis* × *R. rugosa* is valuable for its autumnal blooming. The buds are long and extremely pretty, of a crimson colour, opening to large single flowers. It is a most

splendid bold effect in summer and again in the autumn. Blanc Double de Coubert is, perhaps, the sort most in request. In snowy purity it is equal to Frau Karl Druschki, and it is so free; the bushes rarely are minus a bloom from May to October. A variety recently appeared, named Souvenir de Philemon Cochet, that possesses flowers containing more petals than the last-named Rose, but I should not call it an improved variety. Certainly it has not such snowy white blooms.

I have already alluded to Conrad F. Meyer. It is a Rose almost as indispensable as Caroline Testout or Frau Karl Druschki. Its growths are very lusty and beautifully arrayed in red prickles and bold foliage. The blooms, of a clear and delicate shade of pink, are of immense size, almost rivalling the Hybrid Perpetuals in grandeur. The growth is so very vigorous that it deserves a place to itself, preferably as a free bush isolated upon the lawn, where it may develop into a huge bush, after the fashion of a Lilac or Syringa. Whether the white sport of this Rose, named Nova Zembla, will sustain its parent's reputation remains to be proved. It is said to be a Rose of beautiful form, very sweet and, of course, vigorous. The darkest flower of the group yet produced is Atropurpurea. The blooms are a blackish crimson in the bud, passing to maroon as they expand. Being produced in large clusters, the colour-effect is splendid.

Rich colours are still needed in this group. We want a good scarlet, and there can be no reason why we should not expect this from the

culture upon its own roots. Weak growers need some stimulating strength from a stronger source, and hence we use the Briar in one or other of three forms, also the Manetti, De la Grifferaie and sometimes a stock of such strong-habited Roses as Polyantha simplex. Many amateurs have an objection to the use of stocks because of the tendency to produce suckers at the expense of the Rose that has been worked upon them. This should not cause trouble. A little care in making up the cuttings for stocks, and careful trimming of the latter before planting out previous to budding, will avoid suckers. Only a very few varieties of Roses will thrive satisfactorily without the help of some stock, and these are almost confined to the Chinas and dwarf Polyanthas. I much prefer Dorothy Perkins, Crimson Rambler, Lady Gay and a few more of the wichuraiana section upon their own roots, but most of our best Hybrid Teas and Hybrid Perpetuals are very disappointing in that form.

In making up cuttings of Briar, Manetti or others for stocks we need wood that is firm and fairly ripe cut into 1 foot or so lengths, according to the distance the eyes or buds will admit. It is very necessary to cut out the eyes, except the top two or three. By cutting these out now we effectually stop any more from forming, and secure roots alone upon which to work the Rose buds later on. Of course, in the case of rooting Dorothy Perkins and others to grow on into plants one would not remove any of the eyes from the cutting. In fact, the suckers in this case are

ROSE STOCKS.

LATE September and early in October are generally the best times to strike stocks for working upon the following year. The period is also suitable for rooting such

Roses as will thrive without foster stocks. As a rule the stronger the grower the better it will be suited for

most valuable and form a fair-sized plant the first season. Cut off close below an eye and insert the cuttings a little more than three-fourths of their depth, making them very firm. Frost will sometimes lift the cutting sufficiently to raise the base an inch or two from the soil it was resting upon. In such a case press down the cutting again as soon as the ground will permit and tread firmly along each side of the row. Frequent use of the hoe early in spring is a great help.

The following season the stocks can be lifted, trimmed over once more and planted out where it is intended to bud them. This time do not plant so deeply, 2 inches or 3 inches above the bottom roots being quite deep enough. At present the cuttings can be put in 4 inches apart, but the stocks should be allowed much more room, according to the growth of the variety it is proposed to work.

RIDGEWOOD.

NOTES ON ROSES

GROWN IN A SMALL SOUTH BUCKS GARDEN IN 1908.

TAKEN as a whole the past season has been the best I have known for Roses in my little garden. Never before have they been so abundant throughout the summer, and for the first time in my experience green fly has failed to put in an appearance—no syringing whatever has been necessary. Caterpillars were innumerable, but these are a minor pest, because anyone with perseverance can overcome them. On our light soil in dry seasons thrips are much more difficult to conquer, and it seems impossible to get rid of them without spoiling the flowers. Of mildew, as is ever the case, there was more than enough, and in spite of many infallible remedies I think there always will be in gardens so confined by forest trees as mine is. Of all Roses I love best the dark Hybrid Perpetuals, but I can say little about them, as, notwithstanding repeated efforts, I fail to get any really good flowers. In spite of my many failures I am still an eager learner, and if anyone will teach me how to produce good dark red Roses from a light soil I shall be very grateful. In some cases the growth of Hybrid Perpetuals is quite good; for instance, I have had Ulster 6 feet high from a dwarf plant, and yet the flowers are poor from the exhibitor's point of view. Hybrid Teas do not do so well as I wish, but Duchess of Portland has been the most trustworthy as an exhibition flower during the past season. Unfortunately, though very beautiful, it is not a Rose for the garden, and there have been times when I have felt inclined to do away with it altogether.

In my opinion Florence Pemberton and Dean Hole are two of the best all-round Roses. Both have done well; the latter especially has been wonderful in colour. I think it requires much better living than the former. Le Progrès has made fine growth and flowered very freely as a standard. The form might be improved, but the colour is grand, and makes it worth a place in even a small collection. Mrs. Theodore Roosevelt, again, is a Rose for all, very good in form, and capable of producing magnificent flowers. Konigin Carola has been disappointing. Good in growth, beautiful in form and colour, the larger flowers are nearly always split. Of the newer Hybrid Teas grown here I like best Laurent

Carle and Mrs. Aaron Ward. Both are good in growth and colour, and the former promises to be useful for exhibition. I do not yet possess William Shean, but have no doubt it is a grand Rose. It has been one of the best flowers in a neighbouring garden where Roses are well grown. Writing away from home and without the help of my note-book, I had almost forgotten three lovely Hybrid Teas which have had a good season—M. Joseph Hill, Mme. Mélanie Soupert and M. Paul Lédé. They all come from the same raiser, and, though perfectly distinct, they are somewhat alike in the beauty of their colour. The last named, in spite of being the oldest, is perhaps the least generally known, and in my opinion it is the best of the three for the garden. The June flowers were exquisite, but, like all Roses with the special Pernet-Ducher colouring, they must be shielded from the sun to be seen at their best.

Of Tea Roses, Mrs. E. Mawley is my favourite. Though making splendid growth as a maiden, it is not of the strongest constitution, and is apt to die young. In the matter of attention it is rather exacting, but in return for it it gives me better results than any other Tea, not excepting White Maman Cochet. In my experience there are not many Roses that give exhibition blooms without careful culture. To those who want fine flowers at the cost of little trouble, I strongly recommend Mme. Jules Gravereaux; treat it how you will it seems to thrive. The perfect Rose has yet to come; but the only weak point I have found in the above is its liability to mildew. Mme. Constant Soupert is a great acquisition, good as a standard or bush, grand in colour, of very strong growth, and likely to

pretty variegated foliage and flowers of a warm blush colour and delicious scent. Another most distinct Rose not often seen, though sent out years ago, is Roger Lambelin; the flower is shaped like a double Petunia, dark red edged with white, vigorous in growth, but with little or no scent. Unhappily, I have room for only a few climbers, and of those not universally known Trier is the most useful, blooming very freely throughout the season.

J. B. SHACKLE.

ROSE MILDEW IN SMALL GARDENS.

IN an ordinary Rose season mildew makes its appearance only in the early autumn, or, at all events, not until then are the attacks sufficiently marked to seriously affect the appearance of the plants. Consequently, many growers of a small number of Roses pay no attention whatever to the ravages of this pest; indeed, they seem altogether ignorant of the reason why their Roses at that season become so unhealthy-looking. In the present year, however, mildew appeared unusually early, and, owing to the sudden changes in temperature and other atmospheric causes, has been ever since so general and persistent that even those growing a very limited number of Roses are now beginning to ask: What is this disease which disfigures our Rose trees and their flowers; and how can it be kept in check? The great secret—I call it a secret, because it is known to comparatively few rosarians—is to attack the enemy before it



THE GOLD MEDAL GROUP OF ROSES STAGED BY MESSRS. GEORGE PAUL AND SON OF CHESHUNT AT THE AUTUMN EXHIBITION OF THE NATIONAL ROSE SOCIETY.

do well in all soils except those that are too highly fed.

Of Roses grown here for the first time, Mrs. Myles Kennedy is easily the best, and will, I feel sure, soon take a high position in Mr. Mawley's most valuable Analysis. I would like to say a good word for two Roses not very often seen—Baronne Henriette Snoy and Anguste Comte; both grow well, and the latter is exceptionally beautiful in colour. To those who like curiosities I recommend Rosa Verschuren. It is a Hybrid Perpetual of fairly good growth, with

becomes visible to the naked eye, for the spores of mildew may have taken root as it were on the leaves a week, or even weeks, before they are suspected of being there at all.

For twenty years or more I have always managed to keep my own collection of over 2,000 plants practically free from mildew throughout the whole flowering season, but this has only been accomplished by repeated applications of the remedies employed. On the appearance, however, of the National Rose Society's little handbook, entitled the "Enemies of the Rose,"

I learned for the first time that I had invariably begun my defensive operations too late, for it was only when the first patches of mildew were visible on the leaves that I had thought of attacking them; whereas, had I acted wisely, I ought to have commenced sulphuring or spraying the plants directly after they had been pruned in the spring, and when very little young foliage had made its appearance.

I have said the great secret is to forestall the enemy; but there is another consideration equally important, and that is to allow the enemy afterwards no rest. That is to say, on noticing any slight curl in the foliage and the white mould accompanying it, the plan is to at once take means for destroying this insidious pest—the greatest and most common of all ills the Rose is heir to—on the plants so affected. Should the mildew afterwards show signs of spreading over the collection, the same measures should be adopted with the whole of the plants, whether affected or not. This may appear rather a large order; but in practice it will be found that, if the Roses are to be kept clean and in a growing and flowering condition throughout the season, there will be in the end a greater saving of time and trouble than if only half-measures had been adopted in the early stages of the attack.

As regards preventives of mildew and their application, for years I used nothing but flowers of sulphur, which was dusted lightly over the plants by means of a small muslin bag. Later on I came across some sulphur-bellows, which did the same work more quickly and satisfactorily. Last year I, for the first time, tried a liquid preparation. The one used was Mo-Effic (meaning most efficacious), which, at all events, proved less damaging to the flowers and more efficient than the sulphur, for, when sprayed, the lower as well as the upper sides of the leaves were reached by it. This year I have used a local preparation styled "V. 2 K.," which has proved quite as good as Mo-Effic, although the attacks of mildew have been this season more difficult to deal with. The small grower may make choice with advantage of any of

the remedies named. Flowers of sulphur dusted lightly over the foliage on the first calm morning or evening, while the dew is still upon it, will be found very helpful, and need not be washed off afterwards. Mo-Effic, which may be obtained of Messrs. E. Wright and Co., Brook Street, Bradford, or "V. 2 K." of Messrs. W. Cooper and Nephews, Berkhamsted, are both excellent remedies, and should be applied with a syringe with a fine spray like the Abol syringe, which is sold by Messrs. E. A. White, Limited, Paddock Wood, Kent. There are, no doubt, other preparations equally good to be obtained; but I only mention those which I have myself tried and found successful, and I give the addresses of the makers because I find so many small amateur rosarians are often deterred from using any remedies at all through want of such information. In using either of the above washes it is important that they should be applied only of the strength recommended on the directions accompanying them.

EDWARD MAWLEY, V.M.H.

A FRAGRANT NEW ROSE.

WHATEVER may be the ultimate judgment upon the novelty Mrs. David Jardine, the fact remains that it is one of the most fragrant Roses we possess. It has that powerful perfume which has made La France so popular, and this novelty must be very welcome to many who have been disappointed at the absence of fragrance in so many of our Hybrid Teas. Mrs. David Jardine is so very distinct in habit, the growths being almost smooth with the stiff erect habit of the Hybrid Perpetual, but the delicate clear colouring of the Tea Rose. It is a pink Rose, and the marvel is that as so many new varieties are pink in colour, that there is a distinctness about them. I know of no Rose that has such an even, beautiful form, and I can quite believe it will supersede the Catherine Mermet race for general forcing purposes, because it looks to be a Rose that could be grown equally as well in a cool house as in one with greater heat, such as Catherine

Mermet requires. Our American friends are loud in its praises, and they are very keen judges of a forcing flower. Growers wishing to be up to date, and who are thinking of planting a house next season would do well to secure Mrs. David Jardine. P.

COLOURED PLATE.

PLATE 1858.

ROSE JOSEPH LOWE.

THIS beautiful Rose originated as a sport from Mrs. W. J. Grant, and is being sent out by Messrs. Lowe and Shawyer of Uxbridge, Mr. George Mount of Canterbury, and Messrs. Hugh Low and Co. of Enfield, who kindly supplied the flowers from which the accompanying plate was prepared. Seldom if ever has a new Rose been so well or so frequently exhibited as this, and, when it is remembered that every flower was grown under glass, it is the more remarkable, and, at any rate, has proved beyond dispute its suitability for forcing, both early and late. There is in the flower a very distant resemblance to Mme. Abel Chatenay, but nothing like, to my way of thinking, so marked as some would have us believe. As seen out of doors in my own garden, the colour of Joseph Lowe much more closely resembles La France, and almost entirely lacks the salmon tint that is so characteristic of Mme. Abel Chatenay. Cut when young under glass there may be some resemblance; in the fully-developed flower they are wide apart. I have before me a bloom of each as I write.

I am afraid investigation through the lines of the respective parents of the two Roses will not help us much, as I believe there is considerable doubt as to the correct parentage of Mme. Abel Chatenay. Dr. Grill and Lady Mary Fitzwilliam are generally given as the parents of this Rose, but in the raiser's description Victor Verdier was named as the pollen-bearing parent at the time of its introduction. Be that as it may, I have long come to the conclusion that an argument based on the parentage or pedigree of any particular Rose is on very thin ice, and should and will carry little or no weight; so I will not pursue the subject, although it is interesting enough.

It is a coincidence that just as Mrs. W. J. Grant is known by two names (Belle Siebrecht being the other), so this sport Joseph Lowe seems likely to bear another name. Of the actual facts of the case I am not cognisant, but there is, I think, little doubt that Joseph Lowe is synonymous with Lady Faire, which was sent out by Messrs. Bentley of Leicester in 1906 and exhibited at the Saltaire show at the provincial exhibition of the National Rose Society the following year in the class for new seedling Roses, where it nearly got the gold medal, if my recollection is not at fault, but was certainly awarded a card of commendation.

I do not think there is any question that the two sports are identical; but under which name it will finally be known I should not like to say. Officially, I presume, the National Rose Society will call it Lady Faire; the trade and the public at the moment favour Joseph Lowe, because they have seen and know the flower as such.

It is too early to say very much about its growth and habit. With me small pot plants put out late in the spring have flowered well and



THE GOLD MEDAL EXHIBIT STAGED BY MR. [GEORGE PRINCE OF OXFORD AT THE NATIONAL ROSE SOCIETY'S AUTUMN SHOW.

grown satisfactorily. They could not be expected to make very vigorous growth; all I can say is that they have behaved much better than the majority of plants so treated generally do. Undoubtedly the subject of these notes is a very beautiful variety that can be strongly recommended, and one that is destined to take a high place in popular favour.

Purley. H. E. MOLYNEUX.

THE DAMASK ROSE.

NEAR the Provence, or Old Cabbage Rose, in sentiment as well as in a sort of natural classification, comes the Damask, an illustration of which is given showing the Rose associated with the Madonna Lily, and a beautiful association it proved to be—red and the purest white, as fair to look upon as the same Lily with the rich blue, graceful, feathery-leaved Larkspur (*Delphinium consolida*). The Damask Rose is charming, also, with its delicious though fainter scent and its wide-open, crimson flowers. The Damask



A BEAUTIFUL COMBINATION OF RED DAMASK ROSES AND WHITE LILIES.

Rose, with some of the older Gallicas, may be considered the ancestors of many of our modern Roses, and though there is no record of the earlier pedigrees, those who are old enough to remember some of the first Hybrid Perpetuals will retain the recollection of some Roses, such as Lee's Perpetual, in which such parentage, probably passing through a Portland Rose, of which group there are a few named kinds, is fairly traceable. The parti-coloured form is a charming bush Rose that should be much more used; it is known by the names *Rosa Mundi*, *Cottage Maid* and *York and Lancaster*.

The newly-found but really old garden Rose now called *Hebe's Lip*, otherwise *Reine Blanche*, seems to belong to the Provence group (*gallica*). There were formerly in old gardens some very dark-coloured Damask Roses called *Velvet Roses*, that are either lost or have become rare, as they are now seldom seen. When we were in Mr. Charles Turner's interesting nursery at Slough—and Turner's *Crimson Rambler* is famous the world over—we noticed a form of the Damask raised there, the *crimson Damask*, a single flower 5 inches across, and of a dazzling crimson colour—a pure and most effective shade. We have seen nothing quite so brilliant, and the bush was smothered, suggesting that for the fringe of woodland or in places which require lighting up, so to say, with colour, this is exactly the Rose for early summer. In these days when the Tea and Hybrid Tea sections seem to engross almost the entire interests of rosarians, a thought must be given to such old-world Roses as the Damask, and we are pleased that Mr. Turner has given a crimson Damask of such startling beauty.

ROSES AND THEIR SCENT.

THE Rose has formed the subject perhaps of more literature than any other flower; its history and cultivation have been so fully dealt with that it seems difficult to say anything fresh about it. But one, and that possibly the greatest of its charms, the scent, has of late been treated as a secondary quality to its colour, shape, habit of growth, &c.

George Herbert asked "What is fairer than a Rose; what is sweeter?" and some of our critics will have it that we latter-day rosarians pay most attention to the first question and neglect the second. This may be true in a way, but I rejoice to see indications that the perfume, the "soul of the Rose" as someone calls it, is getting more consideration. I notice in Mr. Molyneux's notes on the latest gold-medal Roses that they are fragrant. Moreover, in one of the earliest catalogues to reach me this season, I find the fact of a variety being fragrant is dwelt upon as though the fact was really a big item to its credit.

For many years I have taken considerable interest in the scents of Roses, and, indeed, from their perfume have tried to speculate upon their parentage, and if this has not been a very profitable pursuit it has given an added pleasure to my walks in the Rose garden, which to those who, like myself, have grown Roses more years than we care to count is worth consideration.

There is no doubt that the scent associated with the Rose is the Old Cabbage or Provence perfume, found also in several old sorts of Roses, and no doubt this forms in a great degree the basis of the scent of our modern Roses. Most of our older red Roses possessed this scent in a greater or less degree, and I will mention a few of the sweetest old flowers that I can remember. *Paul Ricaut* (Hybrid Bourbon), *Baronne Prevost*, *Senateur Vaise*, *Alfred Colomb* (Hybrid Perpetuals), and, later, *Ulrich Brunner* and *Hugh Dickson*. I name these haphazard, and readers will, no doubt, think of many more perhaps sweeter.

But with the multiplication of sorts, whether chance seedlings or so-called pedigree Roses, the old scent became blended in a number of ways, and one could almost form groups of Roses which from their scent, as well as other characteristics of growth, seemed to have common origin. To take the *Victor Verdier* race as an example. All these, such as *Comtesse d'Oxford*, *John Hopper* and others, including *S. M. Rodocanachi*, have the same odour, reminding one of a hock or choice white wine; in that giant *Paul Neyron*, a

sweeter perfume of the same character was to be found.

The Bourbon family seem to have a great range of scent, varying from the *Malmaison* type, in which I suspect the Musk, to *Baronne Gonella*, a very sweet Rose; *Mme. I. Pereire* and *Zephyrin Drouhin*, which, I think, is a Bourbon, perhaps one of the sweetest and latest flowers we have. There is a bunch on the table as I write (September 28).

Among the Teas we have several groups: The *Dijon* family, with their delicate, refreshing perfume; scarcely so sweet are the *Mermets*, which I should call pure Teas; then the *Souvenir d'un Ami* and its white sport. *Mrs. Mawley* has also a delicious odour.

To my mind the *Watteville* class, *Mme. Cusin* and *Golden Gate*, are almost the sweetest, and *Comtesse de Nadaillac* has a delightful perfume of its own. Is it possible that some of the sweetest Bourbon blood is intermixed with this class?

The *Maréchal* has been discussed lately in *THE GARDEN*, and Mr. Kemp, on page 469, says that its reputed parents were *Isabella Gray* and *Solfaterre*. From my recollection of the latter I should say it was probable, if the evidence of scent has anything to do with it.

I am afraid to tackle the Hybrid Teas, both from consideration to the reader and from the bewildering varieties of scent we meet in this charming class, ranging from *La France* to the delicate perfume of *Bessie Brown*. Here, with *Captain Christy*, we get another hint of the *Verdier* type, and, alas! some of the scentless Roses. A very interesting group are the newer yellow Hybrid Teas. *Mme. Ravary* is very fragrant and *Mme. H. Leuilliot* has a strong apricot flavour, perhaps derived from the blend of *Persian Yellow*, which to some people is rather unpleasant in the original flower.

I must conclude this rambling paper, and will tell a true story rather *à propos* to my subject. Many years ago I was looking at a fine collection of *Camellias*, when the owner, an old lady, observed, "I think that really the bet of *Camelliath* it, that they don't *thmell*." Long may it be before our Roses lose their scent!

J. T. STRANGE.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE FLOWER GARDEN.—Owing to less satisfactory weather the flower garden is beginning to look untidy. Its appearance may be improved by a frequent gathering up of leaves and seared foliage. From this time forth hardy perennials should be planted, choosing dry days for this work. Readers who are beginners

should always remember to give each plant ample space for development. I make a rule to group the different subjects in colonies of three to six plants in each group. I am just lifting and dividing plants of London Pride. Dahlias should be lifted and stored away in a dry, cool shed or cellar as soon as the frost has cut them down. Other tender subjects, such as Begonias, Tigridias and Gladioli, should also be lifted and stored in like manner to the Dahlias.



1.—A COARSE, ELONGATED, HOLLOW-STEMMED SHOOT OF A PANSY WHICH IS USELESS FOR MAKING INTO A CUTTING.

reception of our new Roses. If this subject is to do well, the quarters should be deeply dug and a heavy dressing of good manure incorporated at the time. I am thinning out the weaker growths of dwarf Roses, and in the case of the very strong growths that are retained I am removing about a third of each one.

Hardy Fruit.—What the winds have failed to remove I am now gathering as opportunity offers. Apples and Pears as they ripen or are ready for gathering are being carefully harvested. Take especial pains to avoid bruising the fruits. Strawberries that have been growing in pots for forcing I am now plunging under some rough protection. What is really needed is to place old frame-lights over the plants to ward off frosts and protect them from heavy rains.

The Vegetable Garden.—Make the most of all kinds of vegetable refuse by collecting and burning it. The soil of the garden may be enriched by dealing with the subsequent ashes as soon as they can be acquired. The last of our Potatoes have been lifted and stored, as no useful purpose can be served by leaving them in the ground longer. I make a practice of lifting and storing Beet and Carrots. They may be covered with a deep layer of sand, or stored in a cool cellar where ventilation can be afforded when required. A pit may be made outdoors in which to store these subjects if more convenient.

The Cold Frame.—These useful structures are now in frequent demand. Protection to the less hardy plants may be afforded by the cold frame at this season. I usually place the choicer bulbs that were recently potted up in cold frames,

covering these with cinder-ashes until they have made 1 inch or so of growth. Brompton and East Lothian Stocks when wintered in the cold frame give a much better display in the spring.

Chrysanthemums—Complete the housing of all plants as early as possible. It is unsafe to leave any plants in pots outdoors longer, as severe frosts may seriously injure the buds and growths. Those who have a warm, sheltered quarter in their garden may group their plants in such a position, and in the event of a frost being threatened may protect the growths with a covering of light tiffany or scrim canvas.

The Window Garden.—No time should be lost in planting the window-boxes with bulbs; the earlier this is done the better. For indoor decorations I am placing bulbs in glasses and also planting others in bowls in fibre for the same purpose. This latter is a fascinating occupation, and the results are very satisfactory.

The Greenhouse and Conservatory.—Care in ventilating these structures is of the utmost importance at this season. When the temperature reaches about 55° the ventilators should be opened, closing them again in the late afternoon. The showy Hippeastrums should have water gradually withheld forthwith. Fuchsias, as they go out of flower, should be stored away under the greenhouse staging; very little water henceforth will be required to keep them in a satisfactory condition. Primulas and Cyclamen need a light, airy position at this season to promote their well-being. D. B. C.

TOMATOES FOR FRUITING IN EARLY SPRING.

THE earliest fruits are obtained from plants raised from seed sown in September, or from cuttings of older plants propagated in October. Although many amateurs know how to raise plants from seeds, few, indeed, know how to do so from cuttings. Sometimes it is recommended that the tops of older plants should be taken off and put in as cuttings, but there are objections to this course. The tops are less vigorous than the side shoots; they are, furthermore, liable to fall victims to the dreaded disease sooner than the side shoots. There is also one more reason why the latter are the best to insert, namely, their tendency to make steady growth during the winter months and to commence flowering and fruit-bearing at a time when there is every likelihood of the crop being a most satisfactory one, viz., in early spring.

How to Prepare and Insert the Cuttings.—Select strong side shoots which are well exposed to the light on the old plants; these shoots should be about 6 inches long. Remove the bottom leaf and sever the stem immediately below it with a sharp knife; moisten the end and at once insert it, while wet, in a heap of dust-dry sand. The cuttings are thus made ready for inserting in the pots, which should be 3½ inches in diameter and filled with a nice light, sandy compost, free from old, exhausted soil which has been used for other purposes. One cutting will be sufficient for each pot, and it must be very firmly fixed in the centre.

The Winter Treatment.—Of course, a fair amount of artificial heat is absolutely necessary to successfully grow young Tomato plants in the winter-time, and, furthermore, bottom-heat is essential for the propagation of the cuttings so that they may quickly form roots. Plunge the

cutting-pots to their rims in a gentle hot-bed in a small frame. Give water directly the cuttings are inserted, but afterwards be very careful in this matter and only give water when it is absolutely necessary. When the cuttings possess roots take them from the hot-bed and grow them in a warm position and in as light a part of the house as possible consistent with plenty of heat. The young plants should be repotted before they become too much pot-bound, and be fruited in 9-inch pots. Use good fibrous loam, but not any manure. When the lowest trusses of flowers have set, the plants can easily be fed with artificial manures, and some superphosphate, at the rate of two teaspoonfuls to a pot, given twice in ten days and watered in will prove a capital stimulant and deepen the colour of the fruits. AVON.

INCREASING THE PANSIES BY CUTTINGS.

THROUGHOUT September and October the Pansies, both the fancy and tufted types, may be propagated quite easily by means of cuttings. This is the generally recognised period when the work should be done, and there is usually an abundant supply of growths on the old plants from which desirable cuttings may be obtained.

The first consideration is making up the cutting-bed. At this period of the year it should be made up in a rather warmer aspect than would be the case were the cuttings taken a month or two earlier. Choose a position facing either south or south-west, if possible. Here the cuttings should root readily and be delightful plants for transferring to their flowering quarters in March or April next.

An ideal soil for the cutting-bed should comprise leaf-mould, sand and loam, or the ordinary garden soil in place of the last-mentioned, in equal quantities, passing these through a sieve with a half-inch mesh and well mixing the heap afterwards. This should then be levelled and made firm by pressing boards thereon or by the aid of a spade, so that the soil becomes fairly consolidated.

Those who have a cold frame should make up their cutting-bed therein; but four boards nailed together in the form of a square make a rough frame, and will answer equally well provided a rough frame-light or window-sash be used as a protection in moist or frosty weather.

The kind of material to acquire for making into cuttings needs some discrimination. In Fig. 1 an undesirable growth of the fancy Pansy is shown. This is a long, coarse shoot with a hollow stem, quite unfit for the purpose under notice, and for this reason readers should take care to avoid dealing with material of this kind. It is possible, of course, to root such pieces, but the chances are that a large proportion of them would fail entirely, and those that do survive would never possess much vigour.



2.—AN IDEAL SHOOT FOR MAKING INTO A CUTTING



3.—THE SAME SHOOT PREPARED READY FOR INSERTION.

hundreds of cuttings before the propagating period is over.

Fig. 3 is the same cutting as represented in Fig. 2, properly trimmed and ready for insertion. The cuttings should never be more than about 3 inches in length; in fact, we prefer them rather less. The bracts, or leaflets, are cut off, as these often cause the cuttings to damp off, and the lower leaves are also removed close to the stem of the cutting itself. To complete the operation the stem is cut through immediately below a joint.

Fig. 4 is a sucker-like growth with several roots of recent development at its base. If the old plants are mulched with some light, gritty material and this worked well into the crown of the plant itself, in a week or two such little pieces may be broken out from the crown of the plant. In a little while these rooted, sucker-like pieces will develop into useful plants, so that their treatment is all the more simple in consequence and success assured. The cuttings and the rooted suckers should be inserted in rows in the prepared cutting-bed already described, observing a distance between each cutting of about 2 inches, more or less, and a similar distance, or rather more, between the rows themselves. In this way it is possible to insert some hundreds of cuttings in a comparatively small area. Should the weather be dry and sunny, cuttings must be sheltered from the sun during the daytime. Maintain a moist condition of the soil always—not necessarily a saturated condition—as this keeps at bay insect troubles, which invariably arise when the soil is dry and the conditions of the atmosphere are dry also.

ROSE PLANTING.

ALTHOUGH Roses may be planted safely any time between the end of October and February, providing due care be taken and we avoid moving them during severe frost, there is no gainsaying the fact that late October and during November are the ideal months. Having got the soil well turned over and manured, it is wise to plant as soon as possible, so that the whole may settle around the roots steadily before winter sets in. Failing to catch this chance, I would wait until February rather than plant when the ground is wet, cold, and likely to settle down harsh. It sometimes happens that the soil is very dry at the early digging up and the plants suffer a little from wood shrivelling. In such a case, water well around the roots as soon as a little of the soil has been placed upon them. Do not wait until the final treading up; the watering will not be so beneficial, and will have a tendency to cake the surface soil around the plant.

Manure should never be placed direct upon the roots; rather a little of the plain soil first and then the stronger on top of that. The roots thrive better if they have to grow 1 inch or so before they find it. Plant firmly, but do not ram the soil around the roots, and be careful

that they are spread out as much as possible. Bunching and crowding them is a great and common error.

The depth of planting needs a little consideration; 3 inches above where the bud was inserted upon the stock is a good depth for dwarfs, while standards are better planted about the same depth they were before lifting from the nursery garden. A little attention will show where this was, the portion of stem being plainly marked at the ground line.

How close to plant is too wide a question for this note; it depends entirely upon the class of plant and the object you wish them for. Nor can we give any sure guide as regards the different sections or classes, now that these vary so much even among themselves. Any time spent in trimming away suckers, even in their youngest stages, is well done now that they can be handled better; also cut back a few of the coarsest roots. If a drying time, especially from wind, sets in, afford a good syringing overhead twice a day so long as the wood appears distressed.

ROSES.

JUST a line about strong *v.* weak (?) plants. Too many go into a nursery to choose the strongest plants without reference to the fact that they may be coarse and pithy in growth. A medium strong plant will transplant with greater safety and afford much better results. The wood is always better matured, and we generally get a sounder base. I have seldom known the Roses to ripen their wood in a more promising way than during this autumn. What most amateurs regard as a strong plant has frequently been grown in very rich soil, in order to get a large and showy plant, or to secure a few extra-sized blooms for exhibition. Such do not move well and thrive like one of medium strength transferred from loam to a well-prepared place in the garden.

A. P.

A BEAUTIFUL LILY.

THE name of a most beautiful Lily for the autumn, both for cutting and outside decoration, is *Lilium tigrinum* Fortunei. It grows upwards of 8 feet high, with a great profusion of flowers, and does well in the herbaceous borders or among hard-wooded plants, such as Azaleas, Rhododendrons and Kalmias. To be seen at its best half-a-dozen bulbs should be planted together in a batch and about 1 foot apart; the effect then is gorgeous. The long spikes should be tied up neatly to green Bamboo or other stakes, as, being so large, the wind will easily spoil them.

W. A. COOK.

PLANTING DAFFODILS.

WHEN these are grown in quantity it is necessary to lift a portion each year, especially when they are near large trees, and this lifting process should be in full swing now. Take up the bulbs with a fork; then trench the ground and add cow manure or bone-meal to make the soil rich. These manures will last several years. Then pick out all the best flowering bulbs and plant again thickly together. Take the smaller ones and plant in a rich border by themselves. The choicer varieties, such as King Alfred, Mme. de Graaf, White Queen and Lucifer, should have, in addition to bone-meal, some good sand placed under the bulb. This will keep the roots from decaying, especially in damp positions. Those grown in grass should be of the commoner type, as if not lifted they soon deteriorate, and are uninteresting except as a floral show. For individual beauty the bulbs must be taken up occasionally and the soil made rich by manuring. Narcissi will grow in nearly any soil for a season, but the best is a good rich loam. Emperor and Empress, pallidus precox, maximus, Sir Watkin, Stella superba, Telamonius plenus, Golden Spur, Horsfieldii and the Poeticus section are excellent

for massing for distant effect, and when planted in thousands have a charming effect. W. A.

HOW TO INCREASE BEDDING PLANTS.

DURING recent years hardy plants have become very popular, and for many reasons, chiefly, perhaps, owing to the beautiful and varied selection the planter has to choose from, and also from the fact that many of them may be grown entirely without greenhouses or frames. However, there are various sites in many gardens where the "bedders" still hold their own, and it would be difficult to produce a better (if as good) effect by the use of any other class of plants for furnishing the individual beds. It is often stated that as soon as the beds are at their best many of the plants are cut down and the effect is spoiled for the season. This, however, need not occur, for although a number of cuttings must be taken for propagation, this may be done without spoiling the plants. Certainly, if one cuts off the most prominent shoots from such plants as Geraniums, gaps would occur in the beds; but by carefully taking the cuttings from the most crowded parts of the beds a sufficient number may generally be taken without being missed. Before beginning to propagate, be quite certain, if possible, how many plants will be required for furnishing the beds next season; it is disappointing, when planting out begins, to find that the required number of plants is not at hand, while without careful calculation one may easily have too many of one variety and an insufficient number of others.

In the first place, prepare the soil, which should be light and contain a good proportion of silver sand. Pans, pots or boxes may be used. Generally it is best to use boxes or pans for the stronger-growing plants, and pots for such things as Ageratum, Iresines, &c. Drainage is essential, and must be provided both in pots and boxes, as wet, sour soil is most detrimental to the well-being of the cuttings. Make the soil firm and insert the cuttings with the aid of a small dibble, taking care not to place them too thickly, or they will probably damp off during the winter. Geraniums may be placed outdoors on a firm bed of ashes, damping them overhead occasionally and removing the dead foliage and any trusses of flower as soon as these are seen. Many of the other bedding plants may be readily increased by cuttings at this season, only they require the protection of a frame or bell-glasses, viz., Marguerites, Heliotrope, Tropæolum, Fuchsias, Abutilons, Coleus, &c.

During the winter keep the young plants near the glass, and admit all the air possible during fine, open weather. Do not keep the soil too wet; it is better to err on the other side, but, as with all plants, the happy medium is best. Good sturdy flowers will be produced if this attention is given them; but bedding plants are often looked upon as being too insignificant to require much care, and the result is that at bedding-out time very poor plants are at hand with which to furnish the beds. Good plants will give the best results, and will repay all the care bestowed upon them.



4.—A ROOTED SUCKER-LIKE SHOOT DETACHED FROM AN OLD PLANT. SUCH PIECES QUICKLY MAKE GOOD PLANTS.

THE TOWN GARDEN.

FRUIT IN TOWN GARDENS.—Is it desirable that fruit shall be included among the crops grown in town gardens? Opinions differ widely upon the subject, and they are always in strict accordance with the modicum of success or failure which has attended the efforts made in this direction. Personally, I cannot acknowledge to much sympathy with it, for there are many disadvantages and comparatively few compensations. At the same time, I am bound to admit that friends of mine have grown some really good small fruits, and that in a few instances Apples and Pears are moderately satisfactory. The fact remains that fruits are grown by several townsmen, and it will, therefore, be appropriate to devote a little attention to the subject in this column.

AUTUMN SOIL MANAGEMENT.—One of the troubles of town gardeners, whether they be cultivators of flowers, fruits or vegetables, lies in the excessive drainage of the soil, the food both contained and put in it by intelligent manuring being washed away before the roots have had time to secure more than a tithe of it. This difficulty can never be properly overcome; but it is possible to do a very great deal by the consolidation of the surface and applications of manure in the autumn and the spring. On light soils, treading when they are fairly dry does an immense amount of good, but care must be taken in doing this on stronglands; they are preferably dealt with exclusively by manuring. The best method of conveying food to the roots is in the form of top-dressings of a mixture of manure and compost. To carry this out properly, the top 2 inches of old soil should be removed, the surface bared, carefully loosened and then the space filled in with the best material at command. Or, and simpler, the manure may be spread on the surface in the form of mulchings, taking care that it is sweet and in such a condition that it will not settle down into a close, pasty mass which will be impervious to air. If the appearance of this mulching is objected to, the owner has merely to dust on the top a little fine mould and all will be well. If the trees are not making satisfactory progress it may be necessary to apply strong liquid manure five or six times during the winter months; but judgment must be exercised in this matter, or coarse, unfruitful growth will assuredly result.

PRUNING.—It is not desirable to do a considerable amount of cutting each autumn, for the tree that is allowed to assume somewhat of its natural habit will invariably produce heavier crops of fruit. Of course, it is impossible to carry out this dictum in the case of trained trees, but with others it should always be kept in view. Whatever cutting is done should be limited, as far as possible, to the removal of misplaced branches and to thinning out in those places where there is the slightest suspicion of crowding, as it is imperative that full light shall have access to every bud upon the tree if the ripening is to be perfect. In all pruning it is essential that the habit of cropping of each tree shall be taken into consideration, as the indiscriminate use of the knife does more harm than good.

PLANTING.—In the probable event of fresh planting being necessary, the grower must observe one or two very simple rules, or he will not reap as rich a reward as he should do from his trees. In the first place, it is unwise to incorporate any manure with the soil in which roots are to be placed unless the land is absolutely impoverished, in which case only refuse material ought to be used. Rather than apply manure—the mechanical working of the soil must be as thorough as possible—sound loam should be worked beneath the roots and in between the layers, and necessary feeding can be done in the form of annual top-dressings of good manure. The soil must be well firmed about the roots, which ought to be spread out to their full extent in an outward and slightly downward direction. **HORACE J. WRIGHT.**

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

HARDY FRUIT GARDEN.

APPLES FOR PLANTING.—If the ground is being got ready as advised, the planting of fruit trees may be proceeded with as soon as the trees can be procured. It is a good plan to visit the nursery and select for one's self, and then no disappointment will follow, though I may say if the order is sent to a good reliable firm, they invariably send the finest trees and true to name. The following are twelve good varieties of Apples for cooking purposes: Lord Suffield (for August and September), Golden Noble, Peasgood's Nonsuch, Loddington Pippin, Warner's King, Lane's Prince Albert, Newton Wonder, Dumelow's Seedling, Blenheim Orange, Northern Greening, Norfolk Beaufin and King Edward VII.

A selection of Apples for dessert are: Irish Peach, Beauty of Bath, Quarrenden, St. Edmund's Pippin, Margil, Allington Pippin, Blenheim Pippin (small), Cox's Orange Pippin, Brownlee's Russet, Sturmer Pippin, Winter Reinette and Cockle Pippin. These are all well tried old favourites. Small trees for quick bearing should be on the Paradise stock, but for orchard planting I advise the free stock.

PLANTS UNDER GLASS.

Allamandas, *Caladiums*, *Ixoras*, *Clerodendrons*, *Gloriosa* and the like will now require a season of rest, and therefore water should be sparingly used and the temperature gradually lowered.

Begonias of the winter-flowering section, on the other hand, require a little more heat and close attention to watering, staking and tying. *Poinsettias* should now have a little more heat, and if the pots are well filled with roots a little manure will be beneficial. It is better to manure now than later. Continue to pot up bulbs for winter flowering.

FRAMES, PITS AND COOL HOUSES.

Chrysanthemums must now all be housed and any tender subjects put under cover of frames; but the lights should be drawn off on all fine days from early morning till as late as possible at night and, if frost is not expected, the lights should be tilted up during the night; in fact, do not coddle any plants at this season but give all the air and light possible.

Border Carnations, in places where they will not stand the winter, must be potted up and placed in a position where they can be afforded protection at any moment, and finally arranged in cool frames on a bed of ashes.

FLOWER GARDEN.

Herbaceous Borders must be kept clean and the plants staked, as the *Asters* or *Michaelmas Daisies* will keep the scene bright for some time to come. All the bedding plants of a tender nature may be now displaced by the winter section. The beds should be dug up and manured before *Wallflowers*, *Pansies*, *Polyanthuses* and bulbs are put in.

ROCK AND ALPINE GARDEN.

Primulas may now be divided and replanted, especially *P. viscosa*, *P. rosea*, *P. minima*, *P. denticulata*, *P. pulverulenta* and such varieties as *Primrose Miss Massey*, *Goldilocks* and *Sparkler*. Replant anything in the way of *Saxifrages* that may require it and use plenty of grit in the fresh soil. *Androsace* should be kept from the wet as much as possible—especially such varieties as *A. sarmentosa*, *A. villosa* and *A. Chumbyi*—and a little stock of these should always be retained in the reserve frame to provide against accidents.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

BEGONIA GLOIRE DE LORRAINE.—This useful flower will now be growing apace, and the necessary tying and staking must be attended to. Light feeding may also now be given. Liquid farmyard manure, or, failing this, a slight dusting of Clay's Fertilizer, on the surface of the pots should be used. The same remarks regarding feeding will apply to the other varieties of *Begonias* now being grown for flowering purposes.

Solanum jasminoides.—The flowers of this charming creeper are freely produced, and are very useful at this time of year. Usually it is grown as a greenhouse creeper, which gives a pretty effect if trained across the principal rafters of span-roofed houses and the flowers allowed to hang down in a natural way. There are also a number of conservatories with high and bare back walls; these this plant would cover rapidly. Wherever such positions as those noted exist, I strongly advise the planting of this *Solanum*. It delights in moisture both in the atmosphere and at the roots, and the more freely it is allowed to ramble, the better will be the effect when in flower.

THE HARDY FERNERY.

Now is the best time of the year for planting Ferns out of doors, as, their season's growth having been made, they will bear removal better than when in a growing condition. There is little risk of injury provided reasonable care is exercised. When replanted in October the plants have an opportunity to make roots and become established by the spring. All Ferns should be removed and replanted with as many roots as possible. At this season also division of the crowns and rhizomes may be safely accomplished.

FLOWER GARDEN.

Housing Tender Plants.—It is quite time that all plants be housed which one is anxious to keep, such things, for instance, as *Palms* in variety, *Grevilleas* and any specimen plants more than ordinarily tender, such as *Heliotropes*. Where this work is in progress, it will be advisable to lift any inmates of the flower garden required for potting up. A batch of the *Paris Daisies* will come in very serviceable and furnish a good supply of flowers when the frost has made an end of nearly everything outdoors. If lifted carefully, well soaked and placed in a late Peach house in partial shade, they will feel little of the effect of their removal.

HARDY FRUITS.

Figs.—The crop on open walls has this season been very good, and now the fruit is cleared there should be no delay in preparing the trees for the winter, as I attach more importance to thorough ripening of the wood than to coddling or covering to preserve that which is only half matured. It is the embryo fruits at the points of the shoots which require light and air. All useless fruits should now be removed, also shoots and lateral growths which cannot be attached to the wall.

Black Currants.—Where it is contemplated making new plantations of these the work should now be taken in hand. To obtain fine *Black Currants* it is necessary for the bushes to make free growth, for, as the fruit is produced on the young wood, the more robust this is the larger the bunches and finer the berries. Where young bushes have been prepared they may now be carefully lifted with balls of earth and transplanted, when they will not fail to give a crop the next season. I think more attention should be paid to bush fruits; they are profitable, wholesome and give less trouble than the fruits of the orchard.

T. B. FIELD.

(Gardener to Baroness Berners.)
Ashwellthorpe, Norwich.

NEW PLANTS.

ODONTIODA CHARLESWORTHII GOODSON'S VARIETY.—This is an improved form of the beautiful *Odontioda Charlesworthii* which created so much interest at the last Temple Show. The flowers of this variety are larger than the type, and the crimson colour is also deeper, the rich yellow blotch on the lip being very pronounced. Shown by Mr. H. S. Goodson, Putney. First-class certificate.

Cypripedium Bianca superba.—A reputed cross between *C. Prospero* and *C. insigne* Sanderae, this handsome Lady's Slipper partakes largely of the last-named parent. The flower is of medium size, the ovate lanceolate petals being rather narrow and waved at the margins. The pouch, or lip, is rather drooping and very evenly formed, both petals and lip being of a uniform clear canary yellow. The dorsal sepal is large, somewhat hooded and of the purest white except at the base, where the colour is green. Shown by Lieutenant-Colonel G. L. Holford, C.I.E., C.V.O., Tetbury, Gloucestershire. First-class certificate.

Cattleya Rutilant.—This is a very beautiful addition to this large family. The flowers are large, the sepals being rather narrow and lanceolate, with reflexed apices. The petals are nearly twice as broad and beautifully crimped at the margins, the colour of sepals and petals being scarlet crimson. The labellum is large and spreading and of the richest velvety crimson hue, with faint yellow striation in the throat. The flowers are very fragrant. Shown by Messrs. Maron and Sons, France. First-class certificate.

Cattleya Venus.—The result of a cross between *C. Iris* and *C. aurea*, this plant partakes of both parents, but more largely of the first-named. The lanceolate sepals and broader petals are of a deep orange golden hue, and the broad reflexing labellum is rich crimson striated with gold, the canary yellow column being very prominent. Shown by Mr. H. S. Goodson, Putney. First-class certificate.

Laelio-Cattleya Golden Oriole Goodson's variety. This is a charming improvement on the original variety. The dull crimson ground colour of the sepals and petals is marbled over with orange, the lip being a deeper crimson colour and comparatively broad, deep yellow venations running well into the throat. Shown by Mr. H. S. Goodson. Award of merit.

Oncidium incurvum.—A large plant carrying sixteen tall racemes was shown. The flowers are small, the colour being a mixture of purple and white. They are borne rather loosely in compound racemes, which have the habit of incurving towards the centre of the plant. Shown by Baron Schröder, The Dell, Egham. Award of merit.

Sophro-Cattleya Sara Westonbirt variety.—The plant exhibited was a very small one carrying a single flower. The sepals are lanceolate and pointed, and stand out stiffly from the centre. The ovate petals are very broad with plain margins, the colour of both sepals and petals being dull purple. The labellum is small, of rich crimson purple, with a beautiful deep golden throat. Shown by Lieutenant-Colonel G. L. Holford. Award of merit.

Nepenthes Dr. John Macfarlane.—This handsome hybrid is the result of crossing *N. sanguinea* and *N. Curtisii superba*, from both of which it is quite distinct. The foliage is distinctly broad and leathery to the touch, the depending pitchers, which are among the largest of their kind, being of a blood red externally. The broad, deeply-lobed recurving rim is of yellow and crimson, and in strong contrast to the mottled character of the visible interior of the pitchers. From Messrs. James Veitch and Sons, Limited, Chelsea. First-class certificate.

Pennisetum japonicum.—A distinct, elegant and ornamental Grass, quite hardy and of perennial character. In some respects the established

clumps may be likened to the graceful *Eulalias*, and the brownish-white-tipped inflorescences of columnar outline render the species exceedingly attractive and beautiful. From Mr. Amos Perry, Hardy Plant Farm, Enfield. Award of merit.

Selaginella emilliana aurea.—A pleasing variety with leafage of a golden tint. The variety is of sub-erect habit, the fronds not more than 6 inches in length and of extreme beauty, by reason of the delicate tracery which characterises the plant. From Messrs. J. Hill and Son, Edmonton. Award of merit.

Carnation Winona.—An American variety of a clear rose pink shade, the flowers emitting a pleasing if delicate fragrance. From Messrs. R. H. Bath, Limited, Wisbech. Award of merit.

Viola cornuta purpurea.—We can only describe this charming variety as an ideal bedding plant, one well suited for massing in beds or borders, free in growth and profuse in flowering. It is not more than 6 inches high, of the true tufted type and rarely, if ever, producing seeds. The plant is content to flower for months together, in this way creating a picture of clear violet-purple that is not rightly conveyed by the varietal name given above. From Messrs. Gunn and Sons, Olton, Warwickshire. Award of merit.

NEW DAHLIAS

The following new Dahlias came before a joint committee of the National Dahlia Society and the Royal Horticultural Society, and are thus entitled to the first-class certificate of the former and the award of merit of the latter body in each instance:

Elsie Turner (Cactus).—A yellow buff with pale fawn shading.

El Vino (Show).—The well-formed flower is of rosy lilac hue and very distinct. From Mr. S. Mortimer, Farnham, Surrey.

Monarch (Cactus).—The flower is of a uniform pale orange with gold centre. From Mr. J. Burrell, Cambridge.

Nellie Riding (Cactus).—A very showy variety of crimson red tone, lightly touched white at the tips. From Mr. J. T. West, Brentwood.

Norah Reynolds (Pompon).—Small, well-formed flower of reddish hue.

Lady Bountiful (Single).—Rosy lilac, the base of the petals crimson. From Mr. M. V. Seale, Sevenoaks.

Wellington (Cactus).—Self crimson, save for the white-tipped florets.

Satisfaction (Cactus).—A clear and beautiful rose pink shade, approaching to white at the centre.

Saxonia (Cactus).—The flower is of ruby or wine colour, with purplish tips. This set of three were exhibited by Messrs. James Stredwick and Sons, St. Leonards.

NEW FRUITS.

Grape Prince of Wales.—This is a high-class sport from the well-known variety *Mrs. Pince*, and can scarcely be regarded as a new variety, as it was shown last year and received an award of merit. The berries are large, black and slightly oval, and finish remarkably well, the bunches being long and tapering. The flavour is brisk and slightly Muscat. Exhibited by the

Royal Horticultural Society and granted a first-class certificate by the fruit and vegetable committee.

Apple Renown.—This is the result of a cross between Peasgood's Nonsuch and Cox's Orange Pippin. In appearance it partakes of the first-named most, but it has a considerable amount of the fine flavour of Cox's. The flesh is pale yellow and very firm, and it should prove a good Apple, both for dessert or culinary purposes, although it may be regarded as too large for the first-named purpose. Shown by Colonel Archer Houlton, Welford Park, Newbury (gardener, Mr. Charles Koss). Award of merit.

MISCELLANEOUS.

THE LEAF-CUTTER BEE AT WORK.

If you allow it to go about its business undisturbed it is as likely as not to commence operations in the window-casing inside the room, and then you can watch it daily bringing its clean-cut sections of Rose leaves wherewith to line its tunnel.



THE WORK OF THE LEAF-CUTTER BEE.

For that is what it cuts the Rose leaves for; and there are few more marvellous things in Nature than the ingenuity with which it cuts the sections of different shapes, using an oval one to line the bottom of the hole, so that when rolled it will make a sort of cap to line the extreme end. Next to that, and until the tunnel is lined throughout the length, semi-circular pieces are used, which roll neatly into mere tubes, without any surplus to make an end cap; and finally, it seals the top with a circular piece which fits as neatly as if it had been stamped out with a die. Of these it often uses four or five, in layers one upon the other, till the lodge is tiled to its satisfaction. One tunnel may contain five or six of these cells, each capped, lined and sealed with the same care, and each full of pollen-and-honey food for the young bee larva which will emerge from the egg which is laid in every cell. Finally the mouth of the tunnel is stopped up with earth.—*Country Life*.

BLACKBERRY PRESERVE AND ROWAN BERRY JELLY.

At this season of the year, when Blackberries are plentiful, the following recipe can be highly recommended for an excellent preserve made from this wild native fruit. Take any quantity of ripe Blackberries and simmer them in a preserving pan over the fire until quite tender and juicy. Remove them from the fire and rub them through a hair sieve or coarse cloth, so as to get

all the pulp and juice through but extract the seeds. To every pound of pulp and juice add half a pound of crushed lump sugar, and boil quickly for half-an-hour. The preserve is much improved by adding a few Sloes to the Blackberries, which must be simmered with them, and also rubbed through the sieve, just to give a zest to the flavour; but not more in proportion than half a pound of Sloes to five pounds of Blackberries. The jelly made from the berries of the Rowan tree is a favourite delicacy in the North of England, but is very much condemned in Switzerland, where it is said that any concoction from the juice of these berries will "take away the memory." A myth, of course, as it is freely used in Scotland, and Scotch memories are not usually considered short. This jelly can be made in the same way as in the old recipe for American Crab jelly, and is used for dessert with biscuits, or as a substitute for Red Currant jelly with roast mutton. In the "North Country" it is usually taken in preference when handed at the same time. It does not seem to make its way South, as it is never seen in London.

MARTLET, in *Country Life*.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Herbaceous borders (*E. A. Vandets, Zeist, Holland*).—In England the herbaceous border is most usually reserved for perennial herbaceous plants; that is, plants which live for several years and produce flowering stems each year. In such a border the annuals and other plants raised each year from seeds rarely find a place, but are grown with a very great variety of other plants, as annuals, biennials and those tender subjects like the Dahlia, in what we recognise as the "mixed border." In the "mixed border" all kinds of plants may be used very effectively, from the annual of 1 inch or 2 inches in height to the tallest-growing perennials, such as Hollyhocks. In this border, too, a display of the Rambler Roses is quite permissible, and these in early summer make a capital show. Please write again if you think we can further assist you by giving a list of suitable plants in either case.

Stocks falling (*W. McGain*).—The Stocks have been attacked by a fungus growth about the stem at ground level and slightly below, and the fungus encompassing the stem and permeating the tissues causes the collapse of the plant. The fungus growth is hastened by damp about the surface and deep planting. Keeping the plants moderately dry and giving an occasional dusting of air-slaked lime on the ground surface may prove helpful in the future. For the open garden, if you cannot plant in a fresh position, another year give a good winter dressing of lime and avoid manure.

Dahlias in pots (*A. G. Gordon*).—Pots 10 inches in diameter across their tops usually suffice for pot Dahlias. The soil should be three parts good turfy loam, the rest being old hot-bed manure and sharp white sand, well mixed and made fairly firm in the pots. Any Pompon varieties will do well, and a few good Cactus forms are Amos Perry, Mary Service, J. B. Riding, Mont Blanc, Mrs. Carter Page and J. W. Wilkinson. But you would perhaps find the Pompon Cactus section better suited for pot culture; any of these should do well in pots. To have Dahlias in flower by the middle of July, you should get

plants in during April and pot up under glass during May. Your *Nigella* seed-capsules when ripe should give seed that will reproduce the variety true next year.

Bedding Pelargoniums diseased (*W. J. C.*). Your bedding Pelargoniums are attacked by what is known as the Pelargonium stem-rot, a fungus which bears the name of *Fusarium pelargonii*. It makes its home in the tissues of the plant, so that a good deal of the mischief is done before there is any external sign of the disease. It is of comparatively recent date, for it was first described by Dr. Cooke twelve years ago, since when it has gradually become more destructive. Whether the spores remain in the soil is at least an open question, but all diseased plants must be at once burned, and it would be decidedly risky to propagate from those that have been associated with them, as some, at least, may contain the germs of the disease. At first this pest was principally found on highly-fertilized plants, and it is probable that the softened condition of the tissues set up by stimulants will predispose those so treated to the attacks of this fungus. Deep planting, too, encourages the disease. Spraying the plants with Bordeaux mixture has been recommended with variable results.

TREES AND SHRUBS.

Cultivation of *Metrosideros floribunda* (*Colonel W. E. G.*).—This is a native of Australia, and in common with plants from that Continent it needs the protection of a greenhouse in this country. The treatment given to the general run of hard-wooded plants will suit it well; that is to say, it needs during the winter a structure in which the thermometer ranges from 45° to 55°. The roots are of a rather delicate nature, so that even during the winter the soil must not be allowed to get too dry; at the same time an excess of moisture must be avoided. With regard to water it should be treated much the same as an Indian Azalea. Then it usually flowers during the spring and early summer months, and if any shortening back of straggling shoots is necessary this should be done directly the flowers are past. As soon as the cut-back portions begin to break into new growth is the time to re-pot, that is, if re-potting is necessary; but the *Metrosideros* may be kept in good condition for years without being re-potted. In that case the roots should be occasionally given a gentle stimulant, such as weak liquid manure and soot-water mixed, during the summer months. If re-potting is to be done, a mixture of two parts of peat to one part of loam and nearly half a part of sand will form a suitable compost. After potting, the plants must be kept in the greenhouse till the roots take possession of the new soil, after which they may during the summer be stood out of doors, taking care that they are well supplied with water. It may be mentioned that though the name of *Metrosideros floribunda* is to be found in gardening books, it is not now used by botanists, who give it the name of *Callistemon salignus*.

Soil for Azaleas (*Rema*).—The Azaleas concerning which you enquire will thrive equally well in peat alone, or a mixture of peat and leaf-mould. A mixture of sandy loam with the peat will be also equally suitable for them.

Rhododendron flowers for inspection (*J. A.*).—We can find no trace whatever of fungus on the Rhododendron leaves, but on the upper surface they are studded with minute particles of a wax-like secretion, which is by no means unknown among Rhododendrons and will do no harm.

Specimen (*Malvern*).—Four good deciduous trees for specimens, in addition to those you have, are *Crataegus Crus galli* prunifolia, *Rubinia decaisneana*, *Æsculus carnea* Briotti and *Ginkgo biloba* (the Maidenhair Tree). The first three are flowering trees, while the first-named fruits well in autumn and the leaves take on brilliant tints previous to falling. The Maidenhair Tree is a very interesting and ornamental subject, but of rather slow growth when young. If you think it too slow for you, *Pyrus spectabilis* fl.-pl. is an excellent flowering tree, while *P. baccata* flowers and fruits well. You omitted to enclose your name and address.

Information about Wistarias (*F. S. M.*).—All the Wistarias named will grow well if trained to a high east wall, but we are afraid that they would not flower in a satisfactory manner. Presumably the plants will get the early morning sun, and in the event of sharp spring frosts the flower-buds are sometimes injured by the bright sun shining on them when frozen. This applies particularly to *W. sinensis*, for *W. multiflora*, being later in blooming, is not so liable to injury. We should be inclined to try a plant of *W. multiflora*, while other climbing and wall plants likely to flower well under the conditions named are: *Forsythia suspensa*, *Hydrangea petiolaris*

(*volubilis*), *Pyrus* (*Cydonia*) *japonica* in variety, *Jasminum nudiflorum*, *Crataegus Pyracantha* and *Viburnum plicatum*, which, given the protection of a wall, will soon mount upward.

ROSE GARDEN.

Rose plants dying (*Dorothy W.*).—The larger of the two plants sent was, in our opinion, dead, or nearly so, when planted. Its roots are quite black. Probably the plants had been injured by frost before you received them, and they would not show this in the wood all at once. The small plant, presumably of Liberty, had healthy-looking roots, and we can only believe its condition was owing to its very small size and weakly growth. It would have been best if the plants had been hard pruned the first year, cutting them down to within 1 inch or 2 inches from the ground. Roses of this description always turn out best when this is done. They may have suffered after planting. It is always best to go over the beds about a week after planting and make the soil firm against their roots by pressing it with the heel; and if planted in spring some water should be afforded. We also noticed that the roots had not been trimmed. In the large plant these should have been shortened considerably. The best plan would be, as several plants are dying, to replant the bed in October or November, and then make sure that the roots when cut are white and healthy-looking.

Rose blooms per post (*E. T. Barrett*). As everyone knows, the Rose is not a good flower to last when cut, but it can be considerably aided if some simple rules are adhered to, and this is especially necessary when one has to send Roses a long journey per post. The flowers should be cut in the early morning, say, before seven o'clock, and immediately placed in a large vessel of water with their stems well in the water. Place them in a cellar or other cool place in the dark and allow the flowers to remain there until the evening. In packing them for post flat boxes should be used, those about 3 inches deep being the best. Some long grass is placed in the bottom of the box and the sides lined with thin paper. A little mound of grass is laid at one end and the flowers placed one at a time thereon, and when the row is finished start another, and so on until the box is full. A slight sprinkling with water will suffice, and then the paper is folded over the blooms and a thin piece of stick placed across close on to the stalks of the last row. This stick should fit tight into the sides of the box, and if so it prevents the blooms from moving. The box may be enclosed in brown paper if preferred. The great secret of success is to have the flowers about half open, and also to see that they are well charged with water before packing, and only place one layer in a box.

Pot Roses and their treatment (*J. T. Cross*). The best success is obtained from pot Rose culture when a greenhouse can be utilised entirely for them, but when they have to be grown with other subjects the matter is rather more difficult. We do not know what convenience you have for growing pot Roses, but as you ask for twelve names only we presume you will grow them in a mixed greenhouse. The best time to procure plants would be in October or November. These should be what are known as extra sized in 8-inch pots. Such plants are practically ready for forcing. All you would have to do would be to remove about an inch or two of the surface soil and replace this with some loam and well-decayed manure in equal parts. Having done this, keep the plants in a cold pit until ready for starting them into growth. We recommend pruning them in February, but they may be pruned earlier if you desire them to bloom early. It usually takes about twelve weeks from the pruning to the blooming. We advise chiefly Hybrid Teas with a few Hybrid Perpetuals. The Hybrid Teas should be pruned to about 12 inches from the top of pot, the Hybrid Perpetuals to about 6 inches. Where possible, prune to an eye pointing in an outward direction. At first very little water is needed, but plants should be syringed on bright mornings. When new growths are about 1 inch long give the plants a good soaking with water, and after this keep them evenly moist, but not too much so. Watering pot Roses is a most important detail. It is best to tap the pots with a stick, and if they give out a bell-like sound water should be afforded. It is in the early stages of growth that most care is needed. When the buds begin to form and foliage is ample, they can utilise much more water, and would

suffer if it be withheld. Liquid manure may be given when the bloom buds are about as large as Peas, and continued once a week until colour is seen. Good liquid manure can be made from cow manure and soot. Put a bushel of the former and a peck of the latter into separate bags and drop them in a tank or cask holding about 50 gallons of water. When soaked two or three days the liquid can be mixed with twice the quantity of water. As growths develop, tie them to small sticks, so that a uniform disposal of the shoots is maintained. When green fly or aphids is seen fumigate with Tobacco. This may be safely done by using Tobacco sheets or fumers, one of which is sufficient for 1,000 cubic feet. Repeat the fumigation whenever required. Do not allow green fly to gain much hold, as it makes the plants in a very dirty state unless checked. Mildew in very troublesome in pot Rose culture, but this may be checked by syringing the foliage with carbolic soap, half a bar of Lifebuoy soap to 3 gallons of soft water, applying it with a fine sprayer such as an Ahol syringe. Be careful with the temperature. Start with about 45° at night, rising to 50° to 55° by day. As the growths advance, 50° to 55° by night would be about right, and 55° to 60° by day. If sun comes out brightly the glass will rise higher than this, but it will do no harm if the plants have been syringed and a nice moist atmosphere maintained. A dry, parched atmosphere is what pot Roses object to, and this is a sure encouragement to red spider. When this pest appears the Roses soon lose all their foliage and are considerably injured. We hope to have articles dealing with pot Rose culture before the time arrives. Twelve good varieties to start with would be: Hybrid Teas—Mme. Abel Chateaux, Richmond, Antoine Riviere, Dean Hole, Caroline Testout, Lady Battersea, Joseph Hill, Le Progrès and Florence Pemberton. Hybrid Perpetuals—Frau Karl Druschki, Ulrich Brunner and Mrs. John Laing.

Red rust on foliage (Kames).—This is a very common fungoid pest which visits most Rose gardens in late summer, and is especially troublesome upon the red-flowered and thorny-wooded Hybrid Perpetuals. It is very common also on the wild Briar in the hedgerows. To prevent this disease appearing another season it is necessary that all leaves bearing the winter spores should be collected and burned. If every leaf from the bushes and also those decayed on the ground were collected and destroyed, there would be little or no trouble next season. It is well in the spring, just as the foliage is expanding, to spray them with potassium sulphide, but there is little use in attempting any remedial measures now beyond destroying the foliage as it drops. If the Roses are not too old, it would be a good plan to transplant them in October to a new position, or replant them in the old position after well trenching the soil.

Ramblers for successional flowering (Vosbig).—We have pleasure in giving the names of some of the best ramblers for your arches, and have grouped them in three sections, viz., early, medium and late. Some of these in the late section would flower both early and late. Early: Carmine Pillar, Ruby Queen, Electra, Euphrosyne and Waltham Pride. Medium: Gardenia, Rubin, Alberic Barbier and René André. Late: Hiawatha, Dorothy Perkins, Lady Gay, Blush Rambler, Longworth Rambler, Mme. Alfred Carrière and Gruss an Teplitz. Dark red Roses for bedding. — This is a colour of which our collections are at present very meagrely supplied, but the following are the best: Liberty, Richmond, Princesse de Sagan, *Louis van Houtte, *Victor Hugo, *Duke of Wellington, *Alfred K. Williams, *Hugh Dickson, *Ella Gordon, *Charles Lefebvre, Charlotte Klemm and Cramoisis Supérieure. Those marked with an asterisk are Hybrid Perpetuals and would not be so free-flowering in the autumn; but, unfortunately, there are no good dark bedding Hybrid Teas beyond those we have named. Gruss an Teplitz would be a grand sort, only its growths are very strong. It could be pegged down or transplanted each year and replanted in the spring. This has a tendency to keep it dwarf, and when this can be done it is one of the best dark bedding Roses. Some of the Hybrid Teas and Chinas named are not dark red, but they are the nearest we can name.

FRUIT GARDEN.

Black Alicante Grapes splitting (Chas. W.).—The split berries, we notice, are smaller than the normal healthy ones. We think the former must have been affected in their younger stage by a touch of mildew, which interfered with their growth and hardened the outer skin, preventing it distending as growth developed, hence the splitting, especially after heavy watering. The disease on the berries is also, we think, the result of an attack of some species of mildew. We advise you to cut out all the split berries and the worst of the diseased ones, and then dust the bunches carefully with flowers of sulphur when dry and blow it off again with a pair of bellows at the end of the third day; it will not hurt the Grapes if done with care. This application of sulphur will arrest any further progress of the disease, thus also preventing its spreading to the other Vines. The Vine leaves sent

have the appearance of having been burnt some hot, sunny morning before adequate air had been given to the viney. Ventilate freely in warm weather now the Grapes are colouring and putting on their last swelling. Leave a notch of air on the ventilators top and bottom all night, and provide slight heat in the pipes to cause buoyancy and help the circulation of air.

Manure for fruit trees (Vosbig).—A good dressing in the autumn with basic slag would be an economical and efficient fertiliser for your fruit trees, and this could be followed in February by a liberal application of bone-meal. Fruits require good phosphatic manures, and the above would supply this. As the soil is light, some cow manure placed on the surface in autumn and dug in in spring would assist it to retain moisture.

Caterpillars on Gooseberry and Currant trees (Triston).—Your Gooseberry and Currant trees are apparently attacked by the saw-fly caterpillar. To prevent an attack the best way of destroying them is by the removal in autumn or winter of 3 inches of the surface soil from under the trees, where most of the larvae are concealed, burning the same or burying it deeply. Burn all cuttings and decayed leaves as well, afterwards adding a top-dressing of new soil and manure in equal proportions to make up for that taken away.

Melons to fruit in latter half of September (Ernest Moon).—Melons take from twelve to fourteen weeks from the time the seed is sown until the fruit is ripe; therefore, to have them ripe at the latter part of September, the seed should be sown about June 12. Early in September it can be ascertained whether the fruit is a trifle forward or late for the time it is wanted by its size and appearance, and if too late it is an easy matter at that time of the year to apply a higher temperature to hasten it on, or, on the other hand, to retain its growth a little by the withholding of heat. Varieties: Hero of Lockinge, white flesh; Blenheim Orange, scarlet; Windsor Castle, scarlet.

Young Grapes decaying (H. S. O. B.).—Your Grapes are suffering from a bad attack of a disease which is termed "scalding." It is called by this name because the berries of the Grapes suffering from its effects have the appearance of having been parboiled or scalded. It is caused through late or imperfect ventilation on some bright and sunny morning while the internal atmosphere and even the berries are saturated with moisture. To check its ravages now and to prevent its recurrence next year, recourse must be had to freer ventilation, especially at the stage of growth (stoning) your Grapes are now at. A little chink of air should also be left on all night (both top and bottom ventilators), and it is a great advantage to have a little heat in the pipes at night. This keeps the air constantly moving and prevents the deposit of moisture on the berries.

Peach and Nectarine trees in a cold house not setting their fruit (M. E. Dobbs).—The primary cause of your young Peach and Nectarine trees not setting their fruit freely is their making so rampant and strong a growth, which it is difficult and almost impossible to ripen properly. As a consequence the fruit-buds are not properly developed and matured, the result being that the flowers are weak and generally devoid of abundance of healthy, strong pollen. This is also the cause of split stones. We advise you to lift and replant your trees towards the end of October, or as soon as they have cast their leaves, adding some maiden turf loam and a good sprinkling of lime to the soil, but no manure. The largest roots should be shortened by one-third their length and the others slightly shortened. The replanting should be carried out in dry weather, and care must be taken to place the soil carefully and firmly round the roots with the hands as the work proceeds, finishing by giving the trees a good soaking of water. The result will be that you will have as good a crop next year as you would had the trees not been lifted, and in addition you will have laid a foundation for the subsequent constant fertility of your trees. During fine weather from now onwards the trees must be exposed to ample and free circulation of air day and night, and as soon as the fruit is gathered open the ventilators wide and let them remain so night and day, unless the weather should be very rough. It would be better for the trees if all the roof-sashes could be taken off and remain off during the winter, and so expose the trees to the beneficial action of the weather. Where the drainage is good, Peaches like plenty of water at the roots while they are growing freely. As a rule a thorough soaking of the soil once every ten days will suffice. It is a serious mistake to let water run on the border through a hose for an indefinite time, as it not only chills the soil, but it impoverishes it as well by washing away many fertilising ingredients. During the summer it is a good plan to place a mulch of rotten manure over the surface of the soil as far as the roots extend. This not only conserves the moisture in the soil, but also nourishes the trees and helps considerably to lessen the volume of water required by them. The time of flowering and setting is the most precarious and anxious time in the whole year in the cultivation of the Peach. The best thing to do is to try and imitate Nature. The Peach when grown out of doors is never known to drop its buds or seldom to have split stones; therefore expose your trees to all weathers during winter, excepting, of course, when it may be very stormy and over-wet. Continue this treatment until the trees come into bloom, and even then keep the houses cool with a little air on top and bottom day and night. If danger is feared from hard frost let the roof and

sides be covered with mats or some other material, but do not quite close the ventilators. The temperature must be kept low while the trees are in bloom, and each bloom should be fertilised by the pollen of another being placed against the stigma of the flower operated on. As soon as the fruit is properly set the house may be kept warmer and less freely ventilated. All your Nectarines are good varieties. You might substitute Barrington Peach (a fine late variety) for Elruge Nectarine, also Violette Hative Peach for Early Grossa Mignonne.

Stone splitting in Peaches (H. P. B.).—This is a common complaint and, from observations we have made, seems more prevalent than usual this year. The cause is imperfect fertilisation while the trees were in bloom. The most effectual remedy to adopt is to take a hive of bees into the Peach house at the time the trees are in flower, or, failing this, have a rabbit's tail tied to a stick and draw it gently over the flowers. This will help to secure the pollen coming in contact with the stigmas of the flowers, without which fertilisation is impossible. Heavy rains are the cause of the Plums cracking.

Nectarines and Tomatoes (Alpha).—The cause of split stones in Nectarines is defective fertilisation of the flowers. You should carefully inoculate every flower by removing some pollen from the anthers and placing it in contact with the stigma, or if you keep bees place a hive in the house at the time the trees are in flower. Possibly, also, your soil may be deficient in lime. You would be safe in applying some to the soil this winter, as it is indispensable to the successful growth of all stone fruits. The weather must be more or less responsible for the Tomatoes splitting, alternating so frequently between wet and fine and cold and warm, and possibly too much moisture at the roots. The contracting and hardening of the skins of the Tomatoes and their turning a dirty brown or yellow colour are no doubt the result of an attack of Tomato fungus. This is brought about generally by planting in the same soil several times over, so that the soil becomes Tomato sick and often inoculated with the spawn of the fungus. Be sure and plant in new soil next year, adding a liberal sprinkling of lime, and do not plant too thickly in the ground.

Plum trees not bearing and how to prune them (Plum Trees).—Plum trees growing on walls are made of many main branches. It will simplify matters if we endeavour to show you how to prune one of the main branches, because each branch has to be treated in the same way. Start at the bottom of each of the main branches and cut back all the side shoots which grow from them to within five leaves of the main branch from which they start. When you come to the end or leading shoot, which may be anything from 1 foot to 2 feet long, cut a quarter of its length back. This is called summer pruning, and should have been done at the end of July, and it is all that is necessary to do at the present time. Winter pruning consists chiefly in cutting back the same side shoots which have been cut at summer pruning, this time to within two buds of their base. This will result in fruit buds forming at the base of these cut side shoots during the following summer, and which will or should bear fruit the year after. The shoot at the end of the main branch may still be further shortened to half its original length. Your trees may be growing too strong or making gross growth which cannot be ripened. In that case root pruning in autumn must be resorted to.

KITCHEN GARDEN.

Transplanting old Asparagus (F. T.).—Very poor success is likely to attend the transplanting of old stools of Asparagus. The roots of the old plants have gone deep and wide, and, however carefully lifted, will get much broken. Generally very old plants are lifted and blocked close together in soil in a warm, dark place during the winter, where they will easily force shoots for cutting. When done the roots are thrown away. By far your best course is to have a piece of ground trenched 2 feet deep in the winter, have added to it one deep and one surface dressing of manure, and also add to each square yard 1oz. of fine bone-dust. Then in March get from a nursery strong three year old roots and plant them in trenches 6 inches wide and 4 inches deep, the rows 2 feet apart and the roots 20 inches apart in the rows. In this way you will get a bed to last for years.

Onions diseased (T. E., Llandilo).—Onions and their allies, the Leeks, Chives, &c., are liable to be much injured by the growth on them of several kinds of parasitic fungi. All the fungi bore into and through the tissues of the host plant, hence no external applications are of much use. The only thing you can do with any prospect of success will be to cut off the worst of the leaves and burn them, and then apply a dusting of a mixture of quicklime and sulphur in equal quantities to the plant, allowing it to remain on for three days, then syringing it off,

and when dry hoe and rake into the ground; it will help to destroy any spawn which may be there. The common name of the fungus is Onion mildew (*Peronospora schleideniana*). The disease, no doubt, is brought about in your case by some local cause of which we can have no cognisance. It may be that its mycelium has been laying dormant in your ground for some time, only waiting for favourable atmospheric conditions for its development. The best thing to do to prevent its recurrence in future is, we think, to trench the land deeply in order to aerate and sweeten it before planting Onions again, manuring the bottom spit with farmyard manure and the top spit with a liberal application of lime and using the hoe freely in summer while the plants are growing.

Clubbing in the Cabbage family (*H. Waters*).—The club-root of the Cabbage is due to one of the slime fungi called Plasmodiophora Brassicæ. The spores of this organism are in the soil, and under suitable conditions germinate and make their way into the root of some plant belonging to the Cabbage family. Practically all plants belonging to this family are attacked, both among vegetables and flowers, the Wallflower and the Stock suffering as much as the Turnip and the Radish, as well as weeds such as Charlock and Shepherd's Purse. When the parasite has entered the root it sets up irritation, causing a flow of sap towards the infected spot and a multiplication of the cells in that part, so that a large "club" is produced. The cells of this part become filled with the rapidly-multiplying organism, which derives its nourishment from the host, and eventually the root decays, setting the spores (into which form the pest has now gone) free in the soil ready to infect another cruciferous plant. The spores are able to live for at least four years in the soil. The method of treatment is to endeavour to kill the spores, and for this probably the best thing is quicklime applied in the autumn. Vaporite is also recommended. As far as possible avoid growing cruciferous crops on ground known to be infected for at least four years. Destroy by fire all plants clubbed. Do not throw them on the rubbish heap, give them to pigs or allow them to decay in the ground, and keep the ground free of cruciferous weeds. It is said that the most usual time for infection to occur is during the first six weeks of the life of the plant, and therefore very particular attention should be paid to seeing that the seed-bed is free of the fungus spores. Plants which are affected should not, of course, be planted.

Lettuces all the year round (*A. M. B.*).—The chances of securing a long supply of Lettuces will depend very much on the climatic conditions of the East Coast of Ireland and something as to the quality of the soil, which you say is poor. A fairly moist climate if not cold should be much help to the growth of Lettuces over a long season outdoors; but fairly good soil well manured is also needful to create quick growth, as if the growth is slow plants either bolt early to seed or the leafage is hard. To begin the season sow seed in shallow pans or boxes in a warm frame in January, February and March of Paris White Cos and any good Cabbage Lettuce, such as All the Year Round or Tom Thumb. Make similar small sowings monthly outdoors during the spring and summer, and in September sow Hick's Hardy Green and Black-seeded Bath Cos Lettuces in a sheltered position, also some Cabbage Lettuces, and while planting some when strong enough in a warm position outdoors on sloping borders plant others in frames a few inches apart in rich soil, keeping them fairly close till well rooted. If you had heated frames, either by pipes or manure hotbeds, small Cabbage Lettuces might be had from March onward, but without heat it is very doubtful whether even a mild climate would allow Lettuces to heart during midwinter.

MISCELLANEOUS.

Vaporite (*R. W. A.*).—Vaporite is a proprietary compound, the composition of which is not revealed by the manufacturers, and, so far as we know, there is no analysis of it published. You might, if you liked, apply at the College laboratory in your town, but we do not know if the authorities would supply you with an analysis; probably not without a fee, at any rate.

Fungus (*F. H. N.*).—The fungus is the immature state of *Phallus impudicus*, a plant remarkable for its disgusting odour. It often, as in your case, grows near

decaying wood and habitations; sometimes it appears inside dwelling-houses. The only way to exterminate it is to remove it when seen in the young state, and to take away any decaying wood from the immediate neighbourhood of the house.

Books on laying out gardens (*Tyro*).—You may find what you want in a book entitled "The Book of Garden Designs," by Charles Thonger, price 2s. 9d., which can be obtained from the Publisher, 41, Wellington Street, Strand, London. You can also obtain from the same place "Garden Making," by Professor Bailey, price 4s. 4d.; this is by an American author. If you specially desire a quick-growing hedge plant, you will find the large-leaved Privet, which grows to a height of 6 feet and is very dense in two or three years, suitable. This needs clipping in summer and autumn; it is also very hardy. Plant in October or November. Take care to have the ground deeply dug 30 inches wide, and the soil finely broken; the plants should be 1 foot apart. It will be wise to cut back the new plants one-half the length of their shoots in the early spring; this will make the hedge dense at the bottom. You should start the relaying of your croquet and tennis lawn during October or November, as the soil becomes solid if well levelled and the turf well rooted by the following spring. When the turf is relaid, have a thin coating of fine soil well brushed in with a Birch broom after the relaying is complete, as this will do the grass good. When your turf is lifted, have the soil forked over several inches deep and finely broken. Have it evenly trodden over, but not rolled. See that it is perfectly levelled with the aid of a coarse iron rake. Use for that purpose, if you can get one, a bricklayer's level, or a spirit level stood on a long strip of perfectly straight wood. Before relaying the turves, lay each one out on a table and have all coarse weeds pulled out with a steel table-fork, as it is the best opportunity to have these weeds removed.

Names of plants.—*C. E. B.*,—1, Pelargonium album; 2, Polygonum polystachyum; 3, Maurandya erubescens.—*Miss M. E. Thomson*.—Phygelius capensis.—*A. L. Ford*.—Lobelia cardinalis and Helenium autumnale cupreum.—*M. Thonless*.—Phytolacca acinosa. Birds eat the fruits, so we do not think they are poisonous.—*E. N. Orsett*.—Cuphea micropetala.—*O. S.*—Artemisia absinthium (common Wormwood).

Names of fruit.—*R. N. R.*,—1, Plum Lawson's Gage; 2, Aston Town; 3, Duchess of Oldenburg; 4, Nelson's Codlin; 5 and 6, Wellington; 7, Flanders Pippin; 8, Calville Rouge; 9, Lamb Abbey Pearmain; 10, Tower of Glamis.—*W. J. B.*,—1, Gloria Mundi; 2, very close to Lord Derby, and not an improvement on it.—*D. C.*,—1, The Queen; 2, Warner's King; 3, Beauty of Bath; 4, Potts' Seedling; 5, Wellington; 6, Cellini Pippin; 7, Cox's Orange Pippin; 8, Monarch Plum.—*E. Quinton*,—1, Peasgood's Nonsuch; 2, Cox's Orange Pippin; 3, Colonel Vaughan.—*W. T.*,—1, Queen; 2, James Grievie; 3, King of the Pippins; 4, Sandringham; 5 and 6, Waltham Abbey Seedling.—*M. Millard*,—1, Cox's Orange Pippin; 2, King of the Pippins; 3, Bess Pool.—*J. R. D.*—John Apple.—*E. N. Orsett*.—Pears: 1, Conference; 2, Pitman's Duchess. Apples: 1 and 2, Gloria Mundi. Emperor Alexander and Gascoyne's Scarlet should be exhibited as cooking Apples only.—*E. C. Shoosmith*.—The Pear was rotten when it reached us.—*G. W. S.*—Beurré Capiaumont.

LEGAL POINTS.

Compensation, fixtures, &c. (*Barrow*).—As far as we can gather, you are merely living at home with your father, so that whatever rights there may be for compensation against the ground landlord must be asserted by your father under the Agricultural Holdings Acts; similarly as regards the removal of fixtures. It is quite possible, however, that the greenhouse referred to may be an ordinary movable vested in you; it depends on the degree of annexation. Also the answer to "*B. T. F.*" will throw some light on the situation.

Market gardener's compensation (*B. T. F.*).—There is such an Act as the Market Gardener's Compensation Act, 1895, a copy of which can be obtained from Messrs. Eyre and Spottiswoode, East Harding Street, E.C. The following are the chief points: It must have been agreed in writing that the holding shall be treated or let as a market garden, and if so agreed the tenant is entitled to compensation on quitting his holding, although such improvements may afterwards have been made without the landlord's special consent. The improvements comprise: (1) Planting of standard and other fruit trees and bushes permanently set out; (2) planting of Strawberry plants, Asparagus and other vegetable crops, and the erection or enlargement of buildings for the purpose of the business of a market gardener. He is further entitled to remove fixtures on

giving the landlord a month's notice (who can elect to take them at a valuation) and to compensation under the Agricultural Holdings Act, except so far as modified in the tenant's favour as above.

BOOKS.

The Insect Book.*—This little book, which is one of the series of "Country Handbooks" published by Mr. John Lane, is apparently a small and very much condensed edition of the larger work by the same author, "The Story of Insect Life." It is, of course, not written for the experienced entomologist; but as the author says, and his expectations should be justified, "it is believed that it will appeal to the merest tyro in entomology and those willing to learn something of the ways of the insect creation, and; as such, some useful mission will be served." It is, indeed, strange, considering how constantly we are brought into contact with insects, that the ordinary individual knows so little about them. They are not all as bad as the man in *Punch* who kept a turnpike gate. He was sorely puzzled, when a menagerie passed through his gate, to know under what heading of his scale of tolls he was to charge for the various animals. Having, at last, settled all to his satisfaction except the camel, he eventually came to the conclusion that he could not make any charge for it, "as it was a hinsect." Still, there are many persons at the present day whose knowledge of natural history is not much more accurate than that of the gate-keeper. No attempt is made to describe the various insects under their natural classification, but they are mentioned under the name of the locality in which they are most often found. The book is divided into six chapters—the first is an introduction; the second deals with the insects which are most commonly found in our gardens; the third, fourth and fifth with those of the water-side, woodland, meadows, heaths and lanes; and the sixth with our household insects. This method of arrangement has some advantages; it is easier to write about the insects in a chatty sort of way; but many of them—the common gnat, for instance—one would find difficult to localise in this manner. The author treats of it under "Garden Insects," yet it is a water insect for the greater part of its life. There are a large number of illustrations, many of which are life-size, others larger or smaller; but there is no indication as to whether a figure is natural size or not, which may be very misleading to the student. The figures, as a rule, are not first-rate. That of the burying beetle (Fig. 28) does not in any way show that the insect is ornamented with orange bands and spots; to all appearances it is simply a black insect. The common cockchafer, on the same page, is depicted much too large and clumsy, though the description says "our illustration is a remarkably good representation of the cockchafer," and no indication is given of its being larger than life-size. The caterpillar of the large white garden butterfly (Fig. 12) and that of the oak eggar moth (Fig. 25) do not show up well; they should not have had a dark leaf as a background. The representation of the house cricket (Fig. 36) is very quaint, but the legs are shown in a very unnatural position. The froghopper (Fig. 16) is drawn with its wings extended, a position in which it can be very seldom seen. When on a plant the insect always closes them tightly over its back, and if disturbed hops away so rapidly that it is impossible to see if it opens its wings or not. This little book is written in a very pleasant if discursive manner, and will no doubt have the effect, as the author hopes, of directing the attention of the reader to a deeper study of these interesting creatures.

* "The Insect Book." By W. Percival Westell, F.L.S., M.B.O.V.; 120 pp., 36 figs. John Lane. Price 3s. net.



THE NEW HYBRID TEA ROSE JOSEPH LOWE.



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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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SPRING BEDDING.

(First Prize Essay.)

IT is indeed strange, considering the wealth of suitable material available, that we do not find the practice of spring bedding more generally adopted and more varied in character, it being the exception rather than the rule to find gardens where anything beyond the ordinary is ever attempted. Thus we often find even large gardens where no pretence is made at making novel displays with spring-flowering plants—simply the same old varieties planted each year in the same style, and, in many cases, occupying the same beds as for years past. Small wonder the owners often vote spring bedding monotonous. Fortunately, my lot has always been cast in places where every encouragement was given to make the beds as attractive as possible at this season, and below I give combinations which have always found favour here and in previous situations I have held. Such well-known bulbous flowers as Scillas, Snowdrops and Crocuses are too well known and too frequently planted to need special mention here, one common mistake often noted being that of planting too thinly. Any of these to be really effective should be planted by the thousand, and the low prices at which they are now obtainable renders this possible even to those who have but slender incomes.

Dealing with the plants in alphabetical order, the first I would mention is the

ARABIS.

The value of the Rock Cresses should on no account be overlooked by the gardener who aims at having a good display in the early spring. The common variety, albida, is well known and makes a good carpet for Hyacinths, Tulips or Narcissi of all shades of colour, while the variegated variety may be used with telling effect for either of the dark shades found in Tulips or Hyacinths. Beautiful as the old single varieties are, they are now for most purposes eclipsed by the double white variety of recent introduction. This is produced from cuttings, and grows equally as freely as the old alpina. The foliage is a trifle broader, the flowers somewhat resembling a small Stock or Lily of the Valley, for which it makes an excellent substitute, lasting well in a cut state.

Its use, either planted in large breadths or used as a carpet for bulbs, can scarcely be over-estimated. Various combinations will suggest themselves to an intelligent reader. The various colours now obtainable in

AUBRIETIAS

allows the spring gardener more scope than was possible a few years ago. A good collection of named varieties should find a place in every garden having any pretence at being up-to-date. Round beds of Tulip La Candeur with Aubrietia Dr. Mules found many admirers here

last spring, as also did Tulip Couleur Ponceau, having a groundwork of the lovely flesh-coloured variety Moerheimii.

It should be remembered in using any of the Rock Cresses that care must be taken to plant very thickly, in order that a good carpet may be assured at flowering time; blanks here and there often spoil what would otherwise have been very beautiful effects. Aubrietias come fairly true from seed, but personally I prefer division of roots.

DAISIES.

These are not used so frequently as formerly, but their claims for spring bedding cannot be easily passed by. Used either in mixture or massed in separate colours they form at once an attractive bed, but, excepting for very small beds, I should hesitate to use them too freely, being too stiff, excepting when used as a carpet for other bulbs.

MYOSOTIS.

These favourite flowers are quite indispensable where spring bedding is carried out, the colours harmonising or contrasting very favourably with most bulbs. The best yet under my notice is Star of Love, which grows only 3 inches or 4 inches high, and produces a mass of very pretty azure blue flowers. It makes an admirable setting for Tulips, the dwarf habit allowing the foliage and stems of these to be seen to advantage. Tulip La Candeur, Murillo or Rex rubrum, planted 1 foot apart, carpeted with this makes a splendid bed. Myosotis also does well associated with Narcissi when these are not planted too thickly, preference being given to the white or cream single varieties, the doubles not being so suitable for bedding. In addition to Star of Love, other good varieties are Victoria, Perfection and dissitiflora, each growing from 6 inches to 1 foot, the latter being very early-flowering, while for damp places, where little else will grow, the variety palustris will flourish like a weed. Having suffered considerably from rogues, or got hold of an indifferent stock at times, I have now given up raising Star of Love from seed, relying entirely on division of roots in June.

PRIMROSES AND POLYANTHUSES.

In many gardens there has been quite a boom in the use of these of late years, and rightly so, for few or our spring-flowering plants offer so wide a range of colour, together with fragrance of bloom, as may be found in a good strain of these.

I find the best results are obtained by using them in beds of distinct colours, as by so doing we are able to arrange the colours so that they do not clash with other beds.

Beds of yellow and orange shades look well with Tulip Yellow Prince, which, in addition to its sweetly-scented flowers, has variegated foliage, which makes the bed attractive long before coming into flower. Beds of white and cream look well with red or scarlet Tulips, while for a bed of mixed varieties nothing excels Keizer's Kroon dotted 1½ feet apart.

PANSIES AND VIOLAS.

These are especially well suited for spring bedding, coming into bloom early and remaining

in full beauty until it is safe to put the very tenderest summer bedding plants out.

The Cliveden varieties, white, blue and yellow, although producing rather small flowers, are very floriferous and well adapted for bedding purposes, being excellent for using with Tulips, choosing colours of suitable shades.

The show and fancies, although not quite so free-flowering, when obtained from a good source may always be relied on to produce extraordinary large flowers in the most fascinating shades and markings. A pretty bed is produced by planting the variety Beaconsfield with a border of *Santolina incana*, dotted with May-flowering Tulips.

SILENES.

For producing a mass of flowers in late spring few excel these, of which both double and single forms in white or pink are obtainable. They all flower later than most spring flowers, and for this reason their use should be confined only to those beds not required for filling with summer occupants until June is well in. We use the variety *pendula compacta rosea*, and find it useful for carpeting beds of Parrot or May-flowering Tulips, thereby making that portion of the garden gay when others are either past their best or not sufficiently forward to be attractive.

WALLFLOWERS.

There is no need to dilate on the use of these; their value for supplying colour and fragrance in early spring is generally recognised. I am no advocate for an indiscriminate mixture of colours, preferring beds either of one variety or a careful arrangement of colours to harmonise with other surroundings. The pale creamy flowers of Primrose Dame, planted alternately with Ruby Gem and edged with *Myosotis*, make a nice bed, providing it be sufficiently large to give effect to all colours.

Another bed may be planted with Belvoir Castle as a centre; next this three rows of the dark crimson variety Vulcan, which when obtained true is certainly the best of its shade; finishing with a double row of *Pyrethrum aureum* planted thick enough to make a bold edging. A few white Tulips among the dark Wallflowers, and Keizer's Kroon among the yellows adds to the appearance of the bed. Eastern Queen with Tulip *La Reine*, Harbinger with Tulip *Chrysolora*, or the Dwarf Blood Red with Tulip Cottage Maid are each very pleasing. For narrow borders, where more than one colour is desired, a back row of Vulcan, with Canary Bird next and a front row of Primrose King, edged with *Myosotis*, is very pretty, a few Parrot Tulips intermixed taking away any suspicion of stiffness.

NARCISSI.

I do not favour these in beds, preferring to see them naturalised under trees or in clumps in the banks, although I admit many pleasing combinations may be made by associating the single cream or white varieties with the dwarf-growing *Myosotis*, care being taken not to unduly crowd the bulbs in the beds.

ANEMONES.

The brilliant colours of these, produced in early spring at the time when flowers are scarce, make them specially welcome. They may safely be planted any time from October to February, either in separate beds or used as a carpet to other bulbous flowers. In addition to the foregoing, good use may also be made of small plants of *Prunus pissardii*, Golden Privet, *Euonymus*, &c., all of which may be used as dot plants over such dwarf-growing flowers as *Arabis*, *Alyssum* and *Forget-me-nots*. Many such arrangements as this will suggest themselves to the intelligent gardener who, having a progressive mind, is anxious to depart from the beaten track of former generations and produce beds which are at once novel, original and pleasing.

F. R. CASTLE.

Brumcombe Gardens, Foxcombe Hill, Oxford.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

October 27.—Royal Horticultural Society. Exhibition of Flowers, Plants, &c., 1—6 p.m. Lecture at 3 p.m., by the Rev. Professor G. Henslow, V.M.H., on the "Modification of Leaves and Stipules for Special Purposes." Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster. Croydon Chrysanthemum Society's Show (two days).

The Gardeners' Royal Benevolent Institution.—The Rev. W. Wilks, M.A., Secretary of the Royal Horticultural Society, has forwarded a cheque for £10 to the funds of this institution, being the proceeds of harvest thanksgiving offertories at Shirley Church, of which he is the vicar.

A new Water Lily tank at Kew.—A new tank for the reception of hardy aquatics is now in course of construction in the Royal Gardens, Kew. The site selected is the sunk garden in front of No. 2 Museum, and this tank, when finished, will supersede the ugly, raised one which has existed for many years at the north end of the herbaceous ground.

An interesting exhibition of Onions.—As noted in our columns in the spring, Messrs. Rogers and Co. of Leamington Spa offered £100 as a first prize for the best Onion grown from seed supplied by them of their variety Leamington Giant. All Onions for this competition must reach Messrs. Rogers not later than the morning of the 21st inst. The judge will be Mr. E. Beckett, V.M.H., of Aldenham House Gardens, and an exhibition of the bulbs sent for competition will be held in Monsell's Repository, Windsor Street, Leamington, on Saturday, the 24th inst.

Potatoes and Beets at Wisley Gardens.—A meeting of a sub-committee of the fruit and vegetable committee of the Royal Horticultural Society was held on Tuesday, the 22nd ult. The midseason and late Potatoes and the Beet being grown for trial were examined, and it was resolved to recommend an award of merit to Potatoes 64, Devanha Seedling, from Messrs. W. Smith, Aberdeen, and 84, British Champion, from Mr. G. Carter, Cottenham, Cambs; to Beetroots 36, Willow-leaved (for ornamental purposes), from Messrs. Dobbie, Rothesay; 37, Sutton's Blood Red, from Messrs. Sutton, Reading; and 40, Sutton's Pine Apple, from Messrs. Sutton, Reading. A report to the above effect was laid before the full committee at Vincent Square on the 29th ult., together with samples of the produce. After due consideration and examination of the produce the committee adopted the report and sent it up to the council, who confirmed it on the same date.

Black scab or wart disease in Potatoes.—The Board of Agriculture and Fisheries desire to notify that 244 cases of wart disease or black scab in this year's Potato crop had been reported to them up to October 3. These cases have occurred in the following counties: Shropshire, 60; Staffordshire, 57; Lancashire, 50; Warwickshire, 25; Cheshire, 30; Worcestershire and Leicestershire, 4 each; Derbyshire, 3; Merioneth, 2; and 1 each in Perthshire, Stirlingshire, Dumfriesshire, Cumberland, Nottingham, Berkshire, Flintshire, Breconshire and Glamorgan. A few cases among field crops have been found in the counties in which the disease is most common; but in the great majority of cases the disease has occurred on allotments or in gardens in which Potatoes are constantly grown. Enquiries made by the Board lead them to think that wart disease is very common in gardens in five at least of the above-named counties. The disease has been known in certain districts for ten to fifteen years, and as growers have taken no steps to check its progress it is now causing serious loss. As wart disease may be carried from place to place in infected tubers, it is important to secure

seed Potatoes free from this disease. At the same time, the greater number of cases reported would appear to be due to the cultivation of Potatoes in soil previously infected, or to the use of manure containing refuse from a diseased crop, and in many instances the seed has been viewed with quite unjustifiable suspicion. It should be remembered that even in counties in which wart disease is common, it has not yet seriously affected field crops, and the percentage of diseased Potatoes offered for seed must be inconsiderable. All cases of wart disease must be notified to the Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W. Persons notifying the disease will receive directions as to its treatment. It is believed that under careful treatment this disease can be eradicated, but if neglected it may render the soil unfit for Potato growing. In the case of farmers who sell seed Potatoes, notification of the disease is of especial importance, and failure to notify must be regarded as a serious offence. The Board desire to draw the attention of all seed-growers to the provisions of an Order issued under the Destructive Insects and Pests Acts, 1877—1907, which render persons concealing wart disease liable to prosecution and to a penalty of £10. In addition to the names already mentioned, wart disease is locally known as Cauliflower disease, "fungus" and canker.

PRIZES FOR READERS.

SEPTEMBER COMPETITION.—AWARDS.

In this competition prizes were offered for the best essays on "Spring Flower Beds," and a large number were sent in. Many essayists did not pay nearly enough attention to the combinations of spring-flowering fibrous-rooted plants with bulbous subjects, and where such combinations were given they were in many instances quite unsuitable, thus leading us to think that this phase of gardening is not generally well understood. The prizes are awarded as follow:

First prize of four guineas to Mr. F. R. Castle, Brumcombe Gardens, Foxcombe Hill, Oxford.

Second prize of two guineas to Mr. W. P. Wood, The Gardens, Oaklands Court, Kent.

Third prize of one guinea to Mr. George Cooper, The Gardens, Beauvoir, St. Saviour's, Jersey.

Fourth prize of half-a-guinea to the Hon. Mrs. Guy Baring, St. Cross Mill, Winchester.

The essays from the following are highly commended: D. B. Allwork, J. C. Wadd, F. Tansdell, James Pounsett, S. Bicknell, A. E. Groombridge, C. Blair, W. N. Morton, A. J. Cobb, E. K. Franklin, the Hon. Mildred C. Dany, Miss Hopkinson, F. Hay, C. W. Caulfield, Mrs. Wickham and Mrs. R. Chamberlain.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Rose Prince de Bulgarie with yellow flowers.—As I wrote the paragraph about Rose Prince de Bulgarie having yellow flowers in THE GARDEN for September 14, 1907, mentioned by Mr. Jones on page 467, 1908, it may interest him to know that our flowers have been a normal colour this season. The plants were shifted last autumn and planted in rather heavier ground; also, I think this season they have had more moisture. Is it possible the alteration in the colour was due to the soil being rather drier in the first instance? Our plants are dwarf, and 1907 was their first season. I think, however, they were prettier with the yellow colouring. What good Roses General McArthur and Warrior are! I certainly think, from a garden point of view, they are to be preferred to Richmond.—WILLIAM P. WOOD.

Curling Marechal Niel Rose of canker by budding on Isabella Gray.—In "The Rose Amateur's Guide," by Thomas Rivers of The Nurseries, Sawbridge-worth, sixth edition (London: Longmans, 1857, page 135, article "Noisette Roses," I find the following: "Very recently some charming acquisitions have been made to this group; one of the most so is Isabella Gray, raised from seed of the Cloth of Gold Rose by Mr. Gray, a florist of Charleston, South Carolina. This is of the most beautiful bright yellow, quite as bright as the interior of the flowers of the Cloth of Gold; its flowers are not so large, but it is really a charming variety; it will probably bloom more freely than its parent, but as it was three years in this country before it gave flowers it will probably not be a free bloomer. It should be planted against a wall with a warm aspect." So far, Mr. Rivers; and he further remarks that "The Cloth of Gold flourishes remarkably well in Jersey." Have the present firm of Rivers any knowledge of the missing Isabel? It would be as well to enquire, as perhaps in some odd corner a plant might survive; if not, there may yet be a few plants in South Carolina's sultry clime, for if it requires a warm corner it would certainly bloom out there. In the meantime, I notice a footnote by Rivers on flowering the Cloth of Gold: "Plant a Banksian Rose against a wall (fortuniana is the best variety), and after it has made sufficient growth bud the Cloth of Gold on it. This stock (the Banksian) also suits well the other yellow Noisettes." I commend this method to your readers for experiment. First catch your Banksian, then bud it with Marechal Niel or the Cloth of Gold, and then—well! wait and see.—SYDNEY MARTIN, *The Lodge, Clarewood, Bickley, Kent.*

Fully twenty-five years since I planted a broad span-roofed greenhouse with Roses worked on standard Briar stocks, the roots being outside and the heads inside. Of these one was Marechal Niel, and that very quickly showed canker at the union. Other varieties were Gloire de Dijon, Mme. Berard, Reine Marie Henriette and Noisette Lamarque. Gradually, as I found these strong growers unsuitable for my purpose, I cut them hard back and budded Marechal Niel on the young growths. In every case the result was perfect health and not the least canker, although I had these Roses under my care for ten years afterwards. The house was soon filled with Marechal Niel growths, and the market value of the wealth of flowers thus obtained was considerable. Practically, to avoid canker it is only needful to work any strong-growing climber on the stock, allow it to make good growth to distend the stock, then work Marechal Niel, and the result will be splendid, healthy growth and fine blooms for many years.—A. D.

A comparison of garden features.—It seems to me at this time of year that it would be useful if readers of THE GARDEN could exchange notes as to what was most effective and successful in their gardens during the summer; and if you cared to print these notes it might lead others to give their experiences and we should all get some fresh ideas. Two short borders in my garden, each about 10 feet wide, were greatly admired by all visitors this year. One is composed entirely of scarlet and white flowers with dark red and grey foliage. At the back are Cactus Dahlias in varying tones of red, from the vermilion of Amos Perry to the velvety crimson of Matchless, H. J. Jones and white Pæony-flowered Dahlias; these latter are most decorative, as they hold their large white single and semi-double flowers well above the foliage and grow to a great height. Here are also clumps of red-leaved Mountain Orach, 5 feet high, grouped with the scarlet-flowered, dark-leaved Cannas. Next come informal groups of Pompon Dahlias—White Queen and two very pretty scarlets, Mars and Bacchus—and a wide planting of the silvery-leaved Cineraria maritima.

Towards the front are baya of scarlet single Begonias, and at intervals large clumps of Lobelia fulgens Queen Victoria. None of the planting is at all formal; here and there Begonias run far back, and sometimes the Dahlias come forward. The Cineraria has rather encroached on the Lobelia fulgens, but the effect of the brilliant flowers growing through the grey foliage is most happy. Another border is a harmony of violet and pale yellow. There is a 6-foot-high trellis screen at the back covered with purple Clematis Jackmanii and Rose Alister Stella Gray. The mauve Dahlias are Countess of Pembroke and a charming Pompon called Pure Love. Then there is a mass of Anthemis tinctoria, the sulphur-coloured variety, rising out of a carpet of Verbena venosa. Violet Aster sinensis is grouped with a small pale yellow Zinnia, and at the turn of the path, where there is slight shade, is a large mass of Phloxes, with a wide border beneath them of single yellow Begonias. The Phloxes are now (September 28) past their best, but some fine clumps of a fine Michaelmas Daisy—Ryecroft Purple, I think—are coming into bloom behind them. There was here earlier also a group of Yucca filamentosa inter-planted with Liliun testaceum, which was a very pretty combination.—F. B., *Suffolk.*

A useful early Plum.

The accompanying photograph I took of a small branch of my Myrobolan Plum tree, and have much pleasure in recommending it to anyone wanting a very useful early Plum, for it is a nice size for tarts and ready to gather the first week in August. When the fruits are just turning colour they make a delicious preserve.—E. R. FULLER, *Kelvedon.*

Iris Vartanii.

This opened its first flower with me on the 26th ult., and others are in bud. This is much earlier than I have ever had it in flower before, and the flowers are not so welcome as in the dull, cheerless days of November and December. It would be interesting to have an explanation of this unusually precocious blooming.—F. HERBERT CHAPMAN.

The Japanese Wineberry.—A bush of this fruit in the kitchen garden here has done remarkably well this season, having been profusely laden with its bright red berries, which were in perfection for a month or more, and coming in just after the Raspberries had finished fruiting made a valuable addition to the supply of hardy fruits. The bush under notice is trained on stakes, completely covering a space of about 10 feet by 8 feet.—R. W. DEAN, *Audleys Wood Gardens, Basingstoke.*

MESSRS. J. CHEAL & SONS' LOWFIELD NURSERY, CRAWLEY, SUSSEX.

MY recent visit to this fine nursery—which is, after all, chiefly situated in Surrey—was coincident with the holding at the nursery of an extensive show of vegetable produce, the firm having by way of experiment, and one evidently highly appreciated by their many customers, originated a competition in various classes, the response being so great that the result quite took the firm aback, and ampler space had to be provided to satisfy requirements. Generally the exhibits were very fine, and I



A GOOD SPRAY OF THE MYROBOLAN PLUM.

could have selected from the whole a collection of nine dishes that would have made many professional growers "go under" in a competition. The exhibits represented the firm's seed stocks in every instance, and Messrs. Cheal may regard their stocks with the fullest satisfaction. As ample hospitality was also dispensed, the day was one of exceeding enjoyment to all concerned.

The Lowfield Nurseries have certain distinguishing features or elements. First, there is a huge collection of ornamental trees and shrubs, apparently of every conceivable description. Gold and silver, as well as purple, tints are very rich here. The firm, through Mr. Joseph Cheal, undertakes very large landscape gardening operations, and this description of work calls for

a large stock of those ornamental subjects which ladies and gentlemen now wish to have liberally planted. The old days for heavy, gloomy masses of trees and shrubs have for ever gone. Not only in connexion with these garden or park-making operations have the firm a staff of skilled draughtsmen constantly employed, but their rolling-stock is so considerable that it resembles that of a railway contractor.

Fruit is a second and very important feature of the nursery. Here on the marl of the district not only do trees thrive well, but they seem absolutely free from any description of insect or fungoid trouble. The alarmist will find at Crawley nothing to moan over. The fact which astonishes the visitor in walking over this great nursery and inspecting its fruit quarters is the immense number of trees in all stages of growth, and in all forms of training, there seen. Of flat-trained Peaches, Nectarines, Apricots, Plums, Pears and Apples, as also of cordons or in other forms, there seem to be enough to stock the nation; yet they all go out later. When the winter lifting season begins, then is the firm busy indeed. As my guide, the fruit foreman, said, one great, good result of the establishment of a nursery in a district is, not only that a great amount of labour is employed all the year round, but, just when other businesses become slack in the winter, the nursery trade is the most busy. Many employes have been with them for very long periods, a fact which speaks volumes for the employers. Specially heavy and fine this year is the Apple crop. The samples on the trees were superb. Quoted as wonderful croppers and carrying fine samples were Crawley Reinette (a splendid fruit, yet little known), Royal Jubilee, Newton Wonder, Lane's Prince Albert, Bismarck, Niton House, Bramley's Seedling, Norfolk Beauty, Lord Derby, The Queen, Gascyne's Scarlet, Winter Quarrenden (so well named), Duchess' Favourite, Peasgood's

Nonsuch, Cox's Orange Pippin, Schoolmaster and many others, and especially Mr. C. Ross's varieties, Rival, Houblon, Parquet, Charles Ross and others, all of fine quality and appearance. The firm specially prepare single cordon Pear trees, and these, 6 feet in height, furnished throughout with spurs, soon cover a wall.

A third speciality of the firm's work is found in Roses. These, again, are seen in immense numbers and of all descriptions. Specially strong are they in climbers, both in pots and planted out. A huge breadth of thousands of these latter showed growths 9 feet in height and some seven or eight to a plant, thus providing covering matter as soon as planted.

A long span house shows a bower of climbing Roses in pots, and one adjoining equally well filled with pot Vines, the canes hard and fully ripened.

The fourth speciality of the nursery is found in Dahlias. For these the firm has established a world-wide reputation, not only as growers and exhibitors, but also as raisers. While there may be seen a large collection of the show and fancy varieties, the flowers of astounding size and form, the labours of the firm have been most generally devoted to singles, of which they have the most beautiful varieties in the world. They also raise new Pompon forms and grow all the best-named ones. Of the wonderfully beautiful



THE NEW CACTUS DAHLIA SATISFACTION SHOWN BY
MESSRS. J. STREDWICK AND SONS.

(Much reduced)

Cactus varieties myriads of seedlings are also annually raised. Taking advantage of the opportunity to see so many Dahlias of all sections in full bloom, a chance such as a limited trial at Wisley fails to afford, I made a selection of twelve of each of the Cactus, Pompon and single sections most effectual as garden flowers, and of these I hope to furnish a list later on. I think for such a purpose the singles furnish most beauty. Some are singularly effective, and it is especially the aim of the firm, realising that for one exhibitor of Dahlias there are a hundred who grow them for garden beauty and cutting, to seek to create high-class garden decorative varieties. D.

THE FRUIT GARDEN.

A SMALL HOLDER ON HIS FRUIT.

THE following instructive notes appeared recently in *Country Life*: "Sir,—My fruit plantation consists of two acres of Apples, Plums and Damsons as top fruit, and Strawberries, Gooseberries, Raspberries and Red and Black Currants as bottom fruit.

Green Gooseberries were the first crop to pick and market. My young bushes of *Whinham's Industry* and *Crown Bob*, the earliest and finest varieties of this fruit, yielded abundantly—three bushels in all. I sent the first bushel to *Covent Garden* as an experiment. The price that week on the market was 7s. 6d. per half-bushel. I, however, was credited with 9s. only, less 2s. 3d. commission and carriage; that is to say, I got 6s. 9d. for my bushel, instead of 15s. from my nearest greengrocer. After this I sent the *Gooseberries* in to the nearest country town, and sold them to greengrocers at prices varying from 5s. to 3s. 6d. per half-bushel, according to the state of the market. It takes a man or woman an hour to pick a peck of green *Gooseberries* in the earliest part of the season. When the price drops to less than 3s. the half-bushel, *Gooseberries* become, for me, an unprofitable crop. The thinning-out process of picking them green leaves room for those that are left to ripen and swell into large fruit, so that one can fill a half-bushel basket more rapidly with ripe *Gooseberries* than when they are green. Half-a-crown for ripe *Gooseberries* may be as profitable to pick as 5s. for unripe ones. It must be remembered, too, that picking the fruit green helps the growth of young bushes immensely. I have sold my ripe *Gooseberries* for 3s. 6d. and 4s. per half-bushel, picking altogether from ten to twelve bushels. It is no use growing a small berry nowadays; the large reds are the favourites in the market.

Strawberries.—The open *Strawberry* bed of twenty rods and the rows between the fruit trees and bushes cover about a quarter of an acre of ground. These are of the *Royal Sovereign* and *Paxton* varieties. The fruit has had to be closely netted against the attacks of birds, for my land is surrounded by preserves. Anyone investing in fish-netting should see that he gets somewhere near the width ordered. It is a trick of the trade to say that the 'measurements are not guaranteed.' I have bought netting purporting to be 21 feet wide, which, when laid out, covered only three

rows of Strawberries. We had three weeks of unclouded Strawberry weather of golden sunshine; but we could have wished sometimes for cloudy weather, when we bent our backs under the burning sun from three o'clock to half-past five, the berries turning crimson as we picked. The entire crop of Strawberries was sold to a greengrocer five miles away. He preferred to have the fruit in the evening, so that he could go round with it to the houses before breakfast the next morning, his trade being with 'the gentry,' who know the best time of the day to eat Strawberries. Strawberries, if picked dry in the afternoon, keep better than those picked with the morning dew on them. The total sales amounted to £8 5s., averaging 3½d. per pound during the three weeks of continuous picking. I arranged to take the Strawberries to the greengrocer four days out of the six; he called for them the other two days. Half a ton of straw to keep the fruit clean was used to a quarter of an acre of Strawberries, and from 30lb. to 50lb. were picked every day. Strawberries are not as convenient a crop for me, personally, to grow as other fruit on my little farm, because the bulk of the picking always takes place while we are busy haymaking; but in the face of the fact that I was able to realise 3s. 6d. per 12lb. peck in a year of a glutted Strawberry market, I have been tempted to layer runners for the making of many fresh rows. The runners should be taken from the best fruiting year-old plants, and not from the worn-out beds. It is a capital plan to plant three in a triangle instead of a single plant in the row; the resulting heavier crop pays for netting.

Currants.—Red Currants, as far as my experience goes, are the least profitable of all fruit to market. I find that when Red Currants have to be sold for 3s. the 12lb. peck—which is about their market price this year—they are not a profitable crop to grow, and it is better to 'jam' or bottle the entire lot than to sell them. The birds here are very troublesome. When the fruit is ripening I have to go round and tie up every bush in old muslin meat mufflers. These mufflers are hard to obtain nowadays, as there is an increasing demand for them by motor makers and repairers. Think, too, of the time it takes to pick even a gallon of Red Currants after you have secured your crop of beautiful crimson berries. Black Currants have been fetching about double the price of Red Currants; but I prefer to 'jam' these rather than to sell them at 4s. per half-bushel. At 6s., as lately, it pays to market them; but, taking into account the depredation of birds, the spread of the black mite disease and the cost of picking, I would rather cultivate any other fruit than Currants.

Raspberries.—Raspberries are a good paying crop in the punnet stage—that is to say, when one can make 5d. or 6d. a pound on them—but when most of the crop has to be bulked for the jam-makers on a glutted market, as has happened this year, it is better to jam or bottle the fruit yourself and make your own delicious preserves rather than to purchase an inferior compound known as 'Raspberry jam.'—R. E. GREEN.

[The black mite disease referred to by Mr. Green is not, strictly speaking, a disease, but is caused by an insect known as *Phytoptus ribis*.—Ed.]

THE FLOWER GARDEN.

VERBASCUMS AT GLASNEVIN BOTANIC GARDENS.

THE Mullein family includes numerous species, many of which are tall and stately and suitable for a place in the wild garden, and some of the more showy ones look well for the back of the herbaceous border. Several have been used with great effect in the Glasnevin border, and have been continuously in flower for about five or six weeks. *Verbascum leianthum*, of which an illustration is given, has been the most prominent species, and the best plant has sent up a huge stem 14 feet in height, half of this being a branching inflorescence covered with yellow flowers. The lower part of the stem is clothed to the ground with silvery foliage, some of the basal leaves measuring 4 feet by 2 feet. The plants were raised from seed obtained from Asia Minor and also from Mr. T. Smith of Newry. *V. phlomoides* and *V. longifolium* are two European species bearing a profusion of yellow flowers. They reach from 8 feet to 10 feet in height. *V. olympicum*, from Bithynia, also bears yellow flowers, with handsome silvery foliage; it grows about 6 feet to 9 feet high. If planted in a mass about 4 feet apart, it forms a most telling and effective group. Unfortunately, these three species are biennial, so to obtain a succession seeds should be sown each year.

The Nettle-leaved Mullein (*V. Chaixii*) is a native of South-west Europe. It is a true

perennial and a good showy border plant, with branching spikes of yellow flowers reaching 6 feet to 10 feet in a good deep soil. There is a white form named *V. Chaixii album*, which is also a useful plant. Probably the best perennial Mullein of moderate growth is one which has long been cultivated at Glasnevin as *V. densiflorum*, but is supposed to be a hybrid of *V. nigrum*. For continuity and profusion of bloom it has no equal. Starting to flower in June, it continues through the summer and often until autumn approaches. It commences to flower when about 2 feet high and makes a small bush of flowering shoots, which continue to grow and flower until they reach 4 feet or 5 feet. The foliage is evergreen and frilled towards the margin. The flowers measure 1 inch in diameter, in colour a tawny orange, deepening towards the centre, the filaments being covered with purple hairs. The plant seems to be quite barren here, but it may be propagated in autumn and spring by means of root cuttings.

V. phœniceum is an attractive dwarf perennial, producing graceful spikes of flowers about 2 feet high. For the front part of the herbaceous border it proves a useful plant. From a packet of seeds quite a variety of colours are usually obtained, such as white, rose, lilac and purple. If the seeds are sown in boxes in heat during February, the plants will flower the same summer. *V. weidmannianum* comes from Asia Minor, and is one of Messrs. Haage and Schmidt's introductions. It has a rather slender habit, but reaches 4 feet to 5 feet in height. The flowers are 1 inch to 1½ inches in diameter and of an indigo blue, changing to deep purple. Though a true perennial, in some places it sows itself quite freely.

Several good hybrids have been raised by Mr. T. Smith of Newry from *V. phœniceum* and *V. cupreum*. *V. hybridum* Daisy Hill is an interesting plant about 1 foot to 2 feet high, bearing continuous spikes of bright coppery orange-coloured flowers, each measuring 1 inch to 1½ inches in diameter. *V. newryensis* is a hybrid between *V. Chaixii* and *V. phlomoides*, with erect spikes of large yellow flowers with dark centres.

The following is the raiser's description of *V. hybridum* Lewanika: "One of the most remarkable plants ever raised here. It grows about 2 feet high, and produces its flower-spikes in such a continuous manner from June until October that it is never during that period out of bloom. The flowers are almost indescribable, being a curious shade of bronzy purple." These three hybrids are well worth a trial, and are true perennials. The *Verbascums* are not fastidious plants as regards soil, but deep loam, into which the roots can bore deeply, will give the best results. C. F. BALL.

CACTUS DAHLIA SATISFACTION.

AMONG the many new Cactus Dahlias exhibited this autumn the variety Satisfaction is one of the best and most attractive. The colour is rosy carmine, with white at the bases of the petals, thus forming a sort of white centre. As will be seen by the illustration, the narrow petals are very much twisted. It was shown by Messrs. J. Stredwick and Sons, St. Leonards-on-Sea, before the Royal



A RARE MULLEIN (*VERBASCUM LEIANTHUM*) IN THE BOTANIC GARDENS, GLASNEVIN.

Horticultural Society on the 15th ult., when it received an award of merit.

A MIXED BORDER IN SUSSEX.

THE herbaceous border and summer-house illustrated were made eighteen months ago upon a meadow site. The garden lies 800 feet above sea-level, and, in view of the rough winds that sweep Ashdown Forest, the rate of development is quite satisfactory. The summer-house is Oak-timbered and Heather-thatched. It faces due north. A sunk rock garden lies on the east side of it. The soil is very heavy, in spite of the sandstone formation. To drain the borders the central grass path was sunk 2 feet deep, the sides being upheld by a dry wall. The latter contains a large collection of Saxifrages, Sedums and Sempervivums, which are thriving well. The border contains the usual favourite perennial plants and annual flowers are also made great use of. In the foreground of the illustration there is an effective combination of Mignonette, Nigella, Eryngiums and white summer Chrysanthemums. In the centre of the border a mass of *Lavatera rosea*, Hollyhocks,



MIXED BORDERS IN MR. E. A. WHITE'S GARDEN AT CROWBOROUGH.

Rose Campion, Phlox and pink Snapdragons combine well with *Achillea* (The Pearl) and *Gypsophila paniculata*. Other good effects are obtained by the conjunction of scarlet *Gladioli* and *Eulalia elegantissima*, also blue *Convolvulus* minor mingling with the delicate green of *Koehia trichophylla*. Round the summer-house are grouped plants which gradually merge into the rock garden—*Dimorphanthus mandshuricus*, *Aralias*, &c., also *Veronica Traversii*, which at the time the photograph was taken were scarcely recognisable by reason of their being practically covered by the brilliant bloom of the Highland Flame-flower.

TREATMENT OF LOBELIAS.

WHERE these are growing in situations rendering their removal necessary, they should now be boxed up, using the ordinary border soil that is fairly moist. Pack them thickly together, and do not give them a drop of water until they are pulled to pieces and restored in spring ready for a start. We often hear of losses through the winter months; these can invariably be traced to too much moisture.

THE GREENHOUSE.

WINTER IN THE GREENHOUSE.

(Continued from page 493.)

INSECTS.—These generally increase abundantly during the winter months unless means are adopted for their suppression. Fortnightly fumigations with XL All will by prevention of insect-breeding render recourse to any drastic measures unnecessary. Though this will kill immature thrips, red spider and green fly in all stages, the older insects and the dreaded mealy bug and scale will not be destroyed thereby, unless doses strong enough to injure the plants are given. These tough-skinned gentry must be got rid of, therefore, by sponging the plants with warm, soft soapy water or a weak solution of Gishurst Compound, Fir Tree Oil, &c. As the under-surface of the leaves are the parts most favoured by the pests, these should have special attention. After fumigating it is always advisable to give the plants a good syringing, and admit air as soon as possible to reinvigorate the greenhouse

water in the boiler is heated by the back part of the fire, therefore never neglect this essential though decidedly unpleasant part of the stoker's duty. Two or three times a day should this thorough clearing be done, and the ash-box beneath the bars emptied daily. On examining the fire in the morning the bottom of the furnace will generally be found more or less covered by a clinker. Unless there is a good body of red fire—which there very seldom is if the furnace has done its duty—it is not advisable to attempt to remove this clinker; merely turn it on edge or slightly break it up, open the damper to its full extent and put a little fuel on the fire. Anthracite coal is useful for quickly invigorating a dull fire in the morning; when the fire has burnt up well and the temperature of the house is rising, the removal of the clinker may be completed. Never keep a large body of fire, that is to say, never keep the furnace full of firing. A fire-box filled to half its capacity will be found the most economical; the fire will be easily managed and the maximum amount of heat be generated. On a sudden burst of sunshine appearing a small fire can be readily smothered sufficiently to keep down the temperature, while a big one is, of course, beyond hope in this respect. This applies more particularly to the management of the fire in the daytime, when someone is generally at hand to replenish it as needed. At the final firing up at night the furnace may be well filled to its utmost capacity, almost all the draught taken off, and if any doubts exist as to the lasting qualities of the fire, a few shovelfuls of ashes may be thrown over the front portion near the door. A golden rule in regard to fires and stoking is worth remembering, viz., that when a furnace is found half full of fire in the morning the temperature of the houses will be low; when a fire is found to have almost burnt itself out the temperature will be correspondingly high. In other words: high fire, low temperature; low fire, high temperature. J. K. E.

THE ROSE GARDEN.

THE NEWER ROSES

(Continued from page 457.)

COLONEL R. S. WILLIAMSON (Hybrid Tea, Messrs. Alexander Dickson and Sons, Limited, 1907).—As this was sent out only last year, I have hardly tested it sufficiently to speak definitely about its value for exhibition, but it is, undoubtedly, a fine Rose of great size with round petals of good substance, which in a cooler season would no doubt come with a good high centre; colour white with blush centre. I saw it at Newtownards recently, and it promised well.

Dr. O'Donel Browne.—This is sent out as a Hybrid Tea, but at first sight one would feel inclined to call this Rose a Hybrid Perpetual. I have known it for some time, but have not grown it. On each occasion that I have seen it, both growing and on the exhibition table, it has impressed me as a real good Rose which will be very useful to the exhibitor, its special feature being the number of excellent-shaped flowers it produces, split or quartered flowers being in the minority. Nothing more need be said to prove its utility. Messrs. Alexander Dickson and Sons have staged it frequently this year. Since the above was written this Rose has been awarded the gold medal of the National Rose Society.

George C. Waud (Hybrid Tea, Messrs. Alexander Dickson and Sons, Limited, 1908).—I noted this Rose as very distinct under its old name of Sir Henry Irving on more than one occasion, notably, at Saltaire in 1907, when exhibited by the raisers, its striking feature being its glorious colour. I only know one other Rose that possesses it, and that is *Grüss an Sangerhausen*, but here the orange vermilion is even more pronounced. It created a sensation when staged at

inmates after the weary hours they have spent in a poisoned atmosphere. It is not often necessary to lower the blinds after fumigating or during winter, but this should be invariably done when the hot, sunny days of spring and summer return. It is a wise plan, especially on a windy night, to let the blinds down while fumigating, as this will help to keep the smoke or fumes in the house.

Stoking.—Much in the successful management of the greenhouse in winter depends upon stoking, and it is safe to say that some stokers can keep up a given temperature by the use of half the fuel which others find necessary. In the first place, all flues and chimneys should be kept thoroughly clear. This will create a good draught, which will generate an intense and rapidly attained heat and raise temperatures to an extent and with a facility utterly unattainable with blocked flues and chimneys. Never be afraid to use the stripping or clinking iron freely along the bottom of the fire; clear fire-bars go an extremely long way towards successful stoking. See to it, too, that the iron goes well to the back of the fire; many furnaces are so constructed that the greatest portion of the

Manchester this year, and was unanimously awarded the gold medal. As seen growing it is vigorous and free-flowering, with a pronounced Tea perfume; with all these good points it is safe, I think, to predict a future for this Rose, both on the show-bench and in the garden.

Grace Molyneux (Hybrid Tea, Messrs. Alexander Dickson and Sons, Limited, 1908).—I have already referred to this Rose; here I will add that only occasionally, after severe disbudding and all the aids the exhibitor can give it, will it produce an exhibition flower, but can be strongly recommended as a garden Rose.

George Laing Paul (Hybrid Tea, Soupert et Notting, 1904).—This Rose continues to improve with age, and has frequently been exhibited this year. It is decidedly useful, as it comes well, of a good shape and form; not, of course, often a back-row flower, but deserves to be more grown.

Grossherzogin Alexandra (Hybrid Tea, Jacobs Welter, 1906).—I have seen no reason this season to retract the opinion I previously formed of this Rose, namely, that it is one of the best of the Kaiserin Augusta Victoria type. With me it has, I think, improved on its last year's form.

J. B. Clark (Hybrid Tea, Hugh Dickson, 1905).—I mention this Rose here because I owe it an apology. Until this year it certainly had done nothing with me to warrant its reputation, and I have said so on more than one occasion; but this year I have had many quite good flowers that have been very useful, and I think generally it has been shown in better form throughout the season. At its best it is very fine, as there is no larger dark red unless the new

His Majesty (Hybrid Tea, Messrs. S. McGredy and Son) may be found so. As seen growing this is similar in habit, but the petal and shape of the flower are quite distinct. This Rose has been called the Red Druschki, but I think His Majesty is a better name for it. I referred fully to it in THE GARDEN for September 26. Awarded a gold medal at the autumn show of the National Rose Society.

Joseph Hill (Pernet-Ducher, 1904).—This is generally called Monsieur Joseph Hill, but I am inclined to think that the "Monsieur" should be dropped, especially as Joseph Hill is a citizen of the great American Republic. If I was asked to name the best Rose that we have received from the Continent in the last four years, I think Joseph Hill would be my selection. As a cut-back it is splendid, but I am told that it does not take well on a standard. All my plants are dwarf and have done well; the finest Rose I have grown this year was one of this variety. It is free-flowering, the flowers coming very large if disbudded; shaded, the colour is wonderful. This Rose is a good grower, but apt to send up one strong shoot only, which if left alone will produce half-a-dozen good flowers. Remarkable as the flowers are, I know of no more beautiful foliage; the strong, bronzy green leaves act as a splendid foil to the flowers. One cannot give it higher praise than to say that it is one of the best Roses the raisers have sent us. Should be in every garden.

Purley.

HERBERT E. MOLYNEUX.

SEASONABLE WORK AMONG THE ROSES.

No time should be lost in carrying out autumn pruning. This practice is a great aid to the exhibitor and also to all who delight in quality of bloom from their Roses. It is more applicable to the Hybrid Perpetual group; but there are some of the Teas and Hybrid Teas which are apparently ripening off, and to which a moderate amount of autumn pruning would be helpful. Old wood should be freely removed right down to the base of the plants, if possible. This is not always practicable, and can only be carried out where an annual system of autumn pruning has been in



FABIANA IMBRICATA GROWING IN THE OPEN IN CAMBRIDGE BOTANIC GARDENS.

has been delayed, it may still be done with profit, and it largely facilitates work in the spring. Standard Briars which have been budded should have the ties removed, and it a good plan to retie them again, but not tightly. Where insect pests are troublesome the ties are best removed altogether. Cuttings of Briars for dwarf stock should now be made, selecting good sound shoots with the least amount of pith possible. Make them into lengths of about 8 inches, and plant in well-worked soil with a gritty base for the cuttings to stand upon. The cuttings should be inserted in the soil almost their entire length. Cuttings of hardy Roses, such as Frau Karl Druschki, will root freely, and a goodly number should be inserted now. All of these hard-wooded cuttings should be inserted in an open part of the garden where they may obtain a fair amount of sunlight.

Repotting such plants as need it must not be delayed, but I would strongly advise amateurs to see that their pot plants are full of roots before they disturb them. Many plants are ruined by too much disturbance of the roots. When the roots are seen well around the ball of earth, then a shift into a size larger pot is desirable, and it should be done at once. Roses required for early forcing ought to be repotted in June. If this has not been done, simply top-dress them now with a little soil in which a good sprinkling of bone-meal has been admixed. An excellent compost for pot Roses is three parts fibrous loam, one part well-decayed one year old manure, and about 4lb. of bone-meal to a barrowful of compost. See that the pots and crocks are clean and dry, and be careful to pot firmly. After potting, stand outdoors on a bed of ashes and water about two days afterwards, if no rain falls in the meantime. Rambler Roses grown in pots should not be given too large a size; they flower better if the roots are somewhat confined. Ripen growths of forcing Roses by standing them in full sunlight. Those repotted in June should be laid on their sides for two or three weeks to dry them off preparatory for early forcing. P.

FABIANA IMBRICATA.

The accompanying illustration is from a photograph of a plant growing in an exposed position in the Cambridge Botanic Gardens, where it has grown into a bush 3 feet high in a few years and has not suffered from frost, the only protection it has had being a little rough litter about its base during severe weather. There is also a good specimen trained against a greenhouse wall which has attained a height of about 12 feet. Both these specimens are remarkably fine during June with their fresh, green, Erica-like foliage and white tubular flowers. The plant belongs to the Solanum family and not the Heath family, which it so much resembles in outward appearance. It is also a good subject for pot culture. Cuttings root readily in ordinary soil, and, if grown with the Heaths and other hard-wooded subjects, the plants are useful for the greenhouse in spring. There are about eleven species, all natives of South America, imbricata being a native of Chili. It has been in cultivation since 1838. E. J. ALLARD.

practice for some years; but the object should be to retain three or four of the ripest of the current season's growths and discard as much as possible of the remainder. It is from such hard, yet young growths, that the finest flowers will be produced next summer. Soft, sappy growths should have their points pinched out, but their final cutting down must be deferred till the March pruning. Heads of old standards may now be freely relieved of old wood. It will pay to do this, and the result will be more of the fine new growths another year that help to make these tree Roses so interesting.

Rambler Roses have now, in most gardens, been looked over and all the old wood removed as far as practicable. Where, however, the work

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

COLD FRAMES.—Complete as soon as possible the propagation of the shrubby Calceolarias, as it is well to get the cuttings inserted before the hard weather sets in. The beautiful Campanulas which are in pots and are well rooted should be transferred to those of larger size. Six-inch pots should meet the needs of most plants. The earliest batch of bulbous subjects may be removed from the plunging material and the pots stood in the cold frame for a time. Carnation layers that are well rooted should be potted up without delay. To produce the better flowers it is necessary to cultivate the plants in pots.

Hardy Flower Garden.—In anticipation of frosts in the near future, I make a rule of lifting and replanting at this period plants in the hardy border as opportunity offers. It is a good plan to get as much of this work done as possible before the hard weather sets in. Hyacinths and other bulbs, if not yet planted, should be taken in hand at once. The Anemones, Ranunculuses, Pansies, Sweet Williams and numerous biennials may be planted at the present time.

Greenhouse and Conservatory.—For spring flowering I am just potting up a batch of Gladioli and other spring-flowering bulbous subjects. When finished, these pots are placed in some plunging material, where they may be kept cool and from whence they may be removed, when they have made an inch or so of growth above the soil, later on. The beautiful Freesias, if not already potted up, should be dealt with forthwith. Chrysanthemums that were housed in the earlier days of the month are fast opening their blossoms, and, that their



1.—METHOD OF BLEACHING CELERY BY TYING A 6-INCH-WIDE STRIP OF PAPER ROUND THE LEAF-STALKS.

interests may be promoted, see that the glass structure is freely ventilated and water supplied in sufficient quantity to keep the soil moist in the pots. Should there be evidence of green fly on the Chrysanthemums, the glass structure should be fumigated for at least half-an-hour, and this repeated at intervals of a fortnight to keep this pest at bay. Primula obconica should be removed from the cold frame at this period, placing the pots on a shelf near the glass, where they are safe from frosts.

The Vegetable Garden.—Weeds are giving growers of vegetables much concern just now, the moister weather having encouraged their growth at a remarkable pace. For this reason make good use of the hoe on dry days, as by this means they may be kept in check and the prospects of the vegetable crops brightened thereby. Vacant plots of ground should be properly dug, turning in the weeds carefully. Crops that have not yet been gathered and placed under cover or some protection, such as Beetroot, Onions, Carrots and similar subjects, should be dealt with at once.

The Hardy Fruit Garden.—As the planting season will soon be upon us, preparation should be made for planting the different subjects. The thorough trenching of the soil is important. Order trees from nurserymen of good repute. Stone fruits, such as Plums, Cherries, Peaches, Nectarines and Apricots, benefit to a considerable degree when lime refuse is added to the soil. Freshly-slaked lime answers equally well when this is incorporated in moderate quantities. I always plant new trees when the weather is dry, and the soil in a fairly friable condition as a consequence, treading the soil firmly when the trees are put in.

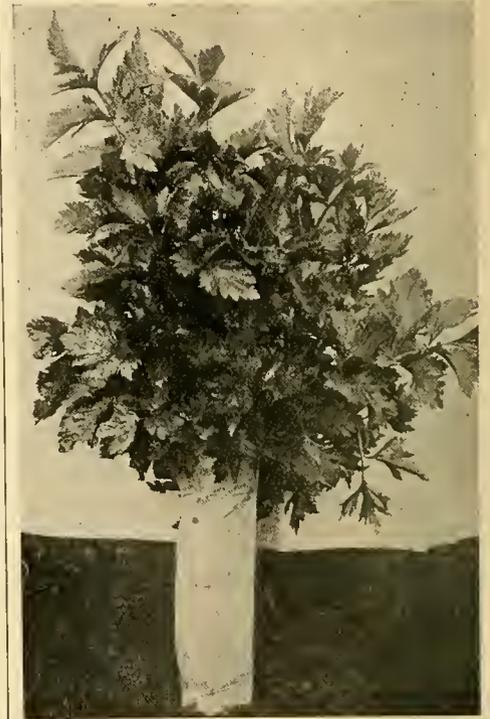
Lawns.—The naturalising of bulbs, especially the Daffodils, may be dealt with at the present time. Groups, small colonies, or breadths of larger dimensions may be planted in the lawn with conspicuous success. My rule is to lift the turf with care by using a spade, taking out the soil and forking over the subsoil. The bulbs are then arranged equi-distant on this, generally a few inches apart, the soil being subsequently replaced and the turf rearranged in position. A beating down of the turf with the back of the spade completes the operation. To distribute worm-casts, I occasionally sweep the surface of the lawn, completing the work by giving the latter a good rolling. Grass that is growing unsatisfactorily may be generally attributed to its impoverished condition. To promote a better state of affairs it is a good plan to apply basic slag or bone-meal. About 4oz. of either manure to the square yard should be applied. D. B. C.

HOW TO EARTH-UP CELERY.

This is an important point in connexion with Celery culture, and, as there are many beginners who may be in ignorance of how this work should be accomplished, we give in the present instance illustrations depicting the methods which may be followed.

Before the Celery can be treated in this manner, it is, of course, necessary that there should be a robust growth, and the plants must be growing away freely before it is possible to take them in hand. It is useless to begin earthing-up the Celery until there is 1 foot or more clear stem available to commence the bleaching process, so that unless the beginner's plants are in such a condition they must be left alone for a little while longer.

Earthing-up should be done on a fine day when the soil is in a fairly friable condition, so that it can be handled more easily. Should the soil in the garden be heavy and retentive in character, it is a good plan to work in some light and sandy material to make the soil more friable. The older method of earthing-up Celery was simply to place soil round about the "sticks," doing this with the greatest care so that no



2.—A SECOND STRIP OF PAPER PUT ON WHEN THE GROWTH WAS SUFFICIENTLY ADVANCED.

particles of earth reached the heart. We prefer to adopt the more satisfactory and simple method of tying round the plants thin cardboard collars about 6 inches in width. Should it not be possible to obtain cardboard, we use with great success strips of brown paper of similar dimensions. If the plants are tied round at intervals of each 6 inches of growth, bleaching operations may be carried out with considerable success and perfectly blanched specimens be brought into effect.

The illustration Fig. 1 depicts how this method of bleaching should be carried out. The beginner should take note of the method of tying as revealed in the illustration above alluded to. The tie should be in the centre of the brown paper, or, if time and material are of little import, two ties may be made round the same piece of brown paper, one at the bottom and the other at the top. If left in this condition for a week or two, the plants, assuming they are watered freely and liquid manure applied in order to promote rapid and satisfactory growth, will be ready for the second tie as depicted in the illustration Fig. 2. If a comparison be made between Fig. 1 and Fig. 2, the extra length of bleaching carried out in the second instance will be better appreciated. It is well to point out, however, that the plants should not be tied too tightly, but sufficient space left for the growth to expand. In the course of time



3.—THE FIRST EARTHING-UP AFTER THE PRELIMINARY BLEACHING WITH PAPER.

it may be necessary to make a third tie, and even a fourth in the case of some of the more vigorous specimens that have grown away freely from the commencement.

For early work this method of bleaching has many advantages, because where this rule is followed it is unnecessary to place earth round about the plants in order to attain our ends. There comes a time, however, when, owing to climatic conditions, some protection against the inclement and frosty weather makes it necessary to earth up the Celery, and this should be carried out in the fashion described in Fig. 3. Here, it will be observed, the ties and paper are just visible above the surface soil, and this should be the rule until the next tie is made. Subsequently, in the course of a week or two, a further earthing-up of the plants will be necessary, and this should be done as in the former instance, taking good care that the growths do not get unduly pressed or damaged, or the soil get down into the hearts of the plants.

Fig. 4 serves the purpose of illustrating the second earthing-up, from which it is possible to see the even character presented by the rows when this work is completed.

The third or final tying and the subsequent finishing of the earthing-up is well portrayed in the illustration Fig. 5. A careful observation reveals the fact that the ridge is now of considerable dimensions, and this should be made quite even and firm to carry off superfluous water, and also in order to protect the hearts of the plants against severe frosts, which will, no doubt, ensue in the winter season.

Some growers make a rule of inserting small land drain-pipes between each stick of Celery, the former being used for the purpose of conveying manure water to the roots of the plants without causing damage to the paper or cardboard that embraces the latter. When water or manure water is applied without some protection being made, the paper may rot unduly early, and this may have the effect of causing the sticks of Celery to rot also. In any case, we prefer earthing-up the Celery by these means to the older and less satisfactory method.

Those who do not wish to take this trouble of binding strips of 6 inches of brown paper, &c., round the sticks of Celery, as advocated above, may carry out their earthing-up process in the simple and more primitive fashion that our forefathers adopted in the days gone by. What is of the utmost importance, however, is to prevent the soil working down into the heart of the plant, and to effect this end we first make a loose tie round the plants

with raffia, controlling all the growths and thus preventing the soil working down, as it is very likely to do unless such means of preventing the same be adopted. The soil is then worked round the sticks of Celery with the hands, and as soon as the earthing-up is done, which should be to a depth of 6 inches, more or less, the tie should be unfastened so that the growth of the plant may proceed apace.

PRETTY TABLE DECORATIONS IN THE AUTUMN.

VERY often, immediately after the first frost has come, there is a dearth of flowers suitable for the decoration of the dinner-table. In other instances variety or change is desirable, and the available stock of flowers does not admit of a decided change in the character of the decorations being made.

AUTUMN-TINTED FOLIAGE AND BERRIES.

In these we have ample material for carrying out various designs on the dinner-table. The

in various stages of ripening may also be found and mixed with the foliage. Vine leaves and those of the Ampelopsis and Ivy are sufficient in themselves to make a most effective display on the table. If ordinary care be taken of the branches and leaves gathered, they may be used on the table several times, as they are at this season in a matured state.

HOW TO ARRANGE FOLIAGE AND BERRIES.

On no account should these be arranged so densely as to block the view across the table. A light arrangement is absolutely essential. Sprays of a light nature should be laid on the cloth itself, and others arranged in tall vases so as to depend gracefully from them. Leaves also may be laid on the cloth. A formal design one night and an informal one the following night would be welcome. The berries should be associated with the foliage in as natural a manner as possible, and all leaves should be dry. Overcrowding must be strictly avoided, as nothing looks worse than a table so packed with decoration that no room is left for the plates, glasses and other ware. I have used the different kinds of leaves and berries extensively in the decoration of both very large and small dinner-tables, and so can personally testify to the charming effects secured. Visitors who are suddenly and unexpectedly confronted with decorations of this kind are delighted, and very rarely fail to express their astonishment and pleasure at the display.

AVON.

DRAINAGE FOR POTS.

THERE is not a plant in existence that will thrive in a pot without drainage—and by this is meant a pot without some broken pieces of pot, called crocks, in the bottom. The object of this layer or layers of crocks is to allow the water to pass away quickly and to prevent the soil from filtering down and stopping up the bottom hole. Unless the soil is maintained in a very sweet condition, the roots get sickly, and eventually decay. The amateur must remember this most essential condition. The depth of this drainage will depend upon the nature of the plants and the size of the pots. Half-an-inch will suffice in very small pots, and in the case of Geraniums which are to be grown simply for bedding-out, one large crock will suffice. The pot most frequently used is called the 5-inch. Place the

larger crocks with the hollow or concave side downwards. On these place smaller pieces, and then a few still smaller. Next will come some rough portions of soil; if fine soil were placed immediately over the crocks it would quickly get washed among them, and so block the hole in the bottom.



4.—THE SECOND EARTHING-UP, SHOWING THE WORK IN A MORE ADVANCED STAGE.

beautiful tints and markings in the leaves and on the ripe berries of various wild plants, even those of the Ivy, show to great advantage in artificial light. One has only to walk to the kitchen garden to find some lovely leaves of Carrot, which, for richness of colours, beat the Maidenhair Fern and other foliage culled from plants in the greenhouse. Then we can combine the leaves of the Coleus from the stove with those of the Beetroot from the kitchen garden. Parsley, too, late in the autumn may be depended upon for the supply of variegated leaves somewhat similar to those of the Carrot. Bracken and other kinds of Fern fronds gathered from roadside and woodland paths are also available; sprays and leaves of the common Bramble look charming on the white table-cloth. If we closely study the Bramble leaves in the autumn, we find most beautiful shades of yellow, bronze and crimson on the dull green background of each leaf. Clusters of Blackberries, too,



5.—THE THIRD AND FINAL EARTHING-UP OF A VIGOROUS ROW.

THE TOWN GARDEN.

HERBACEOUS BORDERS.—Although the number of hardy herbaceous plants which will flourish in town gardens is more limited than in country places, there still remain an abundance with which to make a glorious display during the spring, summer and autumn months. Now, however, the plants are assuming the sere and yellow, and were it not for the Chrysanthemums and Michaelmas Daisies the garden would be almost dreary; these are still producing their share of flowers, and the freedom of growth and profuseness of blooming admirably adapt them for the small and smoky garden. No efforts should, of course, be spared to keep them beautiful as long as possible by the persistent trimming up of all the plants and the complete removal of dead and dying stems and flowers.

MAINTAINING THE BORDERS.—In order to maintain the borders in satisfactory condition over a considerable number of years, it is necessary to pay particular attention to the work of renovation, and something of this must be done each season. As a matter of fact, the plants are shorter-lived in towns than they are in the country, and it has been proved that it repays over and over again to remake the borders every two years, instead of every third or fourth year as answers so well in the rural garden. This operation is somewhat laborious; but if it is commenced in good time and a small portion only dealt with at once, it can be successfully accomplished without undue fatigue or the neglect of other garden work. It is an excellent rule to divide the border to be renewed into sections of 3 feet or 4 feet, according to its width, and to complete each one before another is touched. It is then most improbable that unfavourable weather will catch us when we have many plants out of the ground, and the operation proceeds comfortably and well. The first thing to be done is to lift all the clumps from the section. If the weather is pleasantly moist and cool, they may remain on the surface of the second division; but if it is hot and sunny, they must be covered with a mat, or they will unduly dry out. Then the soil should be taken in hand and thoroughly dug to a depth of at least two spits, and preferably three (this will mean that the roots of the plants will have from 20 inches to 30 inches in which to work), and into the second spit should be worked some of the best procurable sweet natural manure; in the possible event of only fresh manure being available, it will be wise to work it into the third spit; then make the top spit moderately firm and all will be ready for replanting. I am not of the opinion that it is ever good practice to replant the entire clumps, since young stock gives more and finer flowers; therefore, split up the clumps and plant small portions from the outsides, throwing or giving away the remainder to friends who require such material. It is essential in planting that the soil be made very firm about the roots.

MULCHING BORDERS.—In the year when complete remaking is not being done, the surface should be mulched with the best natural manure. The operator must trim up all the plants according to necessity and loosen the surface of the soil before the manure is spread on the top; of course, he will at the same time remove any weeds that may be present. When the mulching is on it may be necessary to spread over it a thin layer of fine soil, as its appearance may be objected to by some people. Care should be taken in this work that lumps of hot manure are not placed directly on the top of the crowns of the plants, but it must be worked well up to them on all sides.

TIME OF WORKING.—This work can be done at any time during the winter when the conditions of the soil and the weather render working on the ground possible; but the sooner it is commenced after the middle of the present month the better.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

KITCHEN GARDEN.

THE work here will now consist of storing crops and cleaning ground and making it tidy till it can be dealt with for succeeding crops. Late Celery should be earthed-up in fine weather. Prepare Endive by blanching; take up Seakale and Chicory if wanted for early forcing, and let it lie for a few days exposed to all weathers, when it will receive a check, and after a week or two may be introduced to the forcing house.

Make up a Mushroom bed, and collect more manure for subsequent beds. Thoroughly turn the manure about for a week or two, and let it become fairly dry before it is made up, or the heat will not be maintained long.

HARDY FRUIT GARDEN.

Pears for Planting.—These are always in demand, and there is always a great glut just about the middle of October. The following are a few of the best varieties for planting to come in from August onwards: Beurré Giffard (about the best early Pear), Jargonelle, Williams' Bon Chrétien, Souvenir du Congrès, Triomphe de Vienne, Louise Bonne de Jersey, Marie Louise, Durondeau, Emile d'Heyst, Doyenné du Comice, Winter Nelis, Glou Morceau, Ne Plus Meuris, Beurré A. Lucas, Beurré Bachelier, Thompson's and, if a big Pear is required, Pitmaston Duchess. Catillac is about the best for stewing purposes, and is usable for several months. Any of the Pears noted above can be grown on the cordon system and in small collections. This method has much to recommend it, as it allows of a greater variety of sorts on a given space.

Peach and Nectarine Trees.—As soon as all the fruit has been gathered from late varieties, cut out any fruiting wood of the current year that is not required, and run a Birch broom lightly over the foliage to dislodge any loose and ripe leaves, so that the sun's rays can shine on every portion of the wood. Apply water if the soil is at all dry.

FLOWER GARDEN.

Roses may be lifted and replanted now, and this should be done if the plants show signs of being worn-out. Roses, like most other plants, delight in a change of soil. Do not leave the plants exposed while the operation of renewing the soil is going on, or the little roots may suffer considerably. Do this work, if possible, in fine weather, so that the soil can be worked down among the roots.

PLANTS UNDER GLASS.

Tree Carnations that are showing flower should now be assisted with weekly waterings of manure. Wood's or Bentley's preparations are quite safe and good. Keep the temperature about 55°, which is a nice growing medium, and syringe between the pots on all bright days to keep down insects.

Malmaison Carnations.—Flowering plants should have about the same temperature as the above, but plants, large and small, for next season's work should be kept cool and dry and close to the glass. The earliest plants may now be placed in 4½-inch pots for single flowers. Carnations suffer more from damp than any other cause, and plants in cool houses do not require much water at this season.

Chrysanthemums.—Now that the bulk of these are housed, they will require constant attention to the watering, and, if a plant or two are allowed to get dry, aphides will soon make an appearance.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

PRIMULA SINENSIS.—Plants should now be removed from cold frames and given a well-ventilated structure. In arranging, it is well to give the same space as the individual plants are likely to occupy when in flower, as the foliage, being brittle, is apt to get damaged when handled. Before housing, a light top-dressing of Clay's Fertilizer, well mixed with finely-sifted soil, will supply all the stimulant necessary for them.

Bulbs for Forcing.—The chief thing to remember is to pot up the bulbs early, or as soon as they can be bought, which is generally early in October. If potted at once and plunged in a bed of ashes, Tulips and Hyacinths quickly root and are ready for removal to a pit or greenhouse during November and December.

FLOWER GARDEN.

Herbaceous Borders.—Any contemplated alterations in these may be carried out at once. Such borders ought to be cleared, manured and trenched every three or four years, and the earlier in the autumn this is done the better. Care should be taken in lifting and assorting the various plants, and the work should be carried out as promptly as possible. Care also must be taken to regulate the sizes and harmonise the colours as much as possible. All the more common and robust kinds should be sparingly used or excluded entirely; some suitable spot can generally be found for these in the shrubberies or elsewhere.

The Wild Garden.—Now is the time to plant Foxgloves, Primroses and any other plants raised for this purpose, so that they may get established before winter. Where wild gardening is indulged in, the present should be a busy time in preparing pictures for the spring months. Natural informal stretches of Snowdrops, Crocuses, Narcissi and Tulips to succeed one another, with here and there groups of blue Apennine Anemones, Chionodoxas, Fritillarias and Camassias, cannot fail to appeal to and render one enthusiastic.

Crocus speciosus.—I must call attention to this beautiful plant. It has been blooming abundantly for three or four weeks past. It is seen at its best when carefully planted, say, a dozen corms in a patch, in good garden soil and then left undisturbed.

FRUITS UNDER GLASS.

Orchard House.—As the various orchard house fruits are gathered the trees should be put outside in a nice open position where they will not be subjected to drip from trees or overhanging buildings. Any that appear to require repotting should be attended to. Others may require attention in the way of drainage, for, in spite of the best care when potting, the drainage material is liable to get out of place or clogged occasionally, and this does much harm. The little pruning that is necessary for pot trees will probably have been done before now; if not, there should be no further delay in dealing with all kinds of stone fruits, especially Cherries, which are so susceptible to injury from the use of the knife.

KITCHEN GARDEN.

Cabbages in Frames.—Small plants from August sowings of Spring Cabbage should now be pricked out into frames, with a view to protecting them through the winter. The smaller the plants the better, provided they have healthy roots. Cos Lettuce should also be sown in the same way, as the weather we have had lately has induced a free and sappy growth, which would be easily injured by frost. Stir a little soot into the soil in the frames, as slugs are generally troublesome.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Carnations dying off (H. K. Sy).—Judging by the roots and branches of the dead plant sent, your Carnation plants must have been very finely developed before they were attacked with wireworm. How to effectually get rid of these pests has been a difficulty with gardeners for all time. Nothing save catching and killing seems ever effective; but there has recently been placed on the market a soil fumigant named Kilogrub, for which the maker claims that it will kill these pests without doing the slightest injury to plant-life or to the soil. Your case seems a desperate one. You might experiment with it on a small scale with a sample tin, price 9d., to be had of Messrs. John Peak and Co., Bridgewater Chemical Works, Wigan, Lancashire. The best way we know of beyond this is by burying just under the surface of the soil sliced pieces of Carrots, Turnips, Potatoes or Lettuce stems. These will attract them in large numbers, and if daily examined and persevered with they may be greatly reduced.

Variation in a Nicotiana (J. G. R.).—It is highly probable that the variation to which you refer does not belong to *N. affinis*, but to *N. Sanderae*, in which group the colour range is considerable. Had you sent a spray of blossoms we could have given you the help you require. It is difficult to express an opinion as to the merit of a flower we have not seen.

THE GREENHOUSE.

Taking Hydrangea cuttings (N. Ellis).—Hydrangea cuttings taken during September and inserted into pots of sandy soil will, if kept close in a cold frame, strike root by the spring, when they will commence to grow. The strongest of the shoots that have not flowered form the best cuttings. These should be taken off at a length of 4 inches to 6 inches, cut with a sharp knife immediately below a joint, the bottom leaves removed, and then inserted firmly into the sandy compost. Immediately they are put in a thorough watering through a fine-rosed can should be given, after which they will not need much water during the winter months; but still, the soil must not be allowed to become dry. In the spring, cuttings of the young growing shoots, taken as soon as they have passed their most succulent stage and put into a warm house, will, if they are kept close, root in two or three weeks.

Coleus leaves dropping (A Subscriber, Cork).—Coleus leaves, especially at this season of the year, drop with very little provocation, and in a dwelling-house where gas is burned nothing can be done to keep them in good condition. Throughout the winter the plants need a warm house in which a fairly dry atmosphere is maintained. A minimum temperature of 56° is necessary to their well-doing. It is not of great importance, but for convenience sake the cuttings are better put singly into small pots. "Gardening in Town and Suburb," price 2s. 6d. net, published by Longmans, Green and Co., 39, Paternoster Row, London, E.C., will give you the information you require. You omitted to send your name and address, hence the delay in replying.

MISCELLANEOUS.

Canker in Melons (R. W. A.).—Presumably you allude to rotting off at the collar. In the first place, abstain from watering close to the stem; and in the

second, rub a mixture of powdered lime and charcoal into the affected part at the first sign of trouble.

Yellow climbing Rose for greenhouse (Cornwall).—Maréchal Niel is rather a difficult Rose to grow in an ordinary greenhouse. We think you would do better with Bouquet d'Or, Mme. Hector Leuilliot or William Allen Richardson. To induce it to flower a little later than the climbing Niphetos, you should prune it a week or two later. K. A. Victoria, Liberty, Caroline Testont and Mme. Abel Chatenay may be grown as half-climbers; that is to say they would cover a space of some 5 feet or 6 feet fairly quickly; or you could obtain the climbing form of each sort, excepting the last-named, if you desire them for the roof. You omitted to enclose your name and address, and this causes delay in replying.

Ice house (M. F. W.).—The best position is below ground, with thick brick walls finally covered with soil, or inserted in a bank with north aspect, the chamber to take the form of a deeply-set cave. In such a position a small house need not be of greater internal diameter than 12 feet; the floor, as also the sides to several feet high, to be of stone or concrete. Set in a bank as you suggest, an opening large enough to admit of the Pine logs being closely arranged should be made. These Pine logs should be thatched with straw or Brackee and finally covered with moistened clay to assist in maintaining the requisite degree of coolness. By forming the house in the bank, you might, if the nature of the soil will permit, drive a deep chamber of oblong shape far into the bank; then, by erecting side walls 4 feet high, form a ridge roof of the Pine logs, to be first covered with sheets of corrugated iron and finally the soil. In this way you would doubtless secure the requisite conditions.

Names of plants.—Cobham.—*Cassinia fulvida* (synonymous with *Diplopappus chrysophyllus*).—F. C. Adams.—The Rose is *Hippolyte Barrean*, a Hybrid Tea.—*Rosebud*.—Eochanress.—M. L. L.—*Helixote Soleriolii*.—F. E.—*Spiranthes autumnalis*.—Miss Wakefield.—Clematis Jackmanii variety and Dahlia seedling (cannot match).—Weekly Reader.—*Colletia cruciata*.—Beginner A.—1, *Sedum sarmentosum variegatum*; 2, *Alyssum maritimum*; 3, *Mesembryanthemum cordifolium*; 4, *Begonia weltoniensis*; 5, *B. acuminata*; 6, *B. metallica*; 7, *B. seedling* (cannot match); 8 and 10, *B. semperflorens* vars.; 9, *B. metallica* var.—A. Letch.—1, If this plant has fruits with hooks it is *Cupressus nootkatensis*, otherwise it is *Cupressus lawsoniana pedunculata*; it is not possible to identify without fruits; 2, *Acaphalis margaritacea*; 3, *Helichrysum petiolatum*.—H. Hatcher.—1, H. Schultzei; 2, Catherine Soupert; 3, Souvenir de Dr. Jamain; 4, Irene Watts; 5, Violet Bouyer; 6 and 7, flowers had fallen; 8, Mme. G. Luizet; 9, Gloire des Polyanthes; 10, Margaret Dickson; 11, Anoa Alexiëff; 12, Jules Margottin.

—B. B. Wither.—*Sedum Telephium* and *Aster Amellus*.—C. E.—1, *Sedum roseum*; 2, *Euonymus europæus*; 3, *Caragana arborescens*; 4, please send when in flower. —Mrs. C., Subscriber Weekly.—*Ceanothus Gloire de Versailles*.—M. Somerset.—*Fuchsia procumbens*.—Blue Rock.—*Sedum spectabile* and *Salvia Horminum*.—R. B.—1, *Veronica salicifolia*; 2, *Ligustrum ovalifolium*; 3, *Veronica Traversii*; 4, *Escallonia punctata*. The discoloured piece of wood is probably Ash. The coloured portion is caused by a fungus named *Peziza aruginosa*. The Oak spangle galls (*Neuroterus lenticularis*) are caused by the larvæ of the above-mentioned insects. The insects emerge from the galls in spring, lay eggs on the Oak leaves and then disappear. The galls appear again in autumn. The presence of the galls does not materially weaken the tree.

Names of fruit.—E. Dixon.—Worcester Pearmain.—R. E. D.—1, Compté Flanders; 2, Uvedale's St. Germain, very poor specimen; 3, Pitmaston Duchess; 4, Catillac; 5, Marie Benoist; 6, Beurré Superfin; 7, not recognised. —A. Preston.—Doyenné d'Alençon.—H. P. E.—1, King of the Pippins; 2, unable to recognise, possibly a local variety; 3, Wellington (Dumelow's Seedling); 4, Gravenstein; 5, Scarlet Nonpareil; 6, Hawthornden; 7, Chelmsford Wonder.—G. W. Euston.—1, Beurré Clairgeau; 2, Emile d'Heyst; 3, Lane's Prince Albert; 4, Stone's Apple; 5, Lady Henniker; 6, Blenheim Orange.—S. Smith.—1, Eckhillville Seedling; 2, May Queen; 3, Cockle Pippin; 4, Bergamotte Espereno; 5, very poor sample of Compté Flanders.—H. Nixon.—1, Keswick Codlin; 2, Lord Derby; 3, May Queen.—W. H. Fraser.—1, American Mother; 2, Royal Nonsuch.—E. S. Martin.—1, Beurré Diel; 2, Marie Guise; 3, Hornead's Pearmain; 4, Beurré d'Amanlis; 5, Blenheim Orange; 6, a form of No. 5; 7, Mère du Ménage; 8, James Grieve; 9 and 10, Broome Park; 11, Cox's Orange Pippin; 12, Improved Keswick Codlin.—Jackson.—1, Marie Louise; 2, King of the Pippins (dessert); 2, Fibbett's Pearmain (cooking); 1, Fearn's Pippin (dessert); 1, Sandringham (cooking).—Woodbrook.—Irish Peach.

—B. C. F.—The Queen.—X. X. A.—1, Cellini Pippin; 2, Bess Pool; 3, Beurré Clairgeau; 4, Marie Louise; 5, Pear Maréchal de la Cour; 6, Yorkshire Beauty; 7, Old Hawthornden.—C. G. O. B.—Aolie Elizabeth.—H. M. B.—Claygate Pearmain.—Constant Reader.—1, Cat's head; 2, Golden Spire; 3, Lord Grosvenor; 4, Norfolk Beauty; 5, Prince Arthur; 6, Blenheim Orange; 7, Cellini Pippin; 8, Queen Caroline; 9, Northern Greening; 10, Boston Russet.—C. A. W.—1, Potts' Seedling; 2, Sandringham.

—Kate's Nest.—1, Oslin; 2, Anole Elizabeth; 3, Rosemary Russet; 4, Boston Russet; 5, Fearn's Pippin; 6, Newton Wonder; 7, Reinette Grise; 8, Tom Putt; 9, Pearson's Plate; 10, Norfolk Beaufin; 11, Tower of Glamis; 12, Cox's Orange Pippin; 13, Belle Dubois; 14, Flanders Pippin; 16, Belle Pontoise; 17, Peoniugton's Seedling; 18, Duchess of Oldenburg; 19, Hoary Morning; 20, Golden Spire.—G. White.—Apples: 1, Nelson's Codlin; 2, King of the Pippins; 3, Golden Spire. Pears: 1, Doyne Boussou; 2, Marie Guise; 3, Forelle.—H. J. D. Tennant.—Emperor Alexander.—W. H. R.—1, Yorkshire Beauty; 2, Hambleton deux Ans; 3, Beurré Goubault; 4, Cox's Pomona.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

THERE was a splendid display of flowers and fruits at the fortnightly meeting held on the 13th inst., and as the weather was fine visitors were also numerous. The splendid collection of Michaelmas Daisies from the Hon. Vicary Gibbs, and the collection of Apples from Lieutenant-Colonel Barton were the two outstanding features of the show, and deservedly came in for considerable attention.

ORCHID COMMITTEE.

Present: Mr. J. Gurney Fowler (chairman), Messrs. James O'Brien, de B. Crawshaw, Harry J. Veitch, Jeremiah Colman, H. Little, W. Boxall, R. Thwaites, F. J. Haubury, Stuart H. Low, A. N. A. McBean, C. H. Curtis, J. Forster Alcock, J. Cypher, J. Charlesworth, H. G. Alexander, Arthur Dye, W. H. White, H. A. Tracy, H. Ballantiae, Gurney Wilson, W. Bolton and A. J. Forster.

From H. Little, Esq., Baronshill, East Twickenham, came a well-grown group, chiefly composed of Cattleyas, with a few other interesting subjects. *Lælio-Cattleya Luminosa*, a large specimen of *Cattleya Maotitui inversa*, with some C. *Portia* varieties, were the most noticeable. A few small plants of *Cypripedium fairieanum* with *Oncidium* all added to the interest of this exhibit. Silver Flora medal.

Messrs. Hugh Low and Co. of Bush Hill Park, Enfield, put up a small but attractive group of very healthy plants, and all in a very floriferous condition. *Cymbidium erythrostylum*, *Lælio-Cattleya Firefly*, *Cypripedium Thalia gigantea*, C. *Milo Westonbirt* variety, C. *Maudie*, *Lelia Perrinii nivea* (with pure white sepals and petals and dainty cream and lilac lip), and *Bulbophyllum careyanum* were some of particular interest. Silver Banksian medal. The beautiful group from Messrs. Sauder and Son, St. Albans, was specially attractive on account of the magnificent plants of *Vanda cœrulea* which were included. The flowers of these were intense sky blue, and the huge racemes made a grand display. Other plants noted were *Lælio-Cattleya Antiozoë*, *Cypripedium Olivia*, C. *Trafalgar* and *Lælio-Cattleya La France*. Silver Flora medal.

Messrs. Moore, Limited, of Rawdon, Leeds, had a small but good collection, among which we noticed *Cypripedium fairieanum*, C. Mrs. F. L. Ames, C. *mennon-inversum*, and the curious *Cynorchis peruviana*, with its pendulous racemes of dull cream flowers freely dotted with brown spots. Silver Banksian medal.

H. S. Goodson, Esq., Putney, S.W. (gardener, Mr. G. E. Day), put up a very fine group, which contained a large number of the choicer *Cypripedium* in addition to Cattleyas, Miltonias and *Odontoglossums*. The forms of *Cypripedium insignis Sanderae* were particularly good. Silver Flora medal.

Messrs. Cypher and Sons' group from Cheltenham contained a large batch of *Cypripedium fairieanum*, many good Cattleyas and *Dendrobiums*. A few specimens that called for special mention were *Cypripedium Milo Westonbirt* variety, C. *bingleyense*, C. *triumphans*, C. *Olivia*, *Cattleya aurea*, C. *massiæna*, *Odontoglossum grande* and *Masdevallia macrura*. All the plants shown were in the best possible health and evidently the result of high-class culture. Silver Flora medal.

Messrs. Heath and Son of Cheltenham staged a small group, in which *Odontoglossums* predominated. O. *grande*, O. *giganteum* and O. *Phalenopsis* were the most prominent sorts.

Messrs. J. and A. McBean of Cooksbridge, Sussex, had a small group of well-grown *Cypripedium* and *Odontoglossums*, C. *insigne* Harefield Hall, C. *Maudie*, C. *Rosettii* and C. *albertianum* being a few of the best. Silver Banksian medal. Messrs. McBean also showed a magnificent specimen of *Cattleya bowringiana*, which carried ten large racemes of good-sized and splendidly coloured flowers. A beautiful plant of *Cattleya fulvescens* came from the same firm, and for each plant they received a cultural commendation.

From Messrs. Stanley and Co., Southgate, N., came a small group of good Cattleyas with a few others of botanical interest. Some seedlings of *Cattleya Minuca* showed considerable variation, although all from the same seed-pod. Silver Banksian medal.

Messrs. Charlesworth and Co., Hayward's Heath, Sussex (late of Heaton, Bradford), put up a wonderful lot of flowers of considerable interest, among which we noted *Plumina nobilis* alba, *Zygo-Colax wiganianus*, *Cynorchis egyptiaca*, *Lælio-Cattleya Luminosa* and *Ocimum Forbesii* with some beautiful hybrids. Silver Flora medal.

FRUIT AND VEGETABLE COMMITTEE.

Present: Mr. George Bunyard (chairman), Messrs. J. Cheal, Owen Thomas, P. W. Tuckett, John Harrison, Joseph Davies, G. Reynolds, J. Basham, P. C. M. Veitch, Alex. Dean, J. Willard, George Wythes, A. H. Pearson and Edwin Beckett.

Messrs. Hugh Low and Co. of Bush Hill Park, Enfield, exhibited a very good collection of Apples, which were splendidly finished and of good size. King of the Pippins, Cox's Orange Pippin, Kerry Pippin, Yellow Ingestre, Allington Pippin, Blenheim Orange and Cox's Pomona were a few of the best among dessert varieties, and New Hawthornden, Schoolmaster, Alfriston, Lord Derby, Beauty of Kent, Newton Wonder and Bramley's Seedling stood out well in the culinary section. Silver Banksian medal.

The magnificent collection of Apples from Lieutenant-Colonel Barton, Cheveny, Hunton (gardener, Mr. James Whittle), created quite a sensation, and rightly so. Rarely have we seen Apples exhibited in such excellent condition, and the fruit reflected the greatest possible credit on those

responsible for its culture. All were splendidly finished, and the huge specimens of Mère du Ménage, Emperor Alexander and Belle Dubois, which occupied the centre, were really wonderful. About eighty dishes were shown, and these included all the best dessert and culinary varieties in existence. Silver-gilt Hogg medal.

FLORAL COMMITTEE.

Present: Mr. H. B. May (chairman), Messrs. C. T. Druey, J. Walker, A. E. Bowles, J. Hudson, J. Green, Charles E. Pearson, A. W. Turner, G. Reuthe, W. Howe, J. F. McLeod, J. Jennings, H. Hooper Pearson, Charles Dixon, A. Turner, H. J. Jones, H. J. Cuthbush, W. P. Thomson, E. H. Jenkins, W. J. James, Edward Mawley, George Paul, J. T. Bennett-Poë, W. T. Ware and George Gordon.

Messrs. James Veitch and Sons, Limited, Chelsea, brought a very fine group of new, rare and distinct conifers, not a few of them quite unique in character. The collection was a very large and complete one, and contained, among others, fine examples of *Pinus Armandii*, collected in China at an elevation of 5,000 feet, and which has proved, not only most distinct, but perfectly hardy in Messrs. Veitch's nursery at Coombe Wood. Other notable things included *Sciadopitys verticillata* (the Umbrella Pine), *Abies pungenis glauca pendula*, *A. p. glauca*, *Pinus pinea*, *P. ponderosa*, *P. Lariois pygmaea*, *Torreya myristica*, *Abies excelsa fiedoniensis*, *A. Veitchii* Japan (very dark green and glaucous on the under-surface of the leaves), *A. subalpina lasiocarpa*, *Pinus pinaster maritima*, *Retinospora obtusa aurea* Crippsi, *Juniperus virgata glauca*, *Abies hookeriana*, *A. nobilis*, *A. Omorika*, *Cupressus macrocarpa*, *Abies magnifica*, *Retelearia Fortunei*, *Cedrus atlantica glauca*, *C. a. aurea* and many more. A remarkable collection of beautiful, interesting and rare shrubs. There were about 100 distinct varieties exhibited. Messrs. Veitch also had a showy group of *Begonia elatior*, one of the winter-flowering class, the firm also having a fine lot of *Citrus japonica* in fruit. Silver-gilt Banksian medal.

The Misses Hopkins, Shepperton, had a small exhibit of alpine and rock plants in variety.

Messrs. Frank Cant and Co., Braiswick Rose Gardens, Colchester, staged a lovely group of Roses, which, for mid-October, were of the highest excellence. Many notable varieties were included, such as Queen Mab, La Tosca, Gustave Regis, White Maman Cochet, Irish Elegance, Mme. Antoine Marie, Mrs. Edward Mawley, Corallina and others. Silver Banksian medal.

Mr. G. Reuthe, Keston, Kent, had a few hardy plants, such as *Crocus* and the pretty autumn-flowering *Snow-drop Galanthus Olge*, which, minus its leafage, is not unlike *G. nivalis*. *Oxalis lobata*, *Parochetus communis*, *Saxifraga Fortunei* and *Tropaeolum tuberosum* were also noted. Messrs. Eggert and Son, Thames Ditton, had a small rocky exhibit with hardy Ferns.

From Highgate Messrs. Cuthbush and Son brought a splendid lot of Carnations, such as Windsor, Countess of Portland, Britannia, White Perfection, Robert Craig, Enchantress, Mrs. Burnett and Victory being among the best. Messrs. Cuthbush also displayed a very fine lot of Orange trees in fruit, and the white and red-berried forms of *Pernettya mucronata*. *Dracaena Brantii variegata* is a new variety striped longitudinally with yellow and green; a very fine plant for decoration. Silver Flora medal.

Messrs. H. B. May and Sons, Edmonton, filled a large table with hardy Ferns, comprising a delightful gathering of choice and interesting forms. The *Scolopendrium* were particularly well represented. A collection of shrubby *Veronicas* also came from Messrs. May and Sons. Silver Flora medal.

Messrs. George Bunyard and Co., Maidstone, had a large group of hardy plants, such as *Michaelmas Daisies*, *Lilies*, *Poppies*, *Anemones*, *Physalis Bunyardii*, *Aster turbinellus*, *Desmodium penduliflorum*, *Kniphofias* and the like.

Messrs. W. Wells and Co., Limited, exhibited a very extensive group of *Chrysanthemums* and *Pentstemons*, the former in large or exhibition blooms, also single, decorative and early-flowering sorts. *Diana*, bronze; *Ethel Blades*, crimson; and Mrs. A. Thomson, rich yellow, among the latter were particularly fine. Silver-gilt Banksian medal.

Messrs. Paul and Son, Old Nurseries, Cheshunt, had a large collection of cut and other shrubs, such as *Cornuses*, *Weigelas*, *Berberis*, *Quercus*, *Acers*, *Pyrus sorbus edulis*, *Calycanthus occidentalis*, *Enonymus europaeus*, *Encalyptus pulverulenta* and *Paulownia imperialis*.

Messrs. Dobbie and Co., Rothsay, contributed a beautiful assortment of *Cactus Dahlias* in many choice colours. The flowers were excellent for so late a date.

Seasonable hardy flowers from Messrs. Barr and Sons included *Kniphofias*, *Michaelmas Daisies*, *Phloxes*, autumn *Crocuses* and other things.

The Hon. Vicary Gihhs, Elstree (gardener, Mr. E. Beckett), had a lovely table of *Michaelmas Daisies*, the many beautiful varieties being displayed to perfection. Apart from the many varieties of *A. Annelins*, some excellent seedlings were seen. *Maidenhair* (a small-flowered sort), *Chapmanii*, *Triumph* (a good cordifolius seedling), *White Diana*, Mrs. J. T. Raynor, Star Shower and *Climax* (a very handsome *Novi-Belgii* form, with lax pyramids of flowers) were some of the best. The arrangement was very effective. Silver-gilt Flora medal.

Messrs. G. and A. Clark, Dover, had a large display of hardy flowers, in which *Cimicifuga simplex* Clark's variety was prominent.

Mr. Seale, Sevenoaks, staged a capital exhibit of *Dahlias* and other flowers artistically arranged. Silver Banksian medal.

Messrs. T. S. Ware and Co., Limited, Feltham, had a varied display of hardy flowers, alpine and other things, *Viola primulifolia* being an interesting plant.

The Roses from Messrs. K. Harkness and Co., Hitchin, were very charming, such as Frau Karl Druschki, G.

Nabouand, White Maman Cochet, Corallina and others eliciting admiration. Silver-gilt Banksian medal.

Messrs. J. Cheal and Sons, Crawley, exhibited single and *Cactus Dahlias*; and Messrs. Hugh Low and Co. staged *Carnations*, Orange trees in fruit and miscellaneous plants in flower.

Messrs. John Jeffries and Co., Cirencester, had a seasonable exhibit of hardy evergreen shrubs and conifers, such things as *Cedrus atlantica glauca*, *Abies pungenis glauca kosteriana*, *Cupressus lawsoniana elegans*, *Abies Veitchii*, *Picea lasiocarpa* and *Cupressus macrocarpa aurea* being among the best. Silver Flora medal.

Mr. H. J. Jones, Lewisham, S.E., had a very fine assortment of *Michaelmas Daisies* in all the leading sorts. *Diana*, *Albus*, *William Marshall*, *Elaine*, *Calliope* (fine blue), *Ryecroft Pink*, *Melpomene* (dark violet) and Mrs. J. F. Rayner being among the best. A capital lot of *Chrysanthemum Moneymaker* (a good white-flowered sort) was also noted. Silver Banksian medal.

Messrs. H. Lane, Berkhamsted, had *Roses* and *Carnations*; and Mr. Frank Baxter, Caterham, had a large group of *Michaelmas Daisies* and early-flowering *Chrysanthemums*.

NATIONAL CHRYSANTHEMUM SOCIETY.

THE early autumn exhibition in connexion with the above society was held at the Crystal Palace, on Wednesday and Thursday, the 7th and 8th inst., and proved a great success, many beautiful exhibits being staged. Many collections in the bunch classes were disqualified, owing to the bunches being over the specified size. We would suggest to the committee that the exhibits be arranged in future a little more in rotation, as this would add greatly to the convenience of visitors without detracting in the least from the artistic side of the show. As arranged on this occasion it was well-nigh impossible to track all the entries; otherwise the arrangements were all that could be desired.

DIVISION I.—OPEN CLASSES.

For a floral display of *Chrysanthemums* (plants or cut flowers or both), and suitable foliaged plants, to be arranged on the floor, first honours went to Mr. F. Brazier, Caterham, Surrey, for a very effective group composed of large-flowered and decorative varieties, all well grown and in numerous warm colour shades. Messrs. J. Peed and Son, West Norwood, were a good second, the flowers in this case being intermixed with a few well-grown *Caladiums*.

In the class for twenty-four Japanese blooms, eight varieties, Mr. H. Parr, gardener to F. A. Bevan, Esq., Trent Park, New Barnet, was the only exhibitor, but the judges considered his collection worthy of first prize. His flowers were of medium quality, Mrs. A. T. Miller and Sapho being the best.

For twelve blooms of Japanese varieties, distinct, there were three entries, the premier award being secured by Mr. Martin Silsbury, Shanklin, Isle of Wight. His flowers were a very good lot, Algernon Davis, Glory (a new yellow seedling), Mrs. A. T. Miller and Shanklin (a new ivory white variety) being the best. Second prize went to Mr. G. Halsey, gardener to Mrs. J. Lyon, Caterham Valley, whose flowers were of medium quality, Bessie Godfrey being the best. The third prize collection was shown by Mr. H. Parr, New Barnet.

In a similar class for six varieties four competitors tried conclusions, Mr. A. C. Horton, gardener to T. L. Boyd, Esq., North Frith, Tonbridge, being first with really good flowers, Mrs. A. T. Miller and Mrs. W. Knox being specially noteworthy. Second prize went to Mr. F. Blackith, Ravenscroft Park, W., for a much inferior lot, Godfrey's Pride and Mrs. A. T. Miller being the two best. Mr. T. J. Broom, Holyport, was third.

Apparently there was only one entry in Class 6 for twelve bunches of early-flowering Pompons, this coming from Mr. John Smellie, Bushby, near Glasgow, and securing first prize. The flowers were a very good lot and had stood the long journey well. *Flora*, bright yellow; *Scarlet Gem*, crimson-scarlet; and *Mignon*, small, deep yellow, were the most conspicuous.

For two vases of nine Japanese varieties with foliage there were two entries, the first prize being appropriated by Mr. G. Halsey for very good flowers, well arranged. The second prize went to Mr. F. Blackith.

In Class 8, for twelve bunches, distinct varieties, grown in the open and not disbudded, the competition was good. A fine lot staged by Mr. J. Smellie, Bushby, near Glasgow, was disqualified, owing to the bunches exceeding the size limit, and the same reason disqualified those shown by Mr. G. Bowness. First prize went to Mr. A. Hawkins, Gordon Road, Ealing, for a good collection of very clean flowers, among which we noticed *Horace Martin*, *Jimmie*, *Polly* and *Roi des Blancs* as being extra fine. Mr. H. Parr, New Barnet, was a very close second.

In a similar class for twelve bunches, disbudded, Mr. A. Hawkins was again first for moderately good flowers, with the exception of the *White Le Cyne*, which were very dry. *Goacher's Crimson* and *Marie Massé* were very fine.

DECORATIVE EXHIBITS.

For a table of bouquets, wreaths, &c., the first prize was withheld by the judges. The second prize went to Mrs. H. L. Sell of Luton, and the third to Mrs. A. H. Cole, Camberwell New Road, S.E.

In Class 11, for a table decoration of *Chrysanthemums* with suitable foliage, the competition was very keen indeed, the first prize being well won by Mr. T. W. Stevens, gardener to W. H. Stone, Esq., Domington, Laurie Park, Sydenham, with a beautiful display of yellow and bronze flowers, intermixed with *Asparagus Sprengeri*, *Koehia tricolorphylla* and *Grasses*. Mrs. H. L. Sell of Luton was a good second with flowers of similar colours, and Mr. R. Edwards, gardener to C. A. Morris Field, Esq., Beechy Lees, Sevenoaks, was third.

Class 12, for three epergnes, was well contested, Mr. A. W. Trossell, The Parade, Beckenham, winning the premier prize with a beautiful arrangement of yellow, bronze and white flowers and *Asparagus* and *Maidenhair Fern* fronds. Miss C. B. Cole, The Vineyard, Feltham, and Mrs. G. Knights, Border Crescent, Sydenham, were second and third respectively.

AMATEURS' CLASSES.

For a dinner-table decoration the entries were numerous, Mr. A. W. Trossell being placed first for a beautiful arrangement of yellow and white flowers, with *Maidenhair Fern*, *Asparagus* and *Amelopsis*. Mr. J. W. Harrison, Laurie Park Gardens, Sydenham; and Miss E. H. Ekins, Rushden, St. Albans, followed in the order named.

Two competitors only entered Class 15, for six bunches of early-flowering Japanese varieties grown in the open and disbudded. The first prize went to Mr. W. H. Chalk, Slough, for a remarkably good lot of flowers. Miss B. Miller, deep yellow; and *La Pactole*, bronze and old gold, were the two best. Mr. R. Sutherland, Auld Aisle, Kirkintilloch, N.B., was the other exhibitor, and he was awarded the second prize.

For twelve bunches of early-flowering Japanese grown in the open and not disbudded, the competition was better, there being six entries; but each was disqualified by the judges owing to the bunches exceeding the specified size.

For twelve bunches of early-flowering Pompons, Mr. A. Haggan, Bushby, near Glasgow, was the only exhibitor, and the judges awarded him first prize.

DIVISION II.—OPEN CLASSES.

For six bunches of early-flowering Pompons there were three entries, the first prize going to Mr. J. Smellie, Bushby, near Glasgow, for splendid blooms. The second and third prizes were won respectively by Mr. J. Emberson, Walthamstow, and Mr. W. J. Cornell, West Norwood.

For six bunches of early-flowering Japanese or decorative varieties, grown in the open and disbudded, the first prize was well won by Mr. J. Emberson, Walthamstow. His *Perle Châtillonaise* and *Goacher's Crimson* were particularly good. Mr. G. Bowness, Bushby, near Glasgow, was a close second, and Mr. J. Smellie was third.

The baskets of *Chrysanthemums* and autumn foliage and berries in this section were very pretty, Miss C. B. Cole of Feltham being the principal winner.

NON-COMPETITIVE EXHIBITS.

These formed, as usual, a very fine feature, and added greatly to the attractiveness of the exhibition.

Hobbies, Limited, of Dereham, Norfolk, put up a truly marvellous bank of *Dahlias* and *Roses*, the latter being remarkably good for so late in the year, and demonstrating to the full the value of the *Rose* for autumn decoration. *Lady Ashton*, G. Nabouand, Mme. Jules Grolez, Betty and Mme. Abel Chateaux were a few that called for special mention. Gold medal.

Messrs. W. Wells and Co., Limited, Merstham, Surrey, staged a beautiful semi-circular group, in which large and decorative *Chrysanthemums*, with choice *Michaelmas Daisies*, predominated. All the flowers used here were of the best possible quality, and the group fully merited the gold medal awarded.

Mr. Frank Brazier, Caterham, Surrey, arranged a large circular group on the floor, composed chiefly of the better class *Michaelmas Daisies*, with plumes of *Pampas Grass* and edged with cut trusses of herbaceous *Phloxes*. This was a very lightly-arranged group, but would have been better without the *Pampas Grass*. Large silver medal.

Mr. G. W. Riley of Herne Hill was showing his green-houses and rustic summer-houses and arches, which attracted considerable attention. Large silver medal.

Mr. J. Williams, 4A, Oxford Road, Ealing, exhibited "Rural Table Decoration," which appeared to be very useful as aids for arranging flowers. Small silver medal.

Messrs. T. S. Ware, Limited, of Feltham exhibited a very good bank of early-flowering *Chrysanthemums* and *Dahlias*, the latter including numerous *Cactus* and *Peony*-flowered varieties in excellent condition. Gold medal.

The collection of fruit staged by Messrs. S. Spooner and Sons of Hounslow was very good indeed, the Apples especially being remarkably well coloured. The Pears too, were excellent and comprised many of the best varieties in season. Silver-gilt medal.

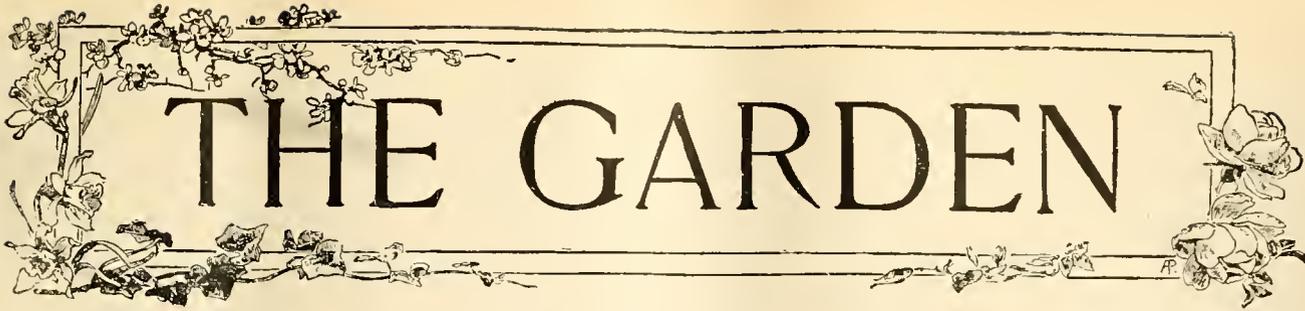
Mr. H. J. Jones, Ryecroft Nursery, Hither Green, S.E., staged a very good bank of *Michaelmas Daisies*, large and small-flowered varieties being freely represented in good condition. In addition, some excellent seedling Japanese *Chrysanthemums* were shown, the variety *Master James*, light crimson, with old gold reverse, being particularly good. Silver-gilt medal.

From Messrs. J. Laing and Sons, Limited, Forest Hill, came a good collection of *Crotons*, *Dracaenas* and other stove foliage plants in great variety, together with *Cactus Dahlias*. Large silver medal.

Messrs. J. Cheal and Sons of Crawley, Sussex, were showing their beautiful single and *Cactus*-flowered *Dahlias* in great variety, the quality of the flowers being really first-class and reflecting great credit on the firm. A few early-flowering *Chrysanthemums* were also included. Silver-gilt medal.

Messrs. J. Peed and Son of West Norwood had an attractive display of their well-known seedling tuberous *Begonias* gathered from the open. These were arranged in masses of their respective colours and were most effective. Small silver medal.

Mr. Norman Davis, Framfield, Sussex, arranged a superb group on the floor, this being composed chiefly of well-grown *Michaelmas Daisies* with a few early-flowering *Chrysanthemums* intermixed. The arrangement and quality of this group were both of the highest order, and fully deserved the gold medal awarded.



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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES FROM PARKS UNDER THE LONDON COUNTY COUNCIL.

BEING much interested in sub-tropical bedding, my interest has been greatly increased this year by visiting some of our London County Council parks. The many different designs and ways of planting the beds really show considerable artistic ability, and give visitors many pleasurable and thoughtful occasions for a halt and for study. Should there be any of your readers intending to pay these wonderful gardens a visit this or next year, I would suggest their seeing the following parks in something like this order: Battersea, Finsbury, Peckham Rye, Springfield, Dulwich and Victoria. The above, to my mind, form a great study to those interested in the great gardening art of the day, and are well worth a visit from devotees with a few idle hours to spend. How many people know that such beautiful flower-beds are to be seen in London? I found out when visiting these parks that, in certain localities, the poorer the neighbourhood the higher the culture of the flowers, which, to my mind, are a real God-send to London humanity. I have learnt much this year on going round these different parks, and no doubt some of your readers who go round will do so also.

It may interest some to know which park struck my eye most. For skill in culture, planting, arranging and getting together such a collection of novelties in flower-blooms and foliage plants, Finsbury Park is first. Here are many striking beds producing great effect. There is one particularly beautiful round bed arranged with standard *Gnaphalium macrophila*, pink *Lantana* and a groundwork of the golden *Fuchsia gracilis*, *Anthericum variegatum*, orange *Lantana*, *Mesembryanthemum cordifolium variegatum*, *Celosia pyramidalis*, with a *Geranium* edging round the bed of Little Dandy. This highly uncommon contrast was extremely graceful. There were also two beds of standards, and dwarf plants under the standards of a good salmon-coloured *Fuchsia* Mrs. Rundle. I do not remember to have seen a more beautiful picture. The silvery foliage of *Artemisia arborescens* is very prominent among the flower-beds in this park.

The next and most beautiful park under the London County Council is Battersea (199½ acres) for both flowers and landscape. When I saw this park I thought, Why do people spend so much money going away from London? Every twist and turn in this extensive oasis is full of the most interesting peeps, and when in the sub-tropical garden one could well imagine, say, Brazil. The most striking feature was the valuable succulent bed which contained a most interesting plant, *Portulaca afra*, the bark of which resembles the elephant's hide and to the touch moves and

feels like a piece of indiarubber. There are also some beautiful specimens of the Phoenix Tree and a large, magnificent bed of the yellow *Lantana* named *Drap d'Or*, the best I have ever seen growing out in the open. In this spot precious and difficult-growing flowers abound in great perfection. It is really a wonderful sight of picturesque and clever planting. After leaving the gardens I took a trip on the lake in the motor-launch, just at dusk, and could well imagine myself far away from London.

By the way, the students' garden is well worth a visit, and it is a pity this is not made into a lovely Old English garden with a beautiful wall all round. Whatever you do, do not miss this park.

In Peckham Rye Park there are some very striking pyramid tower-shaped plants 6 feet high of *Iresine brilliantissima*, trained most perfectly in shape. It struck me what a beautiful effect *Kochia scoparia trichophila* would have against this grand plant. There was a particularly good carpet bed of standard and dwarf *Coleus*, not a single leaf being above another. There was also a fine bed of Paul Crampel *Geranium*. Also at Peckham is a new English flower garden, very beautiful and picturesque, and only opened this year. I noticed that the *Kochia* was named *Kochia trichophila*, but I believe the correct botanical name is *Kochia scoparia trichophila*, there being only one variety. This garden is full of beautiful arbours.

Springfield Park is especially good this year for the graceful and well-grown pyramid specimens of *Fuchsias*, *Iresines*, *Indiarubbers*, *Plumbagoes*, *Heliotropes*, *Ivy Geraniums*, and the *Eucalyptus Gum Tree* plants, planted in very large pots sunk in the turf and very artistically arranged, without cutting out the usual flower-beds; the arrangement, indeed, is quite a novel way of bedding out.

A walk through Dulwich Park at once leads one to admire the beautiful landscape. The Rose and American gardens are beautifully laid out. There is a fine carpet bed representing the arms of Dulwich College, also a good bed of standard *Veronica Andersonii* with *Cannas* for groundwork and the golden *Fuchsia gracilis* for edging. Another bed was the yellow *Lantana Drap D'Or* and the dark *Celosia Thomsonii*, and the succulent bed was very fine also; while another, just inside one of the principal entrances, was a bold effect of sub-tropical plants sunk in large pots in the grass, such as standard *Veronicas*, *Plumbagoes*, and some fine *Fuchsias* called Mrs. Rundle, Charming and Scarcity. All these beautiful beds gave a wonderful effect.

Victoria Park has a very fine bed formed and planted to represent the Prince of Wales's Feathers. This scheme has thousands of the *Geranium* called Flower of Spring and *Iresine Herbstii* plants, with a bold wide edging of blue *Lobelia*, while a mixture of various plants form the centre. I understand this bed took several weeks to plant, and can well imagine it from the size. The *Kochias* here were the largest and finest I have ever seen.

I have also visited Waterlow Park, Avery Hill, Brockwell Park and Golders' Hill this year; the feature of the latter is that not a single *Geranium* of any kind is used. The Old English garden was

full of beautiful rambling Roses blooming in great profusion—truly a pretty sight. I noticed many artists sketching in the cosy corners. This old garden contains all the herbs mentioned in Shakespeare's Works. A beautiful old sun-dial (minus a motto) graced well-grown clumps of Phlox, Zinnias and Kochias. The cultivated Thistle gave quite a tropical appearance.

Brockwell Park's Old English garden contains not only all the herbs, but the plants mentioned in Shakespeare's Works. There was a beautiful bed of Cockscombs and Celosias and some fine specimens of standard Heliotropes and Fuchsias. There was a lovely old wall sun-dial in the corner (again no motto). The laid-out flower-beds of the park I did not admire so much—the beds were in great need of rain.

Waterlow Park, from the Archway Road entrance, has a beautiful bank of mixed flowers. The Old English garden contains, besides the herbs, all the garden plants mentioned in Shakespeare's Works.

Avery Hill has a splendid winter garden and some beautiful flowers in the side terrace. The flower-beds in front, however, left much to be desired.

I was much struck with the happiness of everybody around me. All appeared to be greatly enjoying the different kinds of amusements provided by the London County Council, from a skipping-rope for the little children to the bowling-green for the older men. The only game which appears not to be played at present is golf. I was much interested in some of the side remarks overheard while admiring the flower-beds, such as "What a sin to spend such a lot of money!" What a lot of money "they" spend over these parks laying out these beautiful beds, which form a real lesson to anyone who is fond of gardening. If anyone thinks our money is wasted on our parks it is a very grave mistake, for I particularly watched with intense interest the great number who really did enjoy the lovely flower-beds in the London County Council parks, and I am quite sure the money is well spent and gives endless pleasure to many of the people of London. I hope the London County Council will spend more and more money every year in showing that London can, with all its smoke, fogs and disadvantages, produce flowers of the highest standard, second to none in the world.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

October 27. — Royal Horticultural Society. Exhibition of Flowers, Plants, &c., 1—6 p.m. Lecture at 3 p.m., by the Rev. Professor G. Henslow, V.M.H., on the "Modification of Leaves and Stipules for Special Purposes." Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster. Croydon Chrysanthemum Society's Show (two days).

Resignation of Sir Daniel Morris.—Those connected with the West Indies will learn with regret that Sir Daniel Morris, K.C.M.G., has resigned the post of Imperial Commissioner of Agriculture for the West Indies. From 1886 till 1896 he was assistant-director of the Royal Gardens, Kew, and in the last-named year he was appointed to the West Indies post. His influence in these islands will long be felt, as it has been mainly through his energy that the cultivation of cotton has been developed. Sir Daniel was also for some time treasurer of the Royal Horticultural Society. His services to tropical agriculture will be greatly missed.

Conference of fruit growers at the Wye Agricultural College.—A conference of fruit growers will be held at the South-Eastern Agricultural College, Wye, Kent, on November 27, under the chairmanship of Mr.

C. W. Radcliffe Cooke, President of the National Association of English Cider-makers. "Insecticides" will be discussed by Mr. Spencer Pickering, F.R.S.; "Spraying and Spraying Machinery," by Mr. E. S. Salmon; and "Grading and Packing," by a representative from British Columbia.

Horticultural societies of Ontario.—The second annual report of the above societies, published by the Ontario Department of Agriculture, contains some most useful and interesting information to horticulturists. At the second annual meeting held in the City Hall, Toronto, fifty-eight delegates were present, and numerous addresses on horticulture, all of which are embodied in the report, were delivered. In the Province there are sixty-three societies with a membership of nearly 7,000. Under the new Act six other societies found it necessary to become merged with agricultural societies; their membership was 540. The total grants to societies in 1906 was \$5,956; the grants in 1907 amounted to \$8,000.

Dundee Horticultural Association.—The annual report of this flourishing horticultural association, which is doing so much excellent work in the district it covers, has just been issued to the members. It reports a small increase of membership and continued usefulness during the past session. The treasurer's statement is also of a generally favourable nature, there being a small balance in hand. The Social Fund shows a credit balance also, and the council record their thanks to those who gave the members the privilege of visiting their gardens, and also to the committee of the Technical Institute for the use of rooms. An admirable syllabus of papers for the coming session has also been prepared and is issued along with the report and list of office-bearers.

National Rose Society.—The next metropolitan exhibition in connexion with the above society will be held in the Royal Botanic Gardens, Regent's Park, N.W., on Friday, July 2, 1909. The date of the provincial show, to be held at Luton, is not yet fixed. The autumn show will again be held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, the date fixed for this being September 16.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

"The Garden" Flower Show.—As a reader of THE GARDEN for many years and an admirer of the valuable services it has rendered amateurs, I am much pleased to see the announcement on page 455 that its readers are promised another flower show in 1909. I am sure it will be most welcome, as they will have more time to prepare and obtain a much better knowledge of the work required, as, though the last show was splendid both as regards quality and effect, I feel sure the one promised will be a horticultural triumph. With regard to next year's show, I would ask the Editor to continue, as far as possible, the small classes to encourage amateurs with gardens somewhat limited in size—indeed, if possible, to favour this class—as these exhibitors are a large class and require more encouragement than larger exhibitors who show frequently. But by this I do not depreciate the latter, as the exhibits staged on the last occasion were equal to any at the leading summer shows. I would also suggest that a limit be placed in some of the vegetable classes. In a few cases I noticed there was quantity in excess of quality—I mean, too many varieties, whereas fewer would have been much better, as it would save carriage, space and time in many ways. To get a dozen good dishes requires considerable care.—AMATEUR. [We thank our correspondent very much for his kindly remarks, which shall have our fullest consideration. We welcome any suggestions

our readers care to make before issuing the schedule.—Ed.]

Lilac flowering in the open.—I send a piece of Lilac cut to-day (October 14); several trees are full of buds. I have not previously seen Lilac bloom out of doors at this time of year.—A. H., *Storrington, Sussex.*

Hedychium gardnerianum.—This beautiful flower, a native of the Himalayas and commonly known as the Garland Flower, is not met with in gardens as often as it deserves. The handsome flower-spikes, with their delicious perfume, make it a most suitable plant for the conservatory, especially where such structures adjoin the mansion. A plant now in flower here, with three fully-developed spikes, each carrying fifty or more flowers, is an object of great admiration.—G. JOHNSON, *The Gardens, Durley Lodge, Bishops Waltham.*

Galanthus Olgae.—Mr. F. Herbert Chapman is quite correct in saying that he cannot see that the flowers of this species differ at all from *G. nivalis*, as, like several other autumnal-flowering Snowdrops, it appears to be simply a form of our common Snowdrop. It is a Snowdrop I had for a few years, but lost in some way or other. In common with other Snowdrops of autumnal habit, it blooms before the leaves come, and should therefore be carpeted with some low-growing plant or planted in grass. It comes from Mount Taygetus, in Greece, and is there said to flower in October. After the first year it is usually a little later than that with me.—S. ARNOTT.

Late Peas.—In THE GARDEN for the 10th inst., page 490, one of your readers mentioned Carter's Michaelmas Pea as a good late variety. I have to-day (October 13) picked a fine dish of *Ne Plus Ultra*, and the growth is as green as one could wish to have; also I have Sutton's Satisfaction and Sutton's Latest of All in full bearing and looking the picture of health, and if frost does not set in I shall have Peas for at least three weeks. I used a lot of Vaporite in the soil before opening the trenches for the Peas, and I believe that has a lot to do with the plants being so green and vigorous.—JOHN TAYLOR, *Altyferin, Nantgarredig.*

Precocious Elms at Worthing.—It may interest your readers to know that here in Worthing is an avenue of young Elms bright with the green of leaves that have anticipated normal events by some six months, and I have noticed, in one garden, an Almond, a Deutzia and a Spirea in the same confiding condition. In Paris the same phenomenon is not unusual in the case of the Horse Chestnut, but I venture to think that very rarely in this country has the Elm borne two crops of leaves in the same year. Perhaps some of your readers will contribute their knowledge on the subject.—REGINALD RANKIN.

Genista mantica.—This pleasing Broom is again in bloom, after having flowered well for a long time in early and late summer, and its clusters of good yellow flowers are especially welcome in October. An Italian species, it is yet quite hardy in my garden, where it is now forming good bushes of deep green leaves, plentifully supplemented by the clusters of flowers already mentioned. It apparently delights in a sunny position and rather dry soil. Although quite hardy, it appears to like a little shelter from cutting winds, as a plant I have which is partially protected from cold winds by other shrubs is much more thriving than one which is quite exposed and in a place which receives the full blast of the coldest air we have here. The latter is rather badly cut at times, but invariably recovers as the summer comes on. This Broom is sometimes to be procured as *Carniola mantica*.—S. ARNOTT, *Sunnymoad, Dumfries.*

Sweet-scented Roses.—In answer to your correspondent who asks for the names of Roses remarkable for fragrance, I have found in my garden that Dupuy Jamain, La France de '89

and General Jacqueminot are very sweet. Le Progrès, too, and Laurette Messimy have a very delicate scent, but these are more elusive than the three first named in their perfume.—MABEL A. G. DILL, *Dorset*.

—I beg to send my list of Roses which I consider most fragrant, but we have to remember that soil and situation greatly modify scent as well as colour. Here the soil is practically worthless, and the whole of my beds are made up to a depth of 2½ feet to 3 feet with artificial soil, a mixture of meadow loam, yellow loam, leaf-mould, manure and green marl, mostly carted from various distances; subsoil, sand. I have about 1,000 Rose trees. I may mention that no hand-picking of caterpillars or cures for aphides are needed here; an army of tits—great, blue, marsh and cole—do all the work, with willow wrens and even wasps when feeding their grubs; I feed birds all the year round. The most fragrant Roses, in open ground only: Common Provence (Cabbage) and common Moss, Mme. Isaac Pereire, Bourbon, and, what I consider an identical Rose, Marchioness of Lorne, the former excellent as a standard; Charles Lefebvre, Alfred Colomb, Heinrich Schultheis, Lady Helen Stewart, Mme. Victor Verdier, Duke of Teck, Mrs. John Laing, La France when well fed; Gloire de Dijon, strong Tea scent I do not care for; Mme. Berard, when it will open well, too full; Maréchal Niel, on warm wall; Mme. Eugène Verdier, rather delicate, lovely; Pink Rover, Mme. Abel Chatenay, all the Gallica Roses, especially Village Maid; Conrad F. Meyer, rugosa; Rose à parfum de l'Hay, rugosa; Jersey Beauty, wichuraiana, half-open buds, a wild Rose scent; and for sweet foliage the Penzance Briars, especially Lady Penzance.—G. ROBINSON, *Ringwood, Hants*.

Rosa Verschuren.—In reference to the articles in THE GARDEN for the 10th inst., on Roses grown in a South Bucks garden, I should esteem it a favour if the writer, the Rev. J. B. Shackle, would say through your columns where Rosa Verschuren may be procured, as I cannot find it in any of my catalogues.—A. SAUNDERS

A good crop of Melons.—The illustration shows a crop of Sutton's Best of All Melon grown on the stage in a span-roofed house at Paddockhurst Gardens, Sussex. The house is 26 feet long and 14 feet wide. The plants are grown in wooden boxes the length of the house, and 14 inches deep and the same wide. The Melons are planted 1 foot 9 inches apart, and each carries from four to five fruits of good size and excellent flavour. These, perhaps, take more water by being planted in shallow boxes, but canker and stem-rotting are done away with. For early and late supplies bottom-heat is essential, and too much manure under them is often the cause of failure.—A. B. WADDS.

Rose Isabella Gray.—In reply to Mr. Kemp (page 469), I would suggest that he write to M. Jules Gravereaux, Roseraie de l'Hay (Seine), for the above-named Rose. I notice the variety occurs in the catalogue which this gentleman issues for private circulation. If he could not supply plants it is possible that buds or grafts could be obtained. Someone should take up the hobby of reviving some of these old golden Roses. I fancy they would surprise many present-day rosarians. It is true they were difficult to grow; but then the ardent rosarian would surmount these difficulties. In the "Rose Garden," by the late Mr. William Paul, Isabella Gray or Miss Gray is described as "flowers deep yellow, large and full, form globular, growth vigorous. A good climbing Rose under glass." The subject of budding Maréchal Niel upon other Roses is one full of interest. My father was one of the first to bud Maréchal Niel on to another Rose. He used the yellow Banksian as his stock, and he informs me that the buds produced marvellous blooms the first year, and created quite a furor when exhibited at the Crystal Palace. This was about the second year after Maréchal Niel was introduced. In THE GARDEN,

May 7, 1881, there is an account by Mr. C. M. Hovey, Boston, Mass., U.S.A., of a Maréchal Niel budded on to a plant of Solfaterre, this latter being on its own root, and one gathers from this article that he had a great success with the Maréchal in this way; but the experiment was carried out under glass. I wonder if anyone has tried the R. indica stock for Maréchal Niel. Mr. William Robinson informed me recently that he had seen a marvellous plant of that superbly-coloured Rose Georges Schwartz budded on this stock; but this, I believe, was in France. Here, in England, we should need to plant the R. indica under glass and then bud the Maréchal upon it, as the stock is not hardy. If the R. indica answers so well as a stock, why should not the common China also be employed? This could be grown outdoors against a south or west wall. If we can once obtain the right stock, so as to ensure the immunity of the Maréchal from canker, we shall accomplish much.—P.

Roses with malformed centres.—I have been much struck of recent years by what I believe is a growing tendency for our Roses to come what we locally call "quartered," or, in

MESSRS. WM. PAUL AND SON'S WALTHAM CROSS NURSERIES.

WE recently spent a most pleasant afternoon in the extensive nurseries of Messrs. William Paul and Son at Waltham Cross for the purpose of inspecting the stocks of Roses, hardy ornamental trees and shrubs, and the fruit trees and bushes which will be sent to customers during the present planting season. The nurseries are situated about twelve miles from London on the Great Eastern Railway, trains running thither in about half-an-hour.

The Roses, of course, attracted us first, and the extent to which these are grown needs seeing to be realised. Of pot Roses there are many thousands, and we were particularly interested in some healthy-looking batches which have been specially prepared for the purpose of giving flowers from now onwards until well into the



A GOOD CROP OF MELONS AT PADDOCKHURST GARDENS, SUSSEX.

other words, with a split or confused centre. In carefully examining the blooms in even a first-prize box at any of our leading shows, this defect appears to me to be increasingly apparent, and not considered the serious blemish it was at one time looked upon to be. Some varieties seem much more prone to this malformation than others, and one of the greatest sinners in this respect with me is J. B. Clark. What is the real cause of this distortion of the bloom? At one time I thought the solution lay in injudicious disbudding; but, if so, why does Frau Karl Druschki, disbudded in exactly the same manner as J. B. Clark, always come with a perfect centre? Then, again, I have wondered if hard pruning has something to do with it; but I find that some plants I purposely pruned lightly were quite as addicted to the bad habit. Perhaps a too rich soil may be a contributory cause, and, lastly, possibly extreme fluctuations of temperature, retarding and accelerating the flow of sap alternately, may lie at the root of the evil. I should be glad to hear the opinions of other readers on this somewhat important subject.—B. W. PRICE.

new year with only the temperature of a warm greenhouse. These plants need no pruning or repotting, a little judicious feeding with the temperature named above being practically all they require. Richmond, Mrs. Aaron Ward (a very delightful Rose, with the colour of William Allen Richardson), Catherine Mermet, Hugo Roller and Marie van Houtte were a few that we noticed doing particularly well.

Of Roses in pots for forcing early next spring we inspected a very extensive collection of exceedingly healthy plants, among them being several houses filled with Ramblers in pots for providing the magnificent pillars of blooms such as are shown by Messrs. Paul at the Temple Show. Judging by the firm, well-ripened rods, many of which were over 20 feet in length, these plants will provide a rare optical feast next spring. We noticed a very fine lot of plants of the White Dorothy Perkins, which is an excellent companion for its pink prototype.

The Roses in the open were still giving some fine late autumn blooms, which for colour and perfume would compare favourably with the summer flowers. It would take too much space

to mention them individually, hence it must suffice if we say that all the best varieties belonging to each section are very extensively grown, and all were in the best possible health. A portion of the nursery devoted to all the old Roses—favourites of several generations past—was of considerable interest to us, those which were flowering being remarkable for their fragrance, a feature which is, alas! too often absent in our beautifully-shaped newer Roses, and which may be likened to marble statues. Many good varieties have been raised at the Waltham Cross Nurseries, among them being the well-known Medea and the newer sorts Hugo Roller, Warrior, Refulgence (a scarlet-flowered Hybrid Sweet Briar) and Elaine (a beautiful lemon white Hybrid Tea). A large quarter containing some thousands of plants of Dorothy Perkins was most interesting.

Camellias are still favourites with many people, and Messrs. Paul have one of the largest stocks in the country. The collection consists of nearly 3,000 plants in about 250 varieties, the size of the specimens ranging from over 15 feet high to less than 1 foot, the larger ones in particular being of a most symmetrical character. All were full of plump buds, which promise a good display of flowers later on, and the whole were remarkably free from insects.

Fruit trees of all sorts were largely in evidence, both in pots and the open ground, and many of them were carrying excellent crops. Pot Vines are specially dealt with, and we saw hundreds of well-ripened one year old plants ready for sending to customers. These are either suitable for fruiting in pots or for planting in permanent borders, and the plump buds and solid canes looked capable of producing a good crop of fruit if grown on in pots. Plums, Pears, Apples, Peaches and Nectarines, Apricots, Figs and Cherries are all grown extensively as orchard house trees, the plants being well formed and the wood thoroughly ripened. In the open the fruit trees were the picture of health. Long, yet sturdy, growths were the rule, the soil being especially suitable for these plants. Trained trees of all sorts are specially dealt with, and we noticed many beautiful cordon, fan-shaped and espalier specimens.

Another branch of horticulture dealt with here in a most thorough and comprehensive manner is the culture of hardy ornamental trees and shrubs, both flowering and rich-foliaged types being taken in hand. The methods of propagating these at Waltham Cross are different to those usually adopted, everything that it is possible to treat thus being raised on its own roots. This may, to the uninitiated, seem a trivial matter, but it is nevertheless a very important one. Many of us have bought, say, choice varieties of Lilacs to find, in the course of a few years, that the common stock on which they have been worked has superseded the good variety, eventually killing it outright. With a plant on its own roots such a catastrophe is, of course, impossible. Another point in favour of plants raised by layerings or cuttings is that they are absolutely true and regular in habit. Where seedling trees, for example, are used for the formation of an avenue, the chances are very great that some will grow faster than others and differ to some extent in other ways, but trees from layers, as stated above, will be quite true and regular. Maples, Philadelphuses, Lilacs, Poplars, Willows, Acacias, Lavenders, Buddleias, Beeches, ornamental Thorns, Crab Apples and, indeed, all kinds of hardy trees and shrubs are fully stocked, and it would be very difficult to give the firm an order which it could not execute. The business is under the personal supervision of Mr. Arthur W. Paul, who is one of the keenest horticulturists of the present day, and whose untiring energy maintains the firm in the high position it has so long occupied. The catalogues published by the firm and dealing with the various branches mentioned above are well worth perusal.

THE FRUIT GARDEN.

THE CULTIVATION OF THE GOOSEBERRY.

FOR a working-man and his family possessing a fair-sized garden, I question if we have a more useful or valuable fruit than the Gooseberry. It will grow equally as well in the coldest and most northern part of Britain as it does in the Midlands or the South, or even better. It is, I consider, the most certain cropper and the most prolific of any fruit we have, and the accompanying illustration goes to prove this. It is the earliest available fruit of the year for cooking purposes when picked green, and when planted in different aspects it will supply a delicious and health-giving food for many months in the year. As a preserve it may be enjoyed all the year round, either alone or mixed with other fruits, when it is invaluable to the poor for puddings or to spread on bread when butter is dear and often out of the question. No wonder our Government has hastened to enact a law for its protection from the much-dreaded American Gooseberry mildew.

The larger varieties are invaluable for growing for market when picked in a green state or when ripe, as they give a greater bulk and weight per acre than the smaller varieties, and consequently yield a better cash return.

The Gooseberry may be grown as a bush, standard, cordon or espalier. There are many rubbishy corners in cottage and other gardens lying idle, besides being a nuisance and an eyesore, where the Gooseberry bush if planted would thrive exceedingly well. It likes a deep, rather heavy soil and a cool position, and does not object to a little shade; but it will grow in any fairly good garden soil except that which is very thin and hot. It is also, perhaps, the easiest of all fruit trees to propagate. It is readily propagated by means of cuttings, and the best time to put them in is the last week in October. Choose well-ripened shoots of last year's growth of the variety it is desired to increase, taking them off the tree at their junction with the older wood. Decide the lower part of the shoot of all the buds to the extent of 8 inches, and cut off the top of the shoot to within four buds of the denuded part, leaving the buds on this part, as in due time these will form the bush. The cuttings will then measure about 12 inches in length. They should be inserted in fairly good soil 6 inches deep and 4 inches apart and firmly trodden in, and the position in which they are fixed should be shaded from midday sun. By the following October they will be sturdy, well-rooted little bushes, and should be replanted in an open quarter where they can have more room. The following year they will be ready to plant in their permanent quarters at distances apart for the larger varieties of 6 feet and the smaller 4 feet.

In small gardens a very good way of growing the Gooseberry is to train the bushes as espaliers in rows across the garden or by the side of walks, where they serve a useful purpose in hiding the vegetable crops at a time when they are decaying—not always a pleasant sight to see. The fruit grown in this way is more exposed to light and air, and consequently, in my opinion, much improved in quality and flavour.

I give below a selection of twelve large varieties suitable for market work, and twelve smaller for dessert:

LARGE VARIETIES.

Red.—Beauty, very large and a great bearer; Crown Bob, one of the largest and the earliest ready for picking green; Lancashire Lad, a great favourite for market; and Whinham's Industry, considered by many the best of all for market purposes.

White.—Of all these no doubt the best is Lancer; Lady Leicester, a fine variety with golden tinge when ripe, flavour excellent; Whitesmith, indispensable in any collection.

Green.—British Queen is among the best of the large greens, Telegraph being also very good.

Yellow.—Keepsake: This is one of the earliest ready to pick green for market; it is a handsome and popular Gooseberry. Leveller, an enormous bearer and early; and Langley Beauty, rich golden yellow, flavour rich and delicious.

SMALL VARIETIES FOR DESSERT.

Red.—Ironmonger, rich flavour, fine for bottling; Red Champagne, Dobson's Seedling and Warrington. The latter is fine for preserving and for late dessert.

Green.—Greengage, Langley Gage (one of the best in every respect), and Green Gascoigne.

Yellow.—Golden Drop, one of the earliest; Golden Lion, a late and valuable variety; and Yellow Ball, very small but delicious.

White.—Bright Venus and Whitesmith. The latter is rather large, but on account of its splendid flavour must not be omitted from a list of dessert varieties. OWEN THOMAS.

SWEET PEA NOTES.

ALDERSEY—ITS OWNER, ITS GARDENS AND ITS SWEET PEAS.

IT is impossible to write about the Aldersey Sweet Peas without a big introduction all about their originator and the lovely gardens where they have their home. Mr. Hugh Aldersey has all his life been a gardener, and so it was not surprising that when he came to live at the Hall after his father's death that he should set to work to improve, or probably it would be nearer the mark to say to recreate, the old gardens. Not far from the house there is a large square high-walled kitchen garden, which serves as a sort of centre for everything, for round about it on three sides are bright borders and green lawns and old spreading trees and a delightful rock garden full of good things, and all so deftly arranged and its wide paths so cunningly devised. Alas! it is necessary that these should be so, for otherwise their owner would never be able to visit his treasures. He is, sad to say, an invalid and is obliged to do all his gardening from a Bath-chair. Had I not known I would never have imagined that it was so, and as I stood looking on the beautiful arrangement of plants and shrubs there came involuntarily into my mind the old chestnut of the temperance reformer, who, boasting of a friend who had died at a good old age because, as he said, of his teetotal principles, was somewhat nonplussed when a voice from the audience shouted out "Aye, man, just think how long he would have lived if he had taken something."

It was on one of the few sunny days at the end of August that I was there, and the rockery was quite bright and gay. There were small sheets of the rose-flowered *Silene Schafta*, colonies of both the rose and white *Cyclamen neapolitanum* and the little crimson irid *Anemone cruenta*, trailing tresses of the Shamrock Pea, *Parochetus communis*, bushes of Sun Roses (*Helianthemum*), which had been cut back as soon as the first bloom was over, various *Veronicas*, notably *V. Bidwillii* and *V. canescens*, several *Campanulas*, *Lippia nodiflora*, *Tricyrtis hirta* (the quaint pinkish Toad Lily), *Polygonum capitatum* with its curious V-shaped markings on the leaves and pink flowers, *Scabiosa Pteroccephala*, *Cotula reptans* and many more too numerous to mention.

Flowering shrubs are a distinct feature, and there is a large collection of some of the best. *Erythraea Crista-galli* is only put out for the summer, but all the others are growing outside without any protection. *Jasminum primulinum* and *Solanum jasminoides* are seemingly at home

in a sheltered corner. *Garrya elliptica*, *Rhodotypos kerrioides*, *Romneya Coulteri* in large bushes, *Spiraea bracteata*, *S. Van Houttei*, *Veronica hulkeana*, *Olearia stellulata*, *Buddleias Colvillei*, *lindleyana* and *variabilis veitchiana*, *Carpenteria californica*, *Ceanothus* in about half-a-dozen varieties, *Cistus* in variety and *Coronilla Emerua* are enough to mention to show how many they are and how wide their range. Mr. Aldersey takes a great interest in Daffodils, and the long border, which, by the way, is about 5 yards wide, on the outside of the west wall of the garden is wholly given up to them. He has a fine collection, including some of his own raising. He is a great hybridiser and raiser of seedlings, and Carnations, Gladioli and herbaceous Phloxes have in turn attracted him. At present he has a grand lot of these latter, all of them of some shade of pink. Evelyn, a lovely dwarf salmon pink, was exhibited this year at Shrewsbury and gained an award of merit. Personally, I thought a taller one called Eleanor even more attractive for a garden. It has a conspicuous white eye with which to brighten up the whole truss. The pink, too, is of a very pleasing shade. Three glorious plants of Clematis, which were a mass of bloom on the south wall, must be noted before we pass the portal of what was obviously once the kitchen garden, but which is now only one in name. Here are all kinds of herbaceous plants in nursery beds and here are endless clumps and patches of the now famous Aldersey Sweet Peas. Unfortunately for me, they were past their best, but I was able to imagine the feast that Mr. Burpee and Mr. Sydenham had when they saw them earlier in the season.

It is a long time from 1893, when Mr. Aldersey grew his first Sweet Peas—twelve of Eckford's best varieties—to 1907, when the untiring efforts of twelve seasons' hybridising first met with public recognition, and were crowned with two awards of merit at the great Shrewsbury show. Poor health and such a disaster as overtook him in the wet season of 1901, when his seed harvest entirely failed and left him after all his years of labour with only one of his own raising—Mother o' Pearl, an old type, lavender grey in colour, hooded in shape, but very sweet—would have damped the energy of many a man, but, Phoenix-like, Hugh Aldersey arose from the ashes of the past, and with the practical experience that comes from failure (he had made, he told me, too many crosses and planted far too thickly), and the allurements of Silas Cole's beautiful new type of flower (Spencer), he again set to work to raise more new ones, and the net result to-day is a batch of eighteen very charming varieties.

Many of them were shown at Shrewsbury last month in Messrs. R. Sydenham's stand, but I wish they had not been put in their rustic table decorations, for I nearly missed them.

The best and most distinct of these eighteen will in due course be put on the market by Messrs. Sydenham, but from some correspondence which I have had with the head of the firm it will not be just yet. The stocks are not fixed, and very properly and very wisely Mr. Sydenham will not flood the market with what I call nothing

but "named mixtures" if he can avoid it. There are too many of these already. They make an old grower like myself long for the days of old Henry Eckford to come over again. I think I had almost every variety he sent out, and I hardly ever found a rogue.

The following is a list of the Aldersey Peas with the raiser's own description. I ought to say that, with the exception of Mother o' Pearl, they are all of the Spencer type: Amethyat, lilac, flushed rose; Coral, rose self; Cowrie, pale pink on cream ground; Flamingo, two shades of curmine red, the standard being the darker; Helen Grosvenor (award of merit, Shrewsbury, 1907), orange rose flushed with gold on a cream ground, an improved Helen Lewis;



A SPRAY OF GOOSEBERRY KEEPSAKE.

Jarjoon, lilac self; Mother o' Pearl, lavender grey, old type, hooded; Moonstone, light lavender, a flush of pink in the standard; Opal, light lavender self, a waved Nina Balfour; Pearl, silvery white; Red Admiral, cerise; Romani Rani (English, Gipsy Lady), cream, heavily flushed with salmon pink; Ruby, not unlike St. George, without the magenta shade in the wings, and produces flowers instead of tendrils; Scotch Pearl, lavender, both wings and standards flushed with rose; Seashell, bright rose on cream ground; Sylvia Lee (award of merit, Shrewsbury, 1907), bright salmon rose standard and wings; Topaz, primrose; Tortoiseshell, prawn colour. JOSEPH JACOB,

THE KITCHEN GARDEN.

AUTUMN AND WINTER VEGETABLES.

THERE is a wealth of good green vegetables obtainable all through the winter months if those kinds are grown which are reliable. Of course, at this season I can only briefly note cultural details, but mention of some vegetables that are not grown as much as they deserve should prove of interest to amateurs. A great many growers are not able to force such plants as Seakale, Asparagus and other kinds of vegetables, so that I shall not touch upon these, but those kinds that are easily grown and give a long supply.

The useful Celeriac is a vegetable that the amateur can grow to perfection and at a small cost; indeed, it is less troublesome, if I may use the term, than Celery, as there is far less labour and food required, and the plant is hardier and gives a crop from November to April. The seed is sown early in the spring somewhat like Celery, and the plants grown on and planted out in deeply-dug, well-manured land in rows or drills (not trenches) 2 feet apart. Unlike Celery, to which it is closely allied, it makes a bulbous growth like a large knob, and this is the edible portion. It has a distinct Celery flavour. When fully grown the roots are trimmed and stored in soil or sand in a cool place, much the same as Beetroot or other roots, but I have in the southern part of the country drawn some soil up to the plants and thus wintered them in the open, just covering them with litter in severe weather. I have found Erfurt, Prague and the Large Knob the best. Celeriac is also valuable as a salad. Boiled and sliced like Beetroot it is delicious, and it may be used in other ways as a salad. As a vegetable the common mode of cooking is to boil and serve with white sauce, but it is delicious boiled for a time in clear water, then finished with rich stock and served hot, or partially boiled and then cut in slices or large pieces and finished in butter.

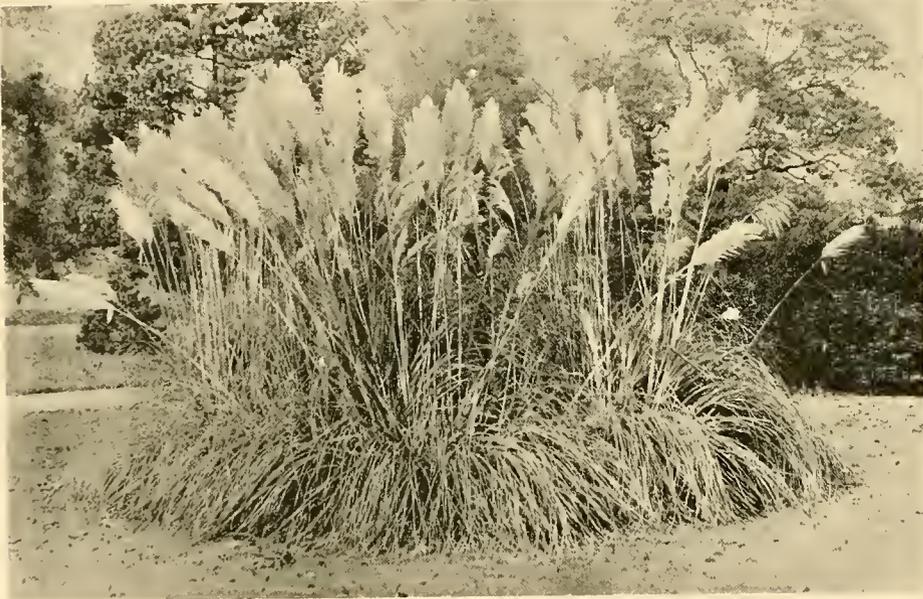
Endive, such as the Large Round-leaved Batavian, is a splendid winter vegetable. I do not advise its culture in the same way as Celeriac for winter supplies, but in the autumn it is far better to make use of it than allow it to spoil, and when boiled it is excellent.

The value of the Cucumber when served as a vegetable is usually overlooked. It is delicious; and at this season there is often a full supply, and they may be used in a variety of ways as a vegetable. Couve Tronchuda is a vegetable not much used in this country, yet it is excellent in the autumn. It is more commonly known as Seakale Cabbage, the midrib or stalk of the plant being used like Seakale, and in the autumn the heads are cut and boiled. Like Seakale, it grows freely in any soil; but to get fine fleshy leaves it is well to sow in the spring and plant out in good land in May or June for an autumn supply. Plant 2 feet apart between the rows and half that distance in the row,

Salsify and Scorzonera are two distinct vegetables much overlooked by amateurs, yet their culture is as simple as that of Celeriac. The seed, if sown in May or June, will give fine roots for the winter. If sown too soon, both these plants, and especially the last-named, have a tendency to bolt or run to seed, so that the dates given are sufficiently early. The Salsify has the larger root, and should be given quite 2 feet space between the rows; and this distance is also suitable for the Scorzonera. The Mammoth is the best Salsify. The roots are lifted and stored like Beetroot. It is a great favourite on the Continent, and may be cooked in a variety of ways. The same remarks apply to the Scorzonera, a black, long root with a very peculiar flavour, quite distinct from other vegetables, and often much liked on this account. The Large Russian is the best type of Scorzonera.

Though a simple vegetable, I would call attention to the value of the yellow Turnips. These are quite distinct from the ordinary white roots, and they remain sound all through the winter. Golden Ball is very good, also Dobbie's Golden; the latter is a splendid keeper.

I have not dwelt upon green vegetables, such as Borecoles, Savoys and others of the Brassica



A FINE CLUMP OF PAMPAS GRASS AT KEW.

type. The Kales are so well known that I need not describe them; we now have fine forms of the Scotch, such as Sutton's Arctic and others, but I would point out the value of the true winter Cabbages. These are quite distinct from the ordinary spring Cabbages and the Colewort varieties. The latter are not hardy enough to go through our severe winters, as when full grown they split badly, and this spoils the heads.

The most hardy variety is the Christmas Drumhead, a medium-sized flat head with very short stalk. This at Christmas is almost equal to a good spring Cabbage, and it is very hardy and remains solid and good for a considerable time. It should be sown in May or June for early supplies. St. John's Day is a true winter Cabbage and a very good-flavoured variety. There is also a new winter Cabbage called Veitch's Drumhead Colewort, which is very useful for its small, compact growth and excellent flavour. Much more might be said about vegetables for autumn and winter supplies, but the above notes will, I hope, arouse interest in this important phase of kitchen gardening. G. WYTHES.

THE FLOWER GARDEN.

PAMPAS GRASS.

FEW hardy plants are more imposing and handsome in the autumn than *Cortaderia argentea*, popularly called the Pampas Grass. Our illustration of a bed in the Royal Gardens, Kew, will give a good idea of its value and beauty as a lawn plant when boldly grouped; for planting at the edge of woodland or shrubbery, where its waving silvery plumes stand out strikingly against the dark background, it is hardly surpassed. For some years subsequent to its introduction in 1848 this was botanically known and still is often met with in gardens as *Gynerium argenteum*, but it is correctly *Cortaderia argentea*. Differences of opinion may exist as to the necessity for changing the name after it has once become thoroughly fixed, but its great beauty at this season of the year affords no food for controversy, for it is in its way unapproachable. A good healthy tuft, with its long, arching, gracefully-disposed leaves, is at all seasons decidedly ornamental, but in early

and attractiveness. As a rule, ordinary culture would suffice for them; a fairly loamy soil is, however, all the better for being enriched with a little very old hot-bed manure and mingled with a large quantity of coarse river sand or roadside grit. Then, in planting bulbs, sand should always be used, a handful beneath each of the smaller kinds and more under giant bulbs, such as the Crown Imperial.

The white Grape Hyacinth is an extremely dainty little flower, seen at its best, perhaps, when filling a small bed as a carpet around groups of scarlet Tulips or bright rose Hyacinths. A fanciful name for this plant is Pearls of Spain: it is catalogued as *Muscari botryoides album*, and is not costly. Again, the white Tassel Hyacinth is much fairer than the old bluish violet kind, and is so hardy that it will thrive almost anywhere. For originality's sake, the Caucasian Starch Hyacinth (*Muscari paradoxum*) is to be recommended, for its colour is an indigo so deep as to be nearly black.

The popularity of Solomon's Seal, especially for shady parts of the garden, make the fact that some species are scarcely ever met with a surprising one. The prettiest is, undoubtedly, *Polygonatum Thunbergii*, for the flowers come in fine drooping clusters and are individually large, white, tipped with green, while the immense foliage is unusually bright in tint. This is about the same height as the ordinary variety, *Polygonatum multiflorum*; but there is a giant sort, 2½ feet tall, that would have a handsome effect in many parts of the garden, under trees, upon banks, or springing out of rockeries, as well as forming huge groups in borders or for bed centres; this is *Polygonatum verticillatum*. Although the blossom is cream instead of pure white, it is very showy and the foliage is remarkably free. None of these bulbs, or roots, cost more than a few pence each, and are cheaper by the dozen.

Edgings and carpets ought certainly to be made of the Lebanon Squill, a flower that becomes very dear to all who once grow it; there is such a refreshing clearness about the stripes of porcelain blue that run down its white petals, and the colour-effect from a slight distance is almost lavender. It does not usually exceed 6 inches in height, but flourishes in most borders, giving a welcome show each April.

It is said that wherever Lilliums thrive, so, too, will *Sanguinaria canadensis* (the Blood-root), which is a lovely pure white, gold-centred little flower; the leaves are quite handsome, and the best way to use this bulbous subject is as a carpet for a stretch of damp, semi-shaded soil. The blossoms, about the size of Primroses, appear in profusion. There is no absolute need to add peat to the soil; as said before, the ground that does for Lilliums will suit these bulbs well enough.

Schizostylis coccinea ought to have found its way into all gardens, yet it has not done so. It is one of the very few flowers of the bulbous class that do not begin blooming until October, and continues often during November; for this reason alone it is entitled to our attention, and the flowers themselves are very beautiful, set in elegant spikes and of the richest scarlet-crimson. It thrives in ordinary borders, and does well massed between shrubs or the larger herbaceous plants; grouped with late white Michaelmas Daisies or Chrysanthemums it can give one of the most striking features of that season. Bulbs cost only 5s. for fifty, so lavish planting can be indulged in. Another lovely way to use it is in groups with a carpet of dwarf white Violas, those that are of excellent bedding habit, either in beds or borders. When given liquid manure during its bud-forming time *Schizostylis coccinea* grows to a magnificent size. Its height is from 1½ feet to 2 feet.

A gem, indeed, is the Painted Wood Lily (*Trillium erythrocarpum*), and one that can be enjoyed by the owner of a shaded damp garden. The plant grows about 1 foot high and has snow white flowers blotched on each petal with bright

autumn, when overtopped with its silvery plumes, there is then nothing to compare with it. Besides the ordinary form there is a variety with variegated leaves, and another in which the flower panicles are pinkish. This variety, known as *Rendatleri*, is not so beautiful as the type, but from its distinct appearance it is well worth a place in most gardens. In the South of England the Pampas Grass is hardy, but in more northern districts it cannot be thoroughly depended upon unless protected. The New Zealand *Arundo conspicua* (now *Cortaderia conspicua*), though less imposing, is hardier than the Pampas Grass, and may therefore be planted in colder localities. Even this is, however, in many places benefited by a certain amount of protection. Both the above-named prefer a good deep soil with ample supplies of water during the growing season, but stagnant moisture in winter is injurious.

UNCOMMON GARDEN BULBS.

THERE are a great many beautiful bulbous plants that are not often cultivated in our gardens, yet which would considerably add to their interest

crimson. *Trillium grandiflorum* is a delightful all-white large bloomer for a similar position. *Tulipa vitellina* is one of the prettiest of the hundreds of hardy or herbaceous Tulips that can be left undisturbed where once planted. Like most of the others it blooms during May, sending up self lemon blooms on stems 20 inches or more in length. Its value for cutting or as a garden adornment can be at once realised. A late Tulip of the same class is *Tulipa Sprengeri*, but this bears orange vermilion blossoms and is only 18 inches high. A smaller but remarkable flower, too, is *Tulipa orphanidea*, for the petals are orange and show a black centre.

Wherever the lesser hardy bulbous plants are loved, the familiar *Chionodoxas*, *Scillas*, *Crocuses*, *Snowdrops*, &c., should be accompanied by *Milla* (or *Triteleia*) *uniflora violacea*, for the sake of the china blue shade of the flowers, the petals of which are regularly striped with violet. It succeeds on the level as well as in rockery nooks, has a sweet perfume and is lasting in water. Probably there are few such inexpensive ways of permanently improving a garden as by planting quantities of the less familiar bulbs in it each autumn. E. D

LILIUM SULPHUREUM.

As you have accepted my photograph of *Lilium sulphureum* (syn. *wallichianum*), you will probably like to hear how I grow it so well. I find it does not thrive in my heavy loam, but requires peat, and I have succeeded with it for some years. This season it is 7 feet 2 inches in height, with fifteen blooms on the best stem. It usually has from five to seven. I stand beside it to show the comparative difference in my height—5 feet 9 inches. As I daresay you know, it has bulblets in the axils of the leaves, which take three years to become blooming bulbs.

Newton Abbott. G. S. PATEY.

COLOURED PLATE.

PLATE 1859.

FRILLED PERSIAN CYCLAMEN.

FOR some years past Messrs. Sutton and Sons of Reading have devoted a considerable amount of time and attention to the evolution of a strain of fringed or frilled Persian Cyclamen, and their labour has been rewarded by a strain which will now come true from seeds. As will be seen by the coloured plate (which has been prepared from flowers kindly supplied by Messrs. Sutton), these frilled varieties possess all the colour gradations of their prototype, and they will, we feel sure, soon become great favourites for the decoration of greenhouses during the dull winter and early spring months. Beautiful as the plain petalled forms undoubtedly are with their varied colours, there is still room for these more ornamental frilled flowers, and doubtless before many years have passed we shall find the same colours in these as in the ordinary forms.

THE GREENHOUSE.

HOW TO GROW CYCLAMEN.

SEEDS of Cyclamen may be sown at any time of the year; but as a rule the best results are obtained from autumn sowing, and, if a succession of flowering plants is required, sow again in January or February. Thoroughly clean the seed-pots or pans and provide them with good drainage. Fill them to within half-an-inch of the tops with a prepared soil consisting of good loam, leaf-mould and sand. The soil should be passed through a quarter-inch mesh sieve and

Seed sown in the early months of the year should be placed in heat at once.

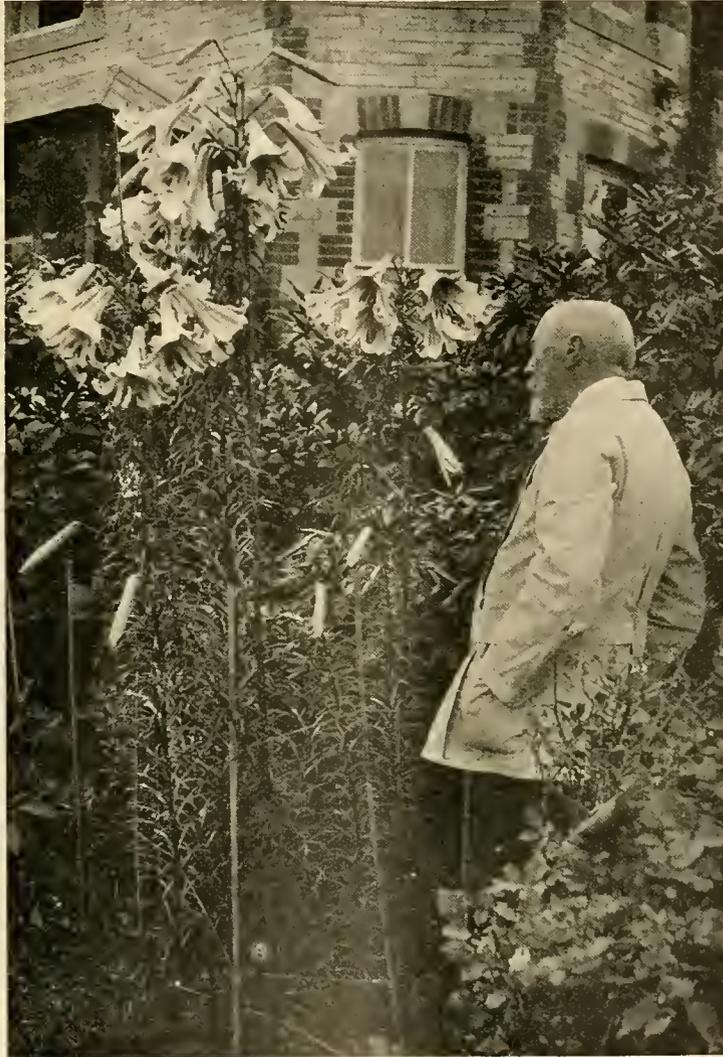
The Cyclamen does not need a strong heat, but an even temperature must be ensured, as extremes are fatal. A light position and a temperature of 55°, rising to 60° during the winter, are suitable. During the summer a light shading may be necessary during a spell of bright weather, but a warm, humid atmosphere is necessary to ensure the development of the corms.

The seed germinates very slowly and very irregularly, some plants being ready for removal before many of the others have started. The plants may be carefully taken from the seed-pots as they become ready and transferred into others 2 inches in diameter, using a compost as

advised for the seed-pots. As the plants grow pot them into 3-inch pots, and at this shift use rather less sand with the soil. In potting always take care to leave the crown of the corm clear. A shelf near the glass is a good place for the young plants at this period of their growth. Do not allow Cyclamen to become dry at any time, or they will quickly fall a prey to aphid; should this appear it must be checked by fumigation. As the spring advances give air to the plants to encourage a sturdy growth, but in doing this be careful to avoid draughts. The plants should be ready for their final shift by the beginning of July. They will flower freely in 5-inch pots if carefully potted. A little dried cow manure finely broken up and mixed with the soil is beneficial.

During August and September the plants grow very freely, and when the roots have taken possession of the soil weak manure water may be given twice weekly. This is a material aid in the production of fine flowers. Some growers advocate growing the plants in cold frames during these months, and they are successful in their management; but as the days become colder they must be removed into a structure having a more congenial atmosphere, or the flowers will be poor and deformed. Well-grown plants of Cyclamen are very beautiful, especially some of the new shades of colour produced from seed of select strains which are now procurable, and the flowers are useful for a variety of decorative purposes. The important points in the cultivation are: An even temperature, a moist atmosphere, plenty of water at the roots (avoiding stagnation), free circulation of air without draught, light position and freedom from insect pests. C. RUSE.

Munden Gardens, Watford.



LILIUM SULPHUREUM GROWING IN THE GARDEN OF MR. G. S. PATEY, ALLER VIEW, NEWTON ABBOTT.

pressed firmly into the pots. The seeds of Cyclamen are much larger than those of many greenhouse plants, and therefore the soil prepared for their reception may with advantage be used in a coarser condition. Place the seeds about 1 inch apart, and cover with a quarter-inch layer of soil. Place a thin layer of Coconut fibre on the surface as an aid in checking rapid evaporation and also in keeping down the growth of moss. Seed sown in the autumn should be placed in a temperature of about 45° for fourteen days, after which transfer the pots to a warm house where a moist atmosphere is maintained.

A PRETTY FLOWERING GREEN- HOUSE BULB.

(ACIDANTHERA BICOLOR.)

THIS is a decidedly uncommon bulbous plant, yet as seen in the cool portion of the T range at Kew it is well worth extended cultivation. A native of Abyssinia, this *Acidantha* has been known for over half a century, but a dozen years ago, when it was given a first-class certificate by the Royal Horticultural Society, it was recognised by very few. It belongs to the Iris family, and has certain affinities to the *Gladiolus*. H. P.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

HARDY FRUIT GARDEN. — The present is the best period for planting Plums, Apples, Pears, Cherries and kindred subjects. See that the ground is deeply dug previous to planting. As soon as the Currants drop their leaves I make it a rule to prune the bushes; the leading shoots should be shortened back to within 4 inches or 6 inches of their base. Lateral growths should be cut back to within an inch or so of their base to form fruiting spur.

Greenhouse and Conservatory. — I am now devoting some attention to Camellias which are to provide a welcome display of blooms next spring. I am sponging the leaves of the plants with a solution of soft-soap water, thus effectually removing lurking insect pests and at the same time thoroughly cleansing them. Chrysanthemums in glass structures need carefully over-looking at frequent intervals. Should warm and sunny weather prevail, the blooms must be shaded from the direct rays of the sun. The glass structure must also be freely ventilated, otherwise damping may set in. It is wise, even in the absence of frost, to have the hot-water pipes slightly warm, as this dispels dampness and assists the large blooms to unfold their florets. The temperature during the day in the greenhouse should be about 55°, and at night from 45° to 50°. Excessive moisture in the glass structure should be guarded against at this period, and for this reason wipe up water from the floor after watering is done.

The Flower Garden. — The hardy border may be replanted at this period. It is optional whether the work be done now or in the early spring, but many plants are better when treated at this period. Old plants should be lifted and divided into smaller pieces, giving preference for replanting the portions broken off from the outer edge of the old stools. New beds and borders ought to be trenched or deeply dug, and be given a heavy dressing of manure at the same time. Leaves should be collected and stored for future use. There are so many uses to which they may be put that they should be conserved as much as possible for use during the winter season. Straggling shoots of Virginian Creeper may be trimmed off, thus making them present a better appearance and contributing to the well-being of the plants. Lift Dahlias as soon as possible; that is to say, immediately after a frost has blackened the shoots. They are then an eyesore, and no useful purpose can be served by allowing them to remain longer in the ground.

Cold Frame. — Plants that are growing away freely should receive abundant



1.—HYACINTHS PLACED IN GLASSES TO START GROWING.

ventilation in order to maintain the growths in a sturdy and firm condition. Auriculas at this time should be watered with rather more than ordinary care; otherwise there is a chance of the soil becoming too wet. What should be aimed at is to keep the soil just moist, erring on the side of dryness. All tender plants in the cold frame should be removed to a glass house where protection can be provided in case of frosts. It would be fatal to leave them longer in the cold frame, as we may safely anticipate the experience of frosts in the near future.

The Vegetable Garden. — In anticipation of frosts I make it a rule at this season to protect Cauliflowers that are maturing. It is a very simple matter, and may be done by bending one of the leaves to cover the head. This also preserves the colour. Carrots and Beet should be lifted without delay if this has not already been done. They may be stored in a cool cellar or placed in a sheltered quarter of the garden, where they may be covered with a thick layer of light soil as a protection against severe frosts. Roots may be taken from this mound from time to time as required. If left in the ground any longer the roots deteriorate. D. B. C.

GROWING HYACINTHS IN WATER.

With the advent of the system of growing bulbs in moss fibre many predicted the extinction of the older method of growing, or, more strictly speaking, flowering of Hyacinths in water, yet the latter plan still has many adherents, judging by the numerous enquiries made about the subject. At the outset it will be well if the beginner fully understands the principles underlying this method of culture; then fatal mistakes which are frequently made will be avoided. It must ever be borne in mind that the flower-spike which is to appear later is already present in detail in the dormant bulb, and also that practically all the food that the plant will get to enable it to develop its leaves and flowers is stored within its tissues; therefore, the more solid and heavy the bulb the better will be the ultimate result. Most bulb merchants stock what are known as first-size bulbs, i.e., those which have been specially selected for their large size and firmness, and it is these only which are worth the trouble of

growing in water. Roman or Italian Hyacinths, too, are not suitable for the purpose on account of their straggling habits, good bedding Hyacinths being the sorts to employ. With these few points thoroughly grasped the amateur is well on the road to success.

Having secured the bulbs, the glasses must next be considered. Many fancy designs have from time to time been put on the market, but the ordinary type shown in the accompanying illustrations have yet to be beaten. Other things needed will be some charcoal, water, a dark cupboard and, subsequently, a light window or greenhouse.

Fig. 1 gives a good idea of the glasses as they appear when the bulbs are first placed in position. It should be carefully noted that the base of each bulb nearly, but not quite, touches the surface of the water. Two or three pieces of charcoal should be placed in the water in each glass, as this will keep it fresh, and the water must not be changed, especially after roots have been made. If any has to be added to make up that lost by evaporation, the work must be done as carefully as possible without disturbing the bulb. The glasses must next be stood in a cool dark cupboard for a few weeks until the bulbs have reached the stage shown in Fig. 2. It will be noticed that a number of rather thick, long roots have been formed, but top growth has not advanced much. This is just the reason why the glasses were stood in the dark cupboard; had they been placed in a light position the leaves would have been developed in advance of the roots, to the detriment of the flower-spike. Although a cool cupboard is advocated it must be frost-proof, otherwise the glasses will be burst by the expansion of the water when it is frozen.

Having, then, got our bulbs in the condition shown in Fig. 2, they may be gradually inured to the light, and by the time the stage shown in Fig. 3 is reached they may be given full light in a warm window or greenhouse. It will be noticed in this illustration that the leaves are opening. Fig. 4 shows a bulb of *Roi des Belges*, a good dark blue variety, at a much more advanced stage, with a plump flower-spike pushing up between the leaves, and Fig. 5 depicts the same bulb at its best. It will be seen in Fig. 4 that the water is traversed by a mass of roots reaching to the bottom of the glass, without which a good flower-spike is impossible. Bulbs flowered in this way are too weakened to be of further use, and their retention is not worth while.

SPONGING PLANTS.

An experienced person can sponge the most tender leaf without doing it an injury, but the novice cannot do the work as well. A few hints on the subject will prove helpful, and practice will soon make the operator perfect in his work. There must be right



2.—HYACINTH AT STAGE FOR BRINGING INTO THE LIGHT.



3.—HYACINTH WITH LEAVES OPENING.



4.—HYACINTH MAKING GOOD PROGRESS AND SHOWING A FLOWER-SPIKE.

principles to work upon, and these principles should be followed methodically. The sponging of the leaves of a few plants seems to be a very simple matter, so does the washing of a kitchen or a tiled floor in the conservatory, yet, if certain operations be left undone, the tiles will present a very smeared appearance, and the same applies to the leaves of plants.

Why Sponging is Done.—Sponging is done for two reasons, both equally important. First, to cleanse the foliage from all dust and encrusted dirt, chiefly that of soot, dust and the excrement of insects combined; secondly, to rid the plants of injurious insects. The encrusted substance clogs the pores of the leaves, thus seriously impairing the general health of the plant; and the insects suck the very life out of their host.

When Sponging may be Done—At any season of the year this work may be done, but in the autumn, and throughout the winter, it should be followed up closely. The syringing in summer cleanses the leaves very much. In winter less syringing is necessary; and as the majority of the leaves of the plants are, at this season, more matured and harder, the sponging may be done without the risk of injuring the foliage.

How to Sponge the Plants.—From the time that the leaves are moistened with clear water, or an insecticide, till they are dry again the plants should be shaded from bright sunshine. Sponging should be done with tepid water only. If dust or encrusted dirt only be present, the leaves must be syringed first. This will soften the hard substance on the leaves, and it can subsequently be removed with the aid of the sponge more readily; but if insects are present, attack them direct with the insecticide. Do not, as it were, erect any partition between them and the solution to be applied. In all cases where insecticides are used it is advisable to syringe the plants again with clean, tepid water before exposing the leaves to the sun. Use a soft sponge, and, supporting each leaf with one hand, gently draw the moistened sponge upwards from the stalk end towards the point. To effectively remove hardened soil from the leaves draw up the sponge several times lightly rather than use undue pressure. Smooth-leaved plants, such as Crotons and Dracenas, are more easily managed than those having leaves with a rougher surface. Sponge the stalks and stems of the plants also, and work the sponge well into the axil of leaf and stem where there are insects; but be quite sure you do not injure any young shoots growing there.

HOW TO TREAT MARGUERITES IN WINTER.

YOUNG, flowerless shoots root readily enough if inserted in sandy soil in shallow boxes, the same as Zonal Geraniums are treated. Of course, they do equally well in flower-pots. It is rather late in the season to take cuttings now, though they would soon form roots if the shoots have not been subjected to any frost.

It is, however, about the wintering of the rooted cuttings that I wish to speak. The bedding Calceolaria is often kept too warm and close throughout the winter months, and so also is the young Marguerite plant. Generally one sees the latter growing on a dry shelf in a warm greenhouse, infested badly with the leaf-mining maggot, with the result that nearly all the leaves are shrivelled and brown in colour, instead of being dark green and fresh.

With the aid of plenty of covering material Marguerites can be kept during the winter in a cool frame with far more success than in a warm greenhouse. The ideal place for them is a frame or low pit where a little heat can be turned on in frosty weather. The atmosphere should be neither too dry nor too moist, but the temperature should be cool according to the state of the weather. It is through subjecting the young plants to a high temperature, caused by heating apparatus, that the plants are often very unsatisfactory. A small quantity of rotted manure in the bottom of a shallow box and some sandy soil are all that is necessary for the cuttings to root in.

PRIMULAS AND THEIR CULTURE.

FOR winter and early spring flowering Primulas are very popular, and, considering the excellent strains that may be procured, this is not surprising. At the present time plants in various stages of growth require frequent attention respecting potting, watering and rearranging in the pits or frames in which they are growing. Plenty of air is necessary to promote a strong, healthy growth, and the plants must also be arranged in a light position, although shade must be provided during bright sunshine. Many successful growers place the frames under the shade of a wall or building, and this is an ideal place for the plants providing the position is not damp.

Slugs are very fond of the tender foliage of the young plants, and if not destroyed often do a large amount of damage. They may be checked by sprinkling soot around the plants, and trapped by placing slices of raw Potato in the frames; they feed on the Potato, and, if these are frequently examined, large numbers may be caught and despatched.

Plants still in 3-inch pots will soon be ready for potting on into 4½-inch pots, which will be large enough for this late batch; they do not require large pots. Provide good drainage and use a sweet, light, sandy soil. Pot fairly firm, but do not ram the soil; the leaf-stalks are very brittle, and care must be taken that these are not broken. After potting, if the weather is dry, sprinkle overhead and provide shade for a few days until the plants begin to root into the fresh soil. They may remain in the frames until frost threatens, if desired, or they may be placed in a light, cool greenhouse. When the pots are filled with roots, well-diluted manure water will assist the plants, and fine trusses of flowers will be produced.

POTTING SOILS FOR PLANTS.

AMATEURS should lose no time in getting in a good stock of the different ingredients necessary for the making up of plant composts. When there is not a sufficient supply at hand the novice is tempted to make use of ordinary garden soil and other fibreless material which is quite unsuitable.

Loam.—This should be of a fibrous nature; if any fine soil is needed it can always be obtained from a heap of fibrous turves. The turves should be cut about 3 inches thick and stacked in an open position with a north aspect. Before putting down any turves scatter some dry, unslaked lime on the ground; this will kill any insects lurking there. Place all the turves with their grass sides downwards and finish the stack by forming a pointed roof; then the rain will not enter and make the turf in a sodden

condition. All turves should be cut from open ground, not near hedges, old banks, nor from under trees.

Leaf-soil.—This is a very important ingredient, because its presence causes the formation of innumerable small fibrous roots of plants, and, in the case of seedlings, it is most essential and for many kinds of bulbs almost indispensable. Form several heaps in some out-of-the-way place where the material can be left undisturbed for several years. First there should be the heap of leaves well rotted, then the one of half-decayed leaves and, finally, the heap of new leaves, so that there will be different grades suitable for use mixed with fine loam, or with coarse mixtures for placing in the bottom of boxes and pots.

Peat.—This soon perishes—that is, loses its toughness of fibre—if it is exposed to the weather during the winter time, but if kept dry it remains good for a considerable period; therefore store it in sheds or in any cool place where it can be kept dry.

Manure.—Here, again, we require littersy and short manure. The latter is manure practically free from straw. Now, in all cases the manure-heap should be under cover and in a northern position. The direct rays of the sun cause evaporation; exposure to rain means that all the best portion of the manure will be washed away.

Sand.—Even road-grit, if carefully washed and dried, will make a valuable ingredient for mixing with potting soil, as it will keep the whole mass porous; but coarse silver sand is the best, especially where cuttings, seedlings and fine-rooted specimens are concerned. Store sand in boxes and keep dry.

PLANTING MIXED BEDS FOR SPRING.

DOUBTLESS many amateurs will now be planting beds of mixed subjects for spring effects, and



5—A FULLY-DEVELOPED FLOWER-SPIKE OF HYACINTH ROI DES BELGES.

there are a few details which should be fully observed if a good display is desired. Where bulbs and other plants, such as Arabises, Aubrietias, Wallflowers and Polyanthuses are used in conjunction, these leafy plants should be inserted first, carefully laying them out at regular distances over the bed. When these are planted, go over the bed with the bulbs, laying out the whole before planting is commenced. Unless this is done it is almost impossible to get a regular bed of bulbs, and if the latter were planted first it is probable that in inserting other subjects many bulbs would be disturbed.

THE TOWN GARDEN.

HARDY PLANTS FOR TOWN GARDENS.—It is thought by some people that the number of hardy herbaceous plants which can be successfully cultivated in town gardens is exceedingly limited, but this is not actually the case. If the grower studies his soil and improves it as may be necessary, there are scores of beautiful plants that may be grown to the utmost advantage. At the same time, there is no gainsaying the fact that certain kinds thrive far better than others; and as some amateurs are unable or unwilling to devote special attention to a plant that requires coaxing, it may be well to enumerate some of the most generally satisfactory.

At the outset I desire to impress upon my readers that I do not guarantee success with a single one of them, but am prepared to support my selections by asserting that they will always succeed provided that the care to which all plants are entitled is accorded to them. To merely stick a plant in and expect that it will go on growing in a satisfactory manner for an unlimited number of years is unreasonable. If it is such a one as will stand cultural neglect there is little doubt that at the end of two or three years it will have overrun the garden and become a pest instead of a pleasure (*Harpalum rigidum* may fairly be mentioned as an example of this); while if it is one that demands attention, then failure to provide it will simply mean that in the course of about two years it will die out. In planting, which will be done in November or in the spring (in many situations the latter is preferable), consideration will be given to the likes or dislikes of each kind in the matter of sun.

In all cases the soil must be deeply dug, and it is almost always imperative that some well-rotted manure shall be incorporated with the second spit. It should be allowed to lie fallow for two or three weeks between the time of working and the actual putting in of the plants, and even then, although the settlement will be good, it is necessary to plant firmly, and, if in the autumn, that the grower shall go over the border after every sharp frost and see that none of the plants has been lifted out of the soil. Should one be found in this condition, it must be at once pressed firmly down again or it will perish.

It may be well to state that this list will only embody hardy plants; those of an annual nature or which are of tender constitution, even though of perennial habit, are omitted. Practically all the annuals flourish satisfactorily, as also do many of the tender plants in favourable circumstances, but in other instances their success is so essentially speculative that I think it wise to exclude them. Some that will be named are strictly biennials, but they thrive so well and are such general favourites that one cannot possibly leave them out.

For spring we have Arabis, Armerias, Aubrietias, Auriculas, Double Daisies, Iberises, Irises, Polyanthus, Primroses, Saxifragas, Violas and Wallflowers (the latter are uncertain in many gardens, as it is difficult to winter them satisfactorily, but they are so fragrant and beautiful that they must always be tried). Pansies also do grandly where the soil is fairly strong and of good depth. For the summer choice may be made from Antirrhinums, Canterbury Bells, Carnations, Chrysanthemums, Heliums, Sunflowers, Irises, Lychnises, Enocheras, Paeonies (a deep, rich soil is imperative for these), Pentstemons, Phloxes, Poppies, Pyrethrums, Rudbeckias and Veronicas. For autumn there are Japanese Anemones, Chrysanthemums, Sunflowers, Achilleas, Inulas, Pyrethrums, Solidago, Sedum spectabile and Michaelmas Daisies. Needless to say, among the more tender plants which bloom superbly in town gardens in late summer and autumn are the Dahlias.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

KITCHEN GARDEN.

CAULIFLOWERS. — Prick out the last batch of these on a border where they can be afforded protection in bad weather.

Celery. — Continue to earth up, and have a stock of dry material in readiness for protecting from frost.

Mushroom Beds. — Continue to prepare horse manure for successional beds. Do not keep the temperature too high in the Mushroom house, and damp the floors and walls twice daily in dry weather. The temperature should rarely be allowed to go below 55° to 60°.

Chicory may now be taken up and placed in pots or boxes for forcing.

Mustard and Cress. — Sow this twice weekly if a good supply has to be maintained. Use shallow boxes and fine soil, and sow the seed on the surface. Do not cover it with soil, or the crop will be gritty. The boxes should be placed in a warm position.

PLANTS UNDER GLASS.

Crotons should be kept in the warmest part of the house and allowed all the sunshine they can get, in order to preserve their colour. Dracaenas and foliage plants generally must be kept well syringed and sponged occasionally. Gardenias should be frequently syringed with N.L. liquid to keep down insect pests.

Houses containing Azaleas, Camellias, Rhododendrons, Callas, Boronias and the like should be kept as cool as possible and full ventilation given on fine days. Pot up retarded Lilies of the Valley and place them in cool frames or houses, covering the pots over with moss. About eight to ten crowns should be placed in a 4½-inch pot for house decoration, but those for cutting may be placed in shallow boxes.

FRUIT HOUSES.

Peach and Nectarine Houses must be kept cool and any lifting or root-pruning required attended to at once. The soil should be removed all round the ball of roots, also underneath, as it is there that the mischief is often caused. The tree should be made to rock from one side to the other, as it will then be certain that no tap roots remain.

Vinerias. — The early house may be pruned at any time now, but take care that no heat is turned on in cases where plants are housed. Houses containing late Grapes must be kept cool and dry, with just a little heat on damp nights. Where there are only a few bunches remaining in one house, they should be cut and placed in bottles of water and be accommodated in the Grape room or on shelves in another house which contains Grapes. By doing this the empty house may be used for a time for housing plants. The borders may be examined if the Vines have not been satisfactory, taking care to cover and protect all roots during the process.

HARDY FRUIT.

Continue to gather and store all fruits as they become ripe. Most Apples and Pears will be ready this month, but if they will not part from the spur readily, do not force them; they will keep all the better for thoroughly maturing.

Collect and get ready soil for borders that require renewing and for fresh planting. Old trees that have been in position a long time have drawn all the goodness out of the ground, and in such cases a good deal of new soil should be imported. Keep plenty of air on the fruit room.

W. A. COOK.

Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CROTONS can be strongly recommended for autumn propagation. With bottom-heat and a close frame there is never any need for partially striking the cuttings on the plants with moss, as this, which is more of a coddling process, is only advisable when the convenience is not what it should be for rapid propagation. The best-coloured shoots which are growing erect, or nearly so, make the best cuttings. The shoots can be cut off of a fairly good length, according to the variety, from 4 inches to 9 inches or 10 inches being very reasonable limits. The cuttings should have all but the two lower leaves left on; the others the young plants will retain for twelve months, and sometimes longer when a successful strike has been made. After they have lain for two or three hours in the water-tank, insert them singly in 2½-inch or 3-inch pots, according to their size, and see that the soil does not at any time become at all dry.

Calanthe Veitchii. — Those who are in the habit of feeding this Orchid as the spikes rise must now be careful not to do too much to it, for the roots are already beginning to lose their hold on the compost, and it is only reasonable to suppose that the plant has by now stored most of the nutriment it requires in its pseudo-bulbs.

HARDY FRUIT.

The Loganberry. — When the Strawberry and Raspberry crop is under the average, the Loganberry comes in very useful. It is less sweet than the Raspberry or Strawberry, which is an advantage. The fruits are borne in clusters, darker in colour than the Raspberry, and somewhat acid when nearly ripe; but if allowed to hang and become black they are sweet and useful for dessert. I find the Loganberry fruits well when grown on an east or north wall and treated much like the Raspberry.

FLOWER GARDEN.

Spring Flowers. — Beds cleared of summer bedding plants that are to be utilised for a similar purpose another year may be planted with spring flowers which are waiting removal from nursery beds. Wallflowers are certainly the most useful of spring flowers, and the variations of colours have undergone considerable improvements in the last few years. Polyanthus may be used largely if plenty of time is available in late spring in which to clear them away and prepare the beds for summer plants. A great point in the planting of these temporary things is to regulate the work in such a way that beds required early another year may be filled with plants that are quickly over, or the sacrifice of which while in flower is not much regretted.

KITCHEN GARDEN.

Forcing Rhubarb. — If this is desired earlier than usual any variety may be forced, but the early red-stalked forms are the quickest to give produce this side of Christmas. If clumps are lifted and placed direct in a rather strong heat they may fail to start satisfactorily. They would do better if first subjected to a frost or frosts.

Broccoli and Cauliflowers. — It is somewhat early to lift and store fully-grown plants in cold pits and frames with a view to having a good supply after those in the open have succumbed to frost, but we sometimes experience wintry weather in October and the early part of November, and this ought to be prepared for.

ROSE GARDEN.

Late October and throughout November is the best season for planting Roses. The ground should be trenched if the soil is sufficiently deep to admit of this, but, if not, double digging is the most satisfactory way of dealing with it, and into the bottom spit should be dug a considerable quantity of good manure which has had time to become fairly decayed. T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

NEW PLANTS.

LÆLIO-CATTLEYA CÆRULEA WESTONBIRT VARIETY.—This is a very pretty flower of large size, graceful outline and delicate colouring. The sepals are lanceolate and rather long and pointed, the petals being broadly obovate, with crinkled margins, the colour of both sepals and petals being the usual deep lilac hue. The labellum is rather long, spreading at the base, the margins of the expanded portion being very much crimped. The colour is rich carmine with a narrow pale lilac edge, with rich yellow extending well into the throat. Shown by Lieutenant-Colonel G. L. Holford, Tetbury, Gloucestershire. Award of merit.

Cypripedium Charlesworthii bromilowianum.—This is rather a small flower of unique colouring. The large dorsal sepal is pure white with the exception of a little green striation at the base, the comparatively small sepals and pouch being pale green. Shown by Mr. H. J. Bromilow, Raun Lea, Rainhill, Lancashire. First-class certificate.

Lælio-Cattleya Mr. Gothard.—A very large-flowered specimen possessing a beautiful colour combination and graceful form. The sepals and petals are of the usual deep lilac hue, but the huge, spreading labellum is of the richest possible crimson, the throat being dull purple with a faint yellow tinge inside. The edge is heavily frilled, thus adding to its beauty. Shown by Mr. H. S. Goodson, West Hill, Putney. First-class certificate.

Cypripedium Lord Ossulston Sander's variety. This is a beautiful addition to the large-flowered Lady's Slippers. The huge dorsal sepal is white, heavily tinted purple, with green striation at the base. The ovate-lanceolate petals are narrow and of a dull green colour with faint purple veinings, the large glossy green pouch standing out well from the back of the flower. Shown by Messrs. Sander and Son, St. Albans. Award of merit.

Odontoglossum Pescatorei Sander.—In this we have a very daintily marked flower of medium size and beautiful form. The sepals and petals are equally ovate with rather acute apices, the cream ground colour being freely and regularly blotched and dotted with pale brownish crimson. The labellum is comparatively large and open, the colour being dull cream, with rich yellow and brown markings near the column. Shown by Messrs. Sander and Son, St. Albans. Award of merit.

Rose Mr. Alfred Tate.—A beautiful and fragrant Hybrid Tea with exceptionally long buds, the colour of the expanded blooms displaying a delightful blending of salmon apricot and pale pink.

Rose Mrs. Edward J. Holland.—A lovely Hybrid Tea of deep rose colour that is most attractive. Very slightly fragrant.

Rose Mrs. Wakefield Christie Miller.—Also a Hybrid Tea of deep rose colour with blush shading. A showy variety in which we could detect no fragrance. Each of the above received an award of merit, the set being exhibited by Messrs. Samuel McGredy and Son, Portadown, Ireland.

Aster Climax.—A Michaelmas Daisy of presumably the *Novi-Belgii* type, and the largest and most handsome of the blue-flowered varieties yet seen. The flower-heads are produced in a not too dense pyramidal panicle, the solitary flowers appearing lower on the spike and well extended at an angle of 45° or more, and thus assisting the fine effect produced. Award of merit.

Aster Maidenhood.—One of the smaller white-flowered set, the blossoms produced in elegant sprays. Award of merit. Both were exhibited by the Hon. Vicary Gibbs, Elstree (gardener, Mr. E. Beckett).

Nerine Countess of Altamont.—A very pretty variety with undulated petals, coloured a deep

salmon rose. Exhibited by Mr. F. D. Goodman, Horsham. Award of merit.

All the preceding were shown before the Royal Horticultural Society on the 13th inst., when the awards were made.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

ROSES FROM CHEPSTOW.

Mr. E. A. Price, Wallhope Cottage, Bough-spring, near Chepstow, sends a few good autumn Roses, which are very fragrant. He writes: "I herewith forward you a few Roses for your table. I hope they will arrive in good condition. I should like your opinion on the Dorothy Perkins Rose. Is it not unusual for it to be in flower now? I have about twelve plants, which I have been propagating for sale purposes; nearly all of them have been in bloom since June, and they look (by the buds on them) as if they intend keeping on till the frost stops them. I may say I have propagated them by cuttings from one plant which I had three years ago. Do you think they have developed the perpetual habit by sporting, or is it owing to last season's weather?"

[There is certainly a perpetual-flowering tendency in Dorothy Perkins, but we do not think your cuttings possess any distinct trait from the ordinary variety, for we have had a similar experience. Some plants last summer produced flowers from July to October. These were raised from cuttings. We believe the tendency of own-root plants is to keep up a continuous new growth, and trusses of bloom are formed on the lateral growths which are so freely produced.]

SWEET PEAS FROM ALDERSEY HALL.

Mr. Hugh Aldersey of Aldersey Hall, Chester, sends us some remarkably fine flowers of new Sweet Peas, which, on a foggy day in October, were most welcome. Tortoiseshell may be described as a rich-coloured Henry Eckford, but with larger and much-waved flowers; Flamingo is a beautiful cherry red waved variety; Ruby has a large, rich orange, waved standard with carmine wings; and Scotch Pearl is a pleasing advance on Frank Dolby. Romani Rani is a beautiful waved variety with a cream ground colour, suffused rich pink, and closely resembles Mrs. Henry Bell. Mr. Aldersey writes: "I enclose a few flowers of some of my new Sweet Peas, also a few sprays of St. George from a plant which is over 8 feet high and growing strongly, and from which I have not gathered a dozen spikes of bloom all the season. It seems to be a peculiarity of this variety to produce masses of tendrils at the expense of flowers."

AN INTERESTING CONTRIBUTION FROM DUNS.

Dr. McWatt of Morelands, Duns, N.B., sent, on the 8th inst., a most interesting collection of flowering subjects. He writes: "I am sending you a branch of *Parrotia persica* (Iron Tree) showing the beautiful colour of the leaves in autumn. This tree is rare in cultivation, but it should not be so, as it is quite hardy and will

thrive in an open and exposed position, although it is stated in Robinson's 'English Flower Garden' that 'in the North it would probably require a wall.' It grows about 12 feet high. *Corylopsis spicata* is another very ornamental shrub resembling the Witch Hazel. It only grows a few feet high, flowering in early spring. *Cercis Siliquastrum* (Judas Tree) grows some 15 feet or 20 feet in height, with rather a crooked habit. It also flowers before the leaves appear. The three trees or shrubs mentioned are all very fine and should be more used for ornamental planting. *Bridgesia spicata* is a very good climbing plant for a wall. The leaves are a fine deep green. Here I have it covering a wall about 12 feet high facing south. I also send you some other things at present in bloom in my garden. Look at the three seedling Delphiniums; they are flowering in the open. I am certain you will agree with me that one of them will be difficult to beat. I think it is the best and most beautifully-coloured Delphinium I ever saw. I have not yet named any of my Delphiniums, but hope to do so next year. *Dianthus Atkinsonii* is a beautiful blood red, perhaps the best of the class, and so easily grown. How is it that it is in so few catalogues? *Arnebia echioides* (Prophet's Flower) seems always to be giving us blooms."

[The Delphiniums sent were of a beautiful sky blue colour. Among other things not mentioned were several varieties of Japanese Anemones, Gaillardias, outdoor-grown Polyanthus and Primroses, *Schizostylis coccinea*, the pretty little *Campanula turbinata*, and *Pernettya mucronata* with its pink berries.]

SWEET PEAS FROM WINCHESTER.

Mr. D. Grant, Compton End, near Winchester, sends an interesting and beautiful contribution of Sweet Peas. Although the flowers had been considerably bruised in transit, enough remained sound to enable us to ascertain that they had received good cultural treatment. Among others we recognised Helen Lewis, John Ingman, Frank Dolby, Nora Unwin and Countess Spencer. He writes: "I send some bunches of Sweet Peas for your Editor's Table; the seeds were sown in January last, and we have had a very successful year."

SWEET PEAS FROM COLDSTREAM.

Mr. James Logan, Castle Lane Gardens, Coldstream, sends an excellent contribution of Sweet Peas, which, in the middle of October, were most welcome. The flowers were large and possessed long, stout stems, such as we see in the summer, and were evidently the result of first-class cultivation.

NOTES AT KEW.

AT present there is much of beauty and interest to be observed in the Royal Gardens, Kew. The fine massed row of *Amaryllis Belladonna* along the front of house No. 1 and near the main entrance is at its best, the hundreds of large, delicate pink flowers contrasting well with the green foliage of *Zephyranthes candida* (the Peruvian Swamp Lily), which is used as an edging.

In house No. 4 a plant of considerable interest and beauty is *Salvia azurea*, which, with its azure blue flowers, makes a welcome splash of a colour too seldom seen in the autumn months. The specimens are of rather straggling growth, but this is not noticed when they are flanked with other kinds of more robust habit.

Those who love the spring Crocuses will also be interested in the autumn-flowering species, of which there is an excellent collection at Kew near the Iris garden, many of the species and varieties now being at their best. The following are some that specially called for mention in the middle of October: *Crocus pulchellus*, pale lilac

with long, dull yellow tube; *C. lævigatus*, pale lilac with darker venations and a very short tube; *C. hadriaticus*, pure white petals with yellow base and bright orange scarlet stigmas; *C. longiflorus*, rosy mauve, yellow base and vivid orange scarlet stigmas; *C. medius*, large purple flowers with feathery, orange-coloured stigmas and long tube; *C. Salzmännii*, pale rosy mauve, star-shaped, rather short tube; *C. asturicus*, pale violet; *C. nudiflorus*, pale blue, cup-shaped flowers; *C. iridiflorus*, very distinct Iris-like blooms, possessing three large, boat-shaped segments of purplish blue colour, branching magenta-coloured stigmas and long tube; and *C. sativus*, a beautiful pure white with yellow base and bright orange scarlet stigmas. These autumn Crocuses are easily grown and seed freely, hence they should find a place in many gardens where bulbous plants are favoured.

LEGAL POINT.

Gardener's compensation (*Pen A. R.*).—It is not surprising that employes do not consider the compensation afforded by the Workmen's Compensation Act altogether satisfactory. If a workman can hardly live on full wages, it seems rather absurd to ask him to live on half; still, for ordinary accidents the statute only provides for a weekly payment of 50 per cent. of his average weekly earnings, unless the servant is under twenty-one, in which case he gets full wages up to 10s. a week. The weekly payment only lasts during incapacity, and there is no reimbursement of doctor's expenses or solatium for pain, &c. On resumption of work at full wages, the claim to half-pay ceases, of course, although the workman may not necessarily have waived further claim; for instance, he may immediately discover that he is still incapacitated. The curious point in this case is that, on the facts as stated, the master appears to have made a profit out of the servant's mishap. This result, however, does not concern the servant; but the insurance company, if it finds it out, would be able to recover the balance from the master.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Border for perennials (*S. Prosser*).—The western end will be the better position. In the first place you should endeavour to improve the soil by the addition of road sweepings, grit, light manure or burnt earth; anything, in fact, that will tend to make the heavy clay soil more porous, and therefore more congenial to the plants you wish to grow. A large number of the best perennials prefer a good holding soil, but in a heavy clay they are sometimes slow to become established. If the border is not yet made, and we presume it is not, we think your best plan will be to prepare it by trenching during the coming weeks, and endeavour to improve it

during the winter in the way we have suggested, planting it in the spring of 1909.

Cutting down the Madonna Lily (*Mrs. B. Spring Rice*).—The stems of the above may be cut down now with impunity; indeed, after the beginning of August in each year the stems are of not much benefit to the bulb, and may be earlier removed if previously wrecked by the disease. In the latter case, however, all the dead stems should be collected and burned.

Sweet Peas (*R. W. A.*).—You display considerable acuteness in your association of certain Sweet Peas. Sutton's Queen and Mrs. Henry Bell, Marbled Blue and Hester, Phenomenal and Mrs. Townsend, John Ingman and Mrs. W. King, Lord Althorp and Helen Lewis are very close to each other. We think you are not far wrong as to Ruby either; but we want to see more of this and Ida Townsend before speaking definitely. As regards Mrs. Collier and James Grieve, there are perhaps more hooded flowers in the latter and it is a shade larger, but they are very close. Is not Miss Davis nearer to Helen Lewis than to Countess Spencer? Enchantress, again, is Countess Spencer rather than Audrey Crier.

Plants in an aquatic tank (*J. E. R.*).—It is difficult to understand the rain-water becoming so dirty, and the only safe thing to try would be charcoal sunk in rather open mesh sacks. We are not aware that the fish would eat the water-snails. The most likely cause of the bud-dropping of the Liliaceae is root dryness, or this and soil poverty combined. The earlier-flowering Fritillary may do quite well under similar conditions of soil, but the Lilies flowering or making growth while the tree was in full leaf would be robbed of all nourishment and moisture. We advise you to examine the Lilies at once and get them replanted in deeper and richer soils. We do not recognise the name of the plant you refer to in your third query, but if you send a specimen we may be able to identify it and give you the information required. The Rose was quite shrivelled up.

Growing Christmas Roses (*M. Kenney*).—There is no reason whatever why you should not succeed with these plants in the open ground, and success is more likely by this method of cultivation than by planting in tubs. The end of August and onward to the middle of October would suit quite well for planting. The chief items are soil preparation and good plants. By "good plants" we mean healthy examples with three or four leaves and not more than twice that number of crowns. This size of plant should be obtained in any case—the diminutive and leafless plant with weakened crowns will only make an effort to live, and will always disappoint. The Christmas Rose requires partial shade and not less than 2 feet depth of light, rich, loamy soil. Big clumps should never be planted intact. Suitable tubs should be not less than 18 inches in diameter, and preferably of the same depth. Such as these would accommodate three or four ordinary-sized plants. A good drainage must be secured. It is very doubtful whether from these autumn plantings you will get any flowers for next winter, as the Christmas Rose must be first established. A chief drawback to the latter mode of culture is that the plants often suffer neglect during the summer time, but when properly planted in the garden this is less likely to ensue. A good time for grafting the Apple would be March or April, and, if you desire to do this, you should plant a few Apple stocks during the autumn. As you are contemplating grafting it, no pruning or other work is necessary. If you write again in January next, we will give you full instructions as to grafting.

THE GREENHOUSE.

Stove for greenhouse (*H. A. S.*).—As both oil and gas stoves consume oxygen, which is needful for plant-life, this mode of heating is, of course, less desirable than hot-water pipes. As this is probably out of the question, your better way will be to get a good-class oil stove and keep it properly trimmed and scrupulously clean. In this way the fumes will give but little trouble.

Information about a Cactus (*N. H.*).—A difficult matter to advise upon, as there are so many kinds of Cacti and the same treatment is not suitable for all. Again, we very much question if it needs a larger pot, as one 11 inches in diameter is very large for a Cactus. By far the better way will be to obtain the opinion of a practical man in your neighbourhood, who, by seeing the plant, will have a great advantage over us. Even in the case of it needing repotting, the season is now too late for it to be done. The better plan will be to wait till next April before the roots are interfered with. Meanwhile care must be taken not to keep the soil too wet; indeed, throughout the winter only enough water should be given to retain the soil in a slightly moist condition. A suitable compost for many Cacti may be made up of three parts good yellow loam, one part of peat or leaf-mould

and half a part each of sand and broken brick rubble.

Culture of Malmaison Carnations (*Rebecca*). You will find ample instructions for growing Malmaison Carnations in THE GARDEN for July 11, page 337. As a rule the layers made in July are sufficiently advanced to be potted into pots 4 inches in diameter, and to be established therein before summer has left us. As soon as these pots are well furnished with roots—that is, generally speaking, in September—the plants should be shifted into their flowering pots, usually 6 inches in diameter. If you desire large plants they may be potted on directly the flowers are over, but when in pots sufficiently large annual repotting is not necessary, though a top dressing and an occasional stimulant, as detailed in the article in question, will be beneficial.

Keeping Geraniums through the winter (*M. A. Gibbs*).—As you surmise, it is now too late to take cuttings of the Geraniums, and it is quite useless to try and winter them in a cold frame. This leaves the long shelf in the cookery school as the only place available for wintering your plants, though, with its varying temperature, it is by no means an ideal position for them. They might, however, succeed there if the plants do not at any time get frozen. A fine day should, if possible, be chosen for lifting the Geraniums, which may have the long succulent shoots shortened back and the strongest leaves cut off. Do not strip the leaves from the stems, but cut them off in such a manner that an inch or so of the leaf-stalk remains attached to the stem. This will quickly die and drop off, whereas if the leaves are stripped from the stem it often causes a wound, which may prove a seat of decay. The very long string-like roots, too, must be shortened back. Then take some clean pots, from 4½ inches to 5 inches in diameter, drain them by means of an oyster-shell or broken crocks and pot the plants, taking care that the soil is pressed down regularly and made moderately firm. After this give a good watering in order to settle the soil in its place, and after being allowed time to drain the plants may be stood on the shelf; if in a good light position, so much the better. They should be occasionally watered during the winter, but no more than is necessary; indeed, throughout that period the soil must be kept almost dry.

ROSE GARDEN.

Roses for shaded trellis (*Rosa*).—Claire Jacquier is one of the worst you could have planted on a shaded trellis. It is rather a shy bloomer at first and needs a lofty, sunny wall or arch where it may extend its vigorous growths, and then it is a lovely picture after three or four years. Félicité Perpétue will do well. It is not a specially beautiful Rose individually; but when a plant is covered with thousands of flowers, as it will be in a year or two, it makes a fine show. Elise Robichon would do very well in the position, and it produces a lovely little bud. If you want large blooms, plant Conrad F. Meyer and Mme. Isaac Pereire. Although not so rampant in growth as the Rambler Roses, they would soon cover an ordinary trellis, providing you prepare some good deep holes for their roots. These holes should be opened about 3 feet deep and 2 feet wide and filled with the same soil if good, with manure liberally admixed. Tausendschön would grow very well; but it is only a one-season Rose, whereas the two last-named would bloom in summer and autumn.

Rose Prince Camille de Rohan failing to open (*G. H. Wheeler*).—From the specimen sent we believe the Rose to be Jean Liabaud and not Prince Camille de Rohan. This latter, although addicted to mildew, rarely fails to expand, whereas the other variety is notorious for this bad quality. It would help the flower to expand better if you removed the buds that surround the central one. By syringing as soon as mildew is seen with a solution of Lifebuoy soap, we think you will overcome the fungus. Take half a bar of the soap to three gallons of soft water, and spray with a fine sprayer every two or three days until checked.

Preserving Rose blooms at exhibitions (*Osprey*).—We are not aware that exhibitors put anything in the water to keep their flowers fresh. The reason the nurseryman's flowers were quite fresh compared with yours was doubtless because he had cut them either early in the morning or late in the evening and put them into water immediately they were cut, or he had culled them from young maiden plants. These have a greater staying power than Roses from cut-back or old bushes. On very hot days it is well to place the flowers into a vessel holding an abundance of cool water and keep the blooms as cool as possible for some hours before travelling with them. For this reason we prefer a travelling-box with tubes much larger than those usually employed in show boxes. The flowers can be transferred to the later at the last half-hour. When at the show find out a cool place and keep your blooms there until a short time before the judging commences, and do not forget to tie the blooms, as this assists them to remain fresh a much longer time.

THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

TULIPS FOR CUTTING.

THE great desideratum in all Tulips which are to be used as cut flowers is length of stem. In certain exceptional cases stumpy flowers may be appropriate, but for ordinary room and table decoration, where gracefulness is all-important, good long stems are a necessity, and all the varieties mentioned in my present article will be found to possess such stems.

FORCED VARIETIES.

For our earliest flowers in February we must rely on some of the early-flowering section. The ones that I would especially recommend to be grown are Thomas Moore, a lovely warm rosy apricot; Duchess of Parma, a long, pointed flower of a rich orange red, which shades into old gold at the edges of the petals; Prince of Austria, a good-shaped, sweet-scented orange brick red; Prince de Ligny, a deep yellow, peculiarly graceful flower; and White Swan, a snowy white, large globular bloom, borne on rather weak stems, which allow the flowers to assume a naturally drooping position. Before passing on I must not forget to say that I very much doubt if there is a more beautiful Tulip in existence for artificial light than a forced Duchess of Parma. On a well-appointed dinner-table set up in deeply-cut white glass vases, or in plain silver, it is without a rival.

A very useful section for growing under glass is the Darwin. Year by year we are becoming more familiar with their value in this respect. From the end of March onwards there is no difficulty in having good flowers in quantity, and I venture to think that a good many varieties lose nothing by this treatment, becoming more delicate and refined in their colouring, almost, in fact, illustrating the impossible as examples of gilding refined gold. Those who visited the early spring shows this year at Vincent Square will have seen them exhibited by Messrs. Wallace and Messrs. Barr more than once. Among the most satisfactory are: Lavender, Rev. Ewbank; reds, Europe and William Pitt; dark crimson, Donders; pink, Clara Butt; white and blush, White Queen and Margaret; dark shades, Zanzibar, Leonardo-da-Vinci (edged flowers) and Loveliness.

The Parrot or Dragon Tulips, with their curious lacinated petals, always command high prices in the cut-flower market. They are not suitable for real forcing, but if opened under glass they come a little earlier than those outside. Their stems are never strong enough to carry the flowers and always bend over. For this reason they are only suitable for positions where they can hang down, such as the top of a tall writing-desk, chimney-

pieces, &c. Cramoisie Brilliant, crimson; Lutea Major, yellow; and Perfecta, yellow and red, are three distinct and good sorts.

Very few Cottage or May-flowering Tulips can be recommended for growing under glass for cutting. They so soon lose all their shape. There are, however, two or three exceptions, viz., Isabella, which comes a delightful shade of buff, with an edge of old rose, and quite tall enough to be used in low vases; Didieri alba, a small, dainty, pure white, pointed flower, borne on a long rather weak stem, which gracefully bends when arranged in water; and such varieties as Jaune d'Enf, Plutagus, Sensation and Queen Alexandra, all of them of those quaint brown, old gold and yellow shades which are in some lists erroneously claimed as Darwins. These are very fascinating to those who like such quaint colouring.

NATURALLY-GROWN VARIETIES.

There is no doubt whatever that the Darwins are an "easy first" in the adaptability of the different sections for cutting. Their tall stems and "florist"-shaped flowers, which never "quarter" with age, are what are wanted for vase decoration. There is really no need for any selection where every variety is equally suitable. Still, it may be of some interest if I mention the twelve that would be my choice, merely saying that I am very partial to the dark and lavender shades, and think medium-sized flowers better than very large ones. Blue Amiable, deep lavender; Rev. Ewbank, paler lavender; Clara Butt, pale salmon rose; Margaret, soft pale pink; Millet, dark crimson maroon; Barron Tonnage, rose edged with pink; Europe, carmine scarlet; Whistler, rich blood red; Velvet King, dark purple; Zulu, rich blue-black; Zanzibar, rich deep claret; Tara, deep ruby.

What I have already said about Parrot Tulips need not be repeated. I would always grow a few for cutting out of doors. Before mentioning any varieties in the May-flowering or Cottage section, may I say that I have a large collection, and give away a good many handfuls to friends in the course of the season. I mention it because the next time I see them I am so often greeted with the remark, "I did enjoy those Tulips; do you know they lasted a whole week, and some even longer." People are surprised at their lasting power in a cut state; but there is nothing remarkable about my Tulips: the only thing is that I always cut them as soon as the flower is open, and then the time of the year has come when there are no fires in the sitting-rooms. Here again, as in the Darwins, the choice is very large. Lack of space forbids my mentioning too many. The best thing I can do is to make three selections and label one dainty, another

handsome and a third beautiful, thereby, in some degree, suggesting their characteristics.

Dainty.—Characteristics: Their long stems; elegant, long and often small flowers; petals inclined to reflex. Retroflexa, soft yellow, exceptionally graceful; Didierii, red; Didierii alba, pure white; elegans alba, pure white, with narrow wire edge of rose; Marjolettii, deep cream, with red blotches at base of petals; sylvestris, yellow self.

Handsome.—Characteristics: Long stems; large, pointed or globular flowers; striking colours. Gesneriana, crimson-red; Lord Byron, cerise; Orange King, fiery orange; Inglescombe Pink, rose pink and salmon; Sensation, golden bronze; Hammer Hales, bronze yellow; Orange Beauty, orange red; gesneriana lutea, rich yellow; Admiral Kingsbergen, crimson and white striped; Louis XIX., immense bronze purple; Gold Mine, brown and orange striped; Emperor Alexander, purple and white striped.

Beautiful.—Characteristics: Long stems; variously-shaped flowers, with refined colouring. Vitellina, deep primrose; La Merveille, coral red; Picotee, white, edged with rose; Ellen Willmott, pale yellow; Kate Conner, soft rose; Beauty of Bath, rosy lavender and pale yellow; Leghorn Bonnet, chrome-yellow; Miss Jekyll, white; Flame, orange scarlet; Ada, white, with pale lavender interior; Zomerschroon, salmon and cream flaked.

JOSEPH JACOB.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

November 4.—National Chrysanthemum Society's Exhibition (three days), at the Crystal Palace.

November 5.—Bury and West Suffolk Horticultural Society's Show (two days). Bath Chrysanthemum Society's Show (two days).

November 10.—Royal Horticultural Society's Exhibition of Flowers, Plants, &c., 1 p.m. to 5 p.m.; Lecture at three o'clock on "British Wild Flowers in the Garden," by Mr. John W. Odell; admission, 2s. 6d.; Royal Horticultural Hall, Vincent Square, Westminster. West of England Chrysanthemum Society's Show. Leeds Baxton Chrysanthemum Society's Show. Horticultural Club, Mr. C. D. McKay on "The French Garden," Hotel Windsor, 6 p.m.

Flower Show for our Readers.

We have much pleasure in announcing that the exhibition of flowers, fruits and vegetables for our readers will be held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, on Wednesday, July 28, 1909. Some readers have suggested holding it on an earlier date in July; but this is impossible, as the hall is fully booked up for other shows. We hope readers will send in any suggestions relating to the schedule, and these shall have consideration.

Trials at Wisley, 1909-10.—The council of the Royal Horticultural Society have arranged for trials at the Wisley Gardens of the following fruits, flowers and vegetables during 1909. N.B.—Everything sent for trial must be named and the name and address of the sender attached. Fruit: Autumnal Raspberries, fifteen canes of each variety to be sent at once. Flowers: Tree Carnations, two plants of each variety; annuals, seed to be sent in January; garden Dahlias (show and Cactus excluded), two plants of each to be sent in April; early-flowering outdoor Chrysanthemums, two plants of each to be sent in April; Pentstemons, two plants of each variety to be sent in April. Vegetables: Potatoes, twenty tubers of each variety to be sent by February; also experiments with the same variety of Potato secured from as many varying sources as possible, under different soil and

climatic conditions. (Note.—Each variety must be labelled as being "early," "midseason" or "late.") Cauliflowers, quarter of an ounce of each variety; Lettuce, quarter of an ounce of each variety; Kidney Beans, half a pint of each variety. Growers, please note.—Autumn-fruiting Raspberries: Fifteen canes of each variety of named autumn-fruiting Raspberries, of which a trial is desired, should be sent at once to Wisley. All parcels should be addressed, if sent by post: The Superintendent, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey. If by rail: The Superintendent, Royal Horticultural Society's Gardens, Wisley, Horsley Station (London and South Western Railway), with advice by post to the superintendent.—W. WILKS, *Secretary, Royal Horticultural Society.*

Sweet Peas in October.—Mr. J. B. Price, Beechworth, Liverpool Road, Kingston Hill, writes: "This morning (October 16) I gathered a bunch of Sweet Peas. Having measured some stalks, I found them to be 10 inches in length; the blooms, although not quite so large as in August, were of good size and the colours vivid. This to me is certainly a record, proving the extraordinary mildness of the season."

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Lespedeza Sieboldii.—The warm, sunny weather experienced during the early half of October has been very favourable for this shrub, and it has rarely been seen in better condition than during that period. Naturally a late September and early October flowering shrub, it frequently happens that the flowers fail to develop properly owing to insufficient sun or frosty nights. This year, however, it has been a perfect picture, the termination of every branch forming a large inflorescence of pretty reddish purple flowers. It is a native of Northern China and Japan, and has been known for a considerable period, though it is rarely met with outside scientific establishments. Its absence from gardens is doubtless due to its lateness of flowering and consequent unreliable character. In the neighbourhood of London it forms shoots up to 5½ feet in length, which produce ternate leaves and axillary and terminal inflorescences of reddish purple Pea-shaped flowers. The inflorescences are borne from every leaf-axil on the upper 2 feet or 2½ feet of each growth, the whole forming on each shoot a large, loose panicle of flowers. These shoots die to the ground-line annually, and are replaced by new branches from the root-stock the following spring. Like most other members of the order Leguminosæ, this plant thrives in light, loamy soil. It should be given a position exposed to full sun, for it fails to give really good results in a shady place.—W. D.

The Wisley collection of Grapes. While the exhibition at the Vincent Square hall, on the 29th ult., of a remarkable and most interesting collection of thirty-one varieties of house-grown Grapes in fifty-three bunches from the Royal Horticultural Gardens, Wisley, attracted great notice, yet the collection was in no sense presented as mere exhibition samples, but was displayed for essentially educational purposes. While Grapes are grown for exhibition in Great Britain with the highest possible skill, and with corresponding results, yet very largely in such cases the range of varieties is very limited; indeed, rarely exceeding some half-dozen. These are comparatively easy of culture, produce large bunches and fine berries, and when well finished are perfect examples of their respective varieties. The object of the Wisley collection, no less than forty varieties being grown in one large, broad, span-roofed house and almost entirely under similar conditions, was first to preserve

for comparison many old and little-cultivated Grapes, some comparatively new ones and those commonly grown for exhibition or market, such as most Vine growers are familiar with. The present year is the third from planting, and each Vine, with the exception of two recently planted, bore from five to six good bunches of fruit, thus enabling full comparison as to the respective merits of each variety to be made, as also thus enabling comparisons as to growth and leafage to be made at the same time. Then there were included in the collection several varieties that, while little grown, produce Grapes of very high flavour. These too seldom find a place in gardens where large showy Grapes are most favoured. Specially rich in flavour are Muscat Champion, berries large, round and reddish; Grizzly Frontignan, berries small and red; White Frontignan, berries white; Muscat of Hungary, berries almost green; Ascot Citronelle, berries amber, very rich flavour; and Muscat Hamburg, black in colour. Of comparatively small-berried black Grapes were West's St. Peters and Black Prince, and there was also the seedless Black Monnuka with its long, pointed berries. A little known greenish yellow Grape is Diamant Traube, excellent for a cold house. Of Vines generally carrying large bunches were Barbarossa, black; Syrian, white; White Nice, and Trebbiano, berries lemon yellow. Other good whites were Chasselas Napoleon, abrupt-shaped bunch, berries lemon colour; Foster's Seedling, Lady Hutt, Mrs. Pearson, Cannon Hall Muscat, Bowood Muscat, Muscat of Alexandria, Duchess of Buccleuch and Golden Queen, the latter having the richest golden hue of any variety. Of coloured varieties there were, of course, Alicante, Lady Downe's, Gros Maroc, Madresfield Court, Alnwick Seedling, Lady Hastings, Appley Towers, Black Hamburg, Directeur Tisserand, a variety of no special merit, and the new, and one of the finest of all the blacks, Prince of Wales. This Grape, which is a robust grower, carries rather long, tapering bunches, not unlike those of Madresfield Court, but the berries are round, very black and carry a dense bloom. It hangs well, berries have firm flesh and rich flavour, and it bids fair to become one of the most popular Grapes of the day. Since the introduction of Madresfield Court, over forty years ago, Grapes that have come into the front rank have been indeed few; Prince of Wales will be a valuable addition. When it is remembered that Black Alicante, Gros Colman, Lady Downe's, Black Hamburg, Madresfield Court, Muscat of Alexandria and Foster's Seedling seem to be the chief exhibition Grapes of the day, it is evident that a few others to increase the selection may well be acceptable. A few varieties at Wisley were over, and Gros Colman was not ready. Another year it may be possible in two sections to show bunches of all forty varieties.—A. D.

Apple Clarke's Seedling.—I have often wondered that one never reads any mention or commendation of Clarke's Seedling Apple. The only Apple catalogue I ever saw it in was Messrs. Merryweather's (of Southwell Nurseries, Notts), and to my surprise it has disappeared from even that one this autumn. In my opinion it is a first-rate variety—an abundant bearer, cooks beautifully and is, I am told by Apple fanciers about here, excellent to eat raw (I myself can say nothing about this last, as I am unable to eat raw Apples). But its chief merit, in my eyes, is its extreme hardiness. My garden is cold and damp. It is not a good Apple soil, and Clarke's Seedling is planted in about the worst part of it and, while most other varieties canker badly, it seems perfectly healthy. It takes on a lovely colour (deep orange with bright crimson side) and is an excellent late keeper; in fact, the only demerit it has, in my opinion, is that it makes but little wood, in consequence of its fertility. It shares this demerit with Lane's Prince Albert. I can confidently recommend it to anyone with a low-lying, cold, damp garden.—D. K., *County Cavan.*

Rose Isabella Gray.—I shall be very much obliged if "M. E. B." will communicate with me in respect of the paragraph in THE GARDEN of the 10th inst., page 490, respecting Rose Isabella Gray.—EDWARD F. KEMP, 6, Avenue Road, Clapton, London, N. E.

Belladonna Lilies in Jersey.—I enclose a small photograph of a clump of Belladonna Lilies taken during September in my garden here. These Lilies have bloomed better than usual this season, probably owing to the dry weather and abundance of sunshine at the time when the bulbs were ripening off. I have now seven clumps in full bloom, some of them having more than twenty spikes. I do not know whether they bloom as freely as this in England, but one of their characteristics in Jersey is that they flower almost equally well in any kind of soil. Those in the photograph were grown in a position facing nearly due south and in a poor rocky soil in which I find it hard to grow anything else. I therefore come to the conclusion that there must be something in the island air which they particularly like.—C. J. ROBIN, Steephill, Jersey.

Apple Miller's Seedling.—I noted the remarks regarding this Apple, and I am surprised that it is not better known. It gained an award of merit last season, and that was the first time I had seen it at any of the London shows, yet it is over forty years ago since I first knew it as one of the best early Apples in Sussex. It may not do so well in all districts, but, among some sorts planted for providing stock, a bush tree produced good crops for at least eight years successively. It is a pretty Apple with a transparent pale skin with red stripes on the sunny side, and I can say one of the best eating Apples grown, but not one which can be kept long. Nutmeg Pippin is another Apple which was not seen at the fruit conference held at Chiswick some years ago, and I have not seen it since I left Sussex; but there it was one of the best dessert Apples we had. It is of medium size and conical, and has yellow skin with dark blotches. Another Apple which was always to the front for flavour was Kerry Pippin. I have recently seen good samples of this, but it is not so well known as it deserves to be. For many years it always secured the first prize for the best-flavoured dessert Apple at the Brighton autumn show, which was held about the middle of September, but this Apple will keep much later. James Grieve has been so well shown this autumn that its value has been fully proved, yet I must say a word in its favour. I have only a small garden, and in it a small tree of this variety, from which I gathered about 100 good fruits this season, and, in addition to bearing the fruit, the tree when in flower was as pretty as any flowering shrub that could be planted. I am surprised that Apple trees are not more extensively planted in villa gardens, for they are ornamental as well as useful.—A. HEMSLEY.

—This distinctly excellent early Apple has had recognition, as when exhibited two years since at a meeting of the Royal Horticultural Society by Mr. W. Fyfe, Lockinge Gardens, where the trees fruit abundantly, it received from the fruit committee an award of merit. Why the nursery trade do not secure stock and put it generally into commerce is, to me, a matter for surprise, as without doubt it is one of the handsomest, most crisp and best-flavoured of all early Apples. It is very largely grown in Berkshire, and only needs to be as widely known in the kingdom as in that county to be universally grown. All those who want a high-class September dessert Apple should grow Miller's Seedling. It is also a first-class market variety.—A. D.

YORKSHIRE ROSES, HARDY PLANTS AND FRUIT TREES.

ON the first day of October, a day noted for its extreme warmth and bright sunshine, we had the pleasure of spending a few hours in the nurseries of Messrs. G. Gibson and Co. of Leeming Bar, Bedale, Yorkshire, and noting how Roses, hardy plants and fruit trees are dealt with there. The natural soil is almost pure virgin loam, such as would delight the heart of any good gardener, and of a character eminently suited for the production of healthy, well-rooted plants, and, when we have coupled with this a very exposed and open situation, there is little wonder that the Leeming Bar plants are so far-famed, and that they give quick returns in the way of flowers and fruits as the case may be. The business is under the personal control of Mr. G. Gibson, who is a business man to his fingers' ends and has done much to raise the firm to its present high position. Roses are grown on a very extensive scale, some 50,000 dwarf bushes having been budded

being stocked in large quantities. A careful inspection of these revealed not the slightest trace of disease or insect pests, and such trees and bushes ought to give excellent returns.

Hardy plants of all descriptions are very extensively stocked by Messrs. Gibson, and many of our readers will remember the beautiful prize-winning groups staged by the firm at the leading shows during the past and other summers. Even at the beginning of October many of them were giving late flowers, thus enabling us to ascertain what they were like. Perhaps the best feature in the whole section was a large bed of Tritoma or Kniphofia nobilis hybrids two years old from seeds. Many beautiful varieties were noted among them, the brilliant yet refined-looking spikes making a grand display.

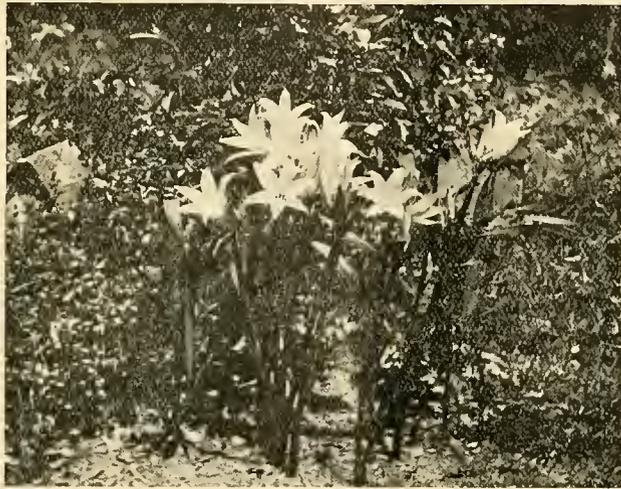
Wild gardening is now, of course, a very popular feature, and to keep well ahead of the times Messrs. Gibson have an extensive stock of such plants as Foxgloves, Aquilegias, Achilleas and Scabious, which are most suitable for such purpose. Of the rare Scabious alba a fine, healthy lot of plants was noticed, every care being taken to eradicate any which are not quite true, so that customers may rely on having white flowering plants when such are ordered. Of the Caucasian Scabious we saw some 15,000 plants, and among a large number of seedlings we noticed many that were carrying much diversified and beautiful flowers.

Herbaceous Phloxes and Delphiniums are naturally well to the front owing to their high value for garden decoration. Among the former Sheriff Ivory, clear pale salmon, crimson eye; the new Mrs. John Harkness, very large and of a pretty salmon shade; Mrs. E. Jenkins, pure white, large flowers; Roger Marc, large, deep salmon; Embracement, large, extra good salmon colour and dwarf; and Tour Eiffel, pale salmon, tall, were a few that we specially noted. Although the named Delphiniums were over, we noticed some very beautiful seedlings still flowering, and of which more will doubtless be heard.

Those who like the Mulleins, as the Verbascums are popularly called, should, if they have not already done so, make the acquaintance of V. Caledonia. This has a large spike composed of beautiful coppery bronze, shaded fawn-coloured flowers, and as the plant, when this main inflorescence

has finished and been cut down, pushes up a series of side shoots, it remain in flower for at least eight weeks, and is a true perennial. V. gloriosa has huge glaucous leaves and large yellow flower-spikes, and when well grown is truly a noble plant. The variety A. M. Burnie somewhat resembles Caledonia, but has lighter-coloured flowers.

The Aconitums are not grown so extensively as their merits demand, two that we saw at these nurseries being quite gems of their kind. These were A. Fisheri and A. japonicum. Both are of dwarf, compact habit, the helmet-shaped flowers being borne in a rather dense terminal raceme. The first-named has marbled blue flowers, and the latter has deep blue self blossoms. Among many other good things seen were Physalis Bunyardii (the Chinese Lantern or Winter Cherry, so useful for winter decoration), Michaelmas Daisies of all the best types, Achillea Ptarmica The Pearl (a beautiful white-flowered Yarrow for cutting), Oriental Poppies Lady Rosco, Princess Ena and Marie Studholme (the last-named being a beautiful dwarf-growing pale salmon sort raised at these nurseries), Montbretias of all sorts, Pæonies in large quantities, early-flowering Chrysanthemums in all the latest varieties, alpines of various sorts, a beautiful lot of Gladioli seedlings and also magnificent flowers of the vivid scarlet G. princeps. The catalogues published by the firm are very interesting.



A CLUMP OF THE BELLADONNA LILY (AMARYLLIS BELLADONNA) IN A JERSEY GARDEN.

this summer, and standards, weeping standards, ramblers and other types are grown in similar proportions. Naturally, some varieties, such as Mme. Abel Chatenay, Caroline Testout, Grüss an Teplitz and Frau Karl Druschki, for which there is always a great demand, are grown more extensively than others, but all old and new varieties find a place in these nurseries. At the time of our visit many of the plants were still carrying superb autumn blooms, some of those on the varieties Hugh Dickson, Frau Karl Druschki and Fisher Holmes being quite up to exhibition standard, notwithstanding the late date. The feature that appeals to one most, however, is the vigorous, healthy growth that has been made during the past summer, growth which augurs well for the crop of blooms next year. Even the maiden or one year old bushes had, in the majority of cases, sent up three or four stout canes, which, owing to the open situation, had become well ripened.

Of the fruit trees a great deal more might be said than we have space for. The splendid natural soil, coupled with intelligent cultivation, have produced young trees and bushes of which any nurseryman might well be proud. Apples, Pears, Plums, Gooseberries, Currants, Raspberries, Blackberries, Loganberries and other kinds of hardy fruits are grown in all the best varieties, trained trees of all sorts, such as fan-shaped, cordons, pyramids, bush and standards,

SWEET PEA NOTES.

VARIETIES TO GROW NEXT YEAR.—NOTES ON THE NEWER SORTS.

THE improvement which has been made in Sweet Peas during the last two or three years is so remarkable as to be almost without parallel in the history of any other garden flower. For over twenty years the patient labours of Henry Eckford led us slowly and steadily along the road of improvement; but with the advent of Countess Spencer a new energy and vitality seemed to infuse the whole Sweet Pea world. Experimenters sprang up all over the country,

Paradise Ivory is a splendid buff and quite reliable; the same cannot be said of most of the cream Spencers offered this year, a great many of which were neither cream nor Spencer. M. A. Linzee, a beautiful rose shade and of enormous size, is well worth growing. I have omitted Frank Dolby, as it is not a true Spencer and has many faults. I intend to try Zephyr next year in its place. A crimson Spencer is also offered for next year, and it will probably displace King Edward VII.

For those who wish to try something new I suggest Olive Ruffle (terra-cotta) and Nancy Perkins (orange); and, if they are somewhat lacking in fixity, we can overlook the fault in consideration of the great beauty of the blooms



AN OLD ESPALIER APPLE TREE DECAYED IN THE MAIN STEM.

many with more enthusiasm than judgment, and stocks were sent out so mixed that it was often difficult to know what they were intended to be. A reaction naturally followed, and now a number of reliable strains have emerged from the chaos and should be secured by all who wish to have the best.

First, we notice that the waved varieties have won all along the line; their splendid vitality, vigorous growth, freedom in throwing fours, enormous size, delicate colouring and beautiful shape more than counterbalance their one defect, want of fixity, a defect which is being steadily overcome. First and foremost comes the prototype of the new race, Countess Spencer, which may now be considered practically fixed. This is certainly the best pink variety. John Ingman, a rich carmine, and Helen Lewis, orange pink, are two of the earliest and best of the Spencer sports. Mrs. Hardecastle Sykes, bluish, and Nora Unwin, white, followed, and the year 1908 saw the debut of a number of splendid new varieties. Evelyn Hemus, cream, edged with pink, and Constance Oliver, a cream ground Spencer, are magnificent and quite fixed. Etta Dyke is the most reliable white Spencer and should certainly be grown. Elsie Herbert, resembling Evelyn Hemus, but with white ground, is not well fixed. The same may be said of Prince of Asturias, by far the largest and finest dark variety. The best way to deal with such unfixed strains is to plant them closer and cut out rogues as soon as they bloom,

that come true. Many other new varieties will be offered, but "I only speak of that which I do know." Still, if I might be allowed to prophesy, I would say that the cream ground Spencers of the type of Constance Oliver will be the greatest favourites for next year. A. E. WHITAKER.

Priesthorpe, Farsley, near Leeds.

CROSS-FERTILISATION OF SWEET PEAS.

IN your issue for October 3, Mr. J. F. Barwise has an extract from "Mendel and His Principles of Heredity," by R. C. Punnett, concerning cross-fertilisation of Sweet Peas. I consider that extract is more evidence in favour of self-fertilisation than anything I could write. If the anthers are sterile, self-fertilisation is impossible, and I am not surprised that very few seeds were formed. But, as Mr. Barwise has said that cross-fertilisation is possible, why did not those plants with barren pollen become cross-fertilised by insects or wind and produce a good crop of seeds, as one would naturally expect? As I wrote in Nos. 1914 and 1919, cross-fertilisation is impossible. I, for one, pooh-pooh the idea of fertilisation by wind, insects or any other agency. Mr. Barwise may quote his authorities for what he writes (and he has a perfect right to do it); and I could do the same if I so wished, but I do not. I have always had a secret attraction for this fertilisation in Sweet Peas, and have studied it from various standpoints.

If cross-fertilisation does take place, what are the insects which bring it about? because I have

never been able to discover insects near the blooms which are strong enough to force open the keel and come in contact with the stigma. My theory is this: that insects, knowing that they cannot force open the keel to feed on the pollen, have given it up altogether. If Mr. Barwise is such a strong believer in cross-fertilisation, why is it possible (as he wrote in THE GARDEN on August 8) that Mr. Bolton has Countess Spencer always true? I should be inclined to think that possibly an occasional flower would be cross-fertilised.

Students of botanical science do tell us that the bright colours and strong scents in flowers are to attract insects, which in many cases bring about cross-fertilisation, but in Sweet Peas this is not, to my mind, the reason in the present-day flower. If we knew the formation of the original Sweet Pea it might have been the case, but is it not possible during the process of time that the formation of the flower has altered, until now the wings and keel lie closely over the essential organ so as to prevent insects getting to them? During our time considerable alteration in the flower has taken place by the introduction of the waved standard, and who knows before the next decade has passed what is in store for us in the formation of the flower? If the flowers of Tree Ivy are examined about this time it will be found to have hundreds of insects upon it. Is it the sweet scent and bright colour which attracts them? I think not.

P. CLAPHAM.

THE FLOWER GARDEN.

THE JAPANESE SCABIOUS.

(SCABIOSA JAPONICA.)

ALTHOUGH the fine *Scabiosa caucasica* was introduced as far back as 1803, it seems to have only been within the last thirty years that it became sufficiently well known to become a garden plant for the many. Unfortunately, some do not find it long-lived, while in other places, where it may be sufficiently hardy to stand the winter, it is frequently disfigured by the imperfect form of the flowers, these being never fully provided with the ray segments. Yet the delicate lilac or mauve colouring of the blooms atones for the defect it develops in some gardens, and the several lilac or mauve-coloured varieties, as well as the scarcer white form, are general favourites in the garden, for use as cut flowers, and also for exhibition purposes.

Now a rival has appeared in the shape of *Scabiosa japonica*, which, as the name would suggest, is a native of Japan, and has only become available for our gardens within the last year or two. It is undescribed in the principal gardening works of reference, and is not named in the latest edition of the Kew Hand List; but is mentioned in the great "Index Kewensis" as having been described by Miquel. It is now in bloom in my garden, and, although not quite so fine as *S. caucasica*, it will apparently prove a welcome addition to our hardy flowers of the border.

When at its full stature it is said to be about 2½ feet in height, but my plant, which is a young one from seed, commenced flowering when barely 2 feet high. It is a pretty, branching plant of quite erect habit, having a quantity of pinnatifid foliage, and yielding a number of mauve or rather lavender-blue flowers, about 2 inches across, on longish stems, which stand well above the foliage without the slightest tendency to droop. This is a valuable feature of this Scabious, which will commend it to those who desire cut blooms of this colour and character. I am not certain whether it will bloom earlier or not in subsequent years; but it flowered for the first time with me early in September, and promises to give blossoms until frost sets in.

S. ARNOTT.

THE FRUIT GARDEN.

PRUNING FRUIT TREES.

WHAT a common thing it is to see fruit trees, especially Apples and Pears, in robust health and making vigorous growth, but quite innocent of fruit! These trees, planted in rich garden soil, are top-pruned year after year, as often as not with the sole object of keeping them within bounds when they have been planted too close together, or because they would otherwise encroach upon ground required for growing vegetables. The result of all this is that in a very few years the balance of power between root and branch is completely upset; the roots have been allowed a free run and have taken the fullest advantage of it, and the tree throws out more and more vigorous young shoots every season in its vain endeavour to restore the balance and keep up with the growth below ground.

Where does one see the fruit on wild trees? Not on those clipped into the form of a hedge, but always on those which are allowed to grow naturally. Surely the lesson to learn from this is to allow trees to grow as naturally as possible, training and pruning them only when necessary to secure an evenly-balanced tree with room for each branch to develop. If the space they are to occupy must be limited, then reduce the roots in order to check top growth; but do not prune the tops for the sole purpose of getting the young growth out of the way.

ROOT-PRUNING

is an operation which should be carried out as soon as the leaves have fallen. If the tree is not large, lift it carefully, free the roots from soil, cut off the tap roots (those which grow downwards) and shorten any other long ones with a sharp knife. Preserve carefully the small or fibrous roots and replant in soil which has been trenched some time previously and allowed to settle. When replanting, place a slate in the bottom of the hole, make this firm and cover with 6 inches or so of prepared soil. On this plant the tree, spreading the roots out evenly all round, work more soil among them with the fingers, giving the tree a slight lift occasionally and then pressing it down again to settle the soil and roots together. Cover with more soil and tread firmly, taking care not to injure the roots.

When planted, the roots nearest the surface should be buried about 3 inches or 4 inches; give a mulch of long manure and secure against storms by using, in the case of a standard, three stakes fastened to the stem in a form of a tripod, each driven firmly into the ground, first wrapping some cloth or sacking round the tree to prevent injury to the bark where they are tied to the stem. This is a much better method than using a single stake. To secure a pyramid or bush tree, fasten three wires round the main stem just above a branch to keep them from slipping down, using sacking or cloth to prevent injury to the bark, and strain the wires tight to three stout pegs driven firmly into the ground at a sufficient distance from the tree.

If the soil is very heavy, old mortar rubbish, road scrapings, burnt garden refuse or other suitable material should be added to lighten it before planting; it is not necessary or desirable to use manure unless the soil is very poor or light, and then only that which is well rotted should be used; if there is any old turf or good loam available, use this.

When a tree that needs root-pruning is too large to lift, take a trench out half-way round about 3 feet or more away from the stem, cut off the large roots with a knife or an axe, work underneath, and cut away all roots growing downwards, then fill in again with fresh soil and make all firm, give a top-dressing of long

manure and secure from storms as advised. Root-pruning, if carefully done, will seldom fail to bring a too vigorous-growing tree into bearing, whereas branch-pruning alone will only have the opposite effect. It is often wise to prune only half the roots at a time if the tree is a large one, leaving an interval of two seasons before completing the work, so that the tree may not suffer from too severe a shock.

When a tree has been brought into proper condition, the crops which it will bear will help to check superfluous growth. The object of root-pruning is to encourage the formation of small fibrous roots, and it is especially necessary when the subsoil is composed of clay or other unsuitable substance, in order to prevent the roots striking down into this. If it is impracticable to prune the roots, the tops should not be pruned except to cut out any branches that cross, or to thin some out where they are too crowded. I have seen hard top-pruned trees, which have for many years been unfruitful, bear good crops after having been allowed to grow naturally for two or three seasons without touching the roots.

I think the photographs I send show rather clearly the effect of a check on the roots of an over-luxuriant tree. The first illustration shows the trunk of an espalier Apple which has lost at least two-thirds of its roots through decay in the main stem on the ground level. This tree has made little unnecessary growth since the decay set in, but, on the other hand, has produced heavy crops of Apples with the greatest regularity. The other illustration shows part of the same tree carrying as good a crop of Apples as anyone need wish to see.

W. A. WATTS.

THE JAPANESE WINEBERRY.

THE illustration on page 534 depicts the Japanese Wineberry growing on a pergola in the gardens at Tynney Hall, Winchfield, Hants. The gardener there, Mr. J. Foster, writes as follows respecting it: "I must first inform you that we have six varieties of the Rubus (Bramble). We have *R. laciniatus*, Wilson Junior, Best of All, *R. phœnicolasius* (Japanese Wineberry), Kittating and the Loganberry. I find *R. laciniatus* is the best variety for cropping; Wilson Junior is a very good one, but does not bear so much fruit as the former. The Loganberry always bears well and is much earlier than the other varieties. The Japanese Wineberry has always given a good crop of fruit each year and is very sweet: the other two varieties are not such good

croppers with us. They have been planted four years; before we planted them I had the ground trenched two spits deep and put a good dressing of farmyard manure in the bottom trench. Ours is a heavy clay soil, which they seem to like, as they throw up young growths every year which reach over the pergola, which is 8 feet high. We treat them the same as Raspberries, *i.e.*, after they have done fruiting we cut out the old growths which have borne fruit this year and tie in about three strong young growths from each plant for fruiting next year. They are planted 6 feet apart, which seems a very suitable distance for plants growing on an arch or pergola."

APPLE PINE GOLDEN PIPPIN.

IN the many notes that have at different times appeared in your paper as to the best dessert Apples, I cannot remember any notice of an Apple that deserves special notice, *viz.*, the Pine Golden Pippin. This is a somewhat small Apple ripening about the end of October, and, in my experience, at its best when eaten fresh from the tree. It was especially recommended to me some years ago by Messrs. Rivers's foreman, and I consider it far away the best early dessert Apple. The tree forms a handsome pyramid and is a good bearer, although I am not quite sure if it bears every year or alternate years. As it is a very heavy cropper, a failure to bear every year may be set down to excessive cropping.

Godmanchester.

G. H.



THE SAME TREE CARRYING A GOOD CROP OF FRUIT.

TREES AND SHRUBS.

FLOWERING SHRUBS IN JULY.

(Continued from page 444.)

POTENTILLAS.—These form a very pleasing group of dwarf, free-flowering shrubs, but one seldom sees any other variety grown than *P. fruticosa*. All are worthy of inclusion, as they produce an abundance of flower for three or four months, require but very little attention and their neat appearance fits them well for the edge of the shrubbery. *P. fruticosa* has bright yellow flowers and grows from 3 feet to 4 feet high. It will succeed, as will all the others, in light or heavy soil. *P. Friedrichsenii* is a very pretty bush, quite as tall as the preceding, but with larger foliage and pale yellow

plant, and its silvery green leafage is very distinct. The large, flat heads of flower make it a conspicuous object.

The *Philadelphus* or *Mock Orange* family is admittedly among the most popular of deciduous flowering shrubs, but how often do we see *P. coronarius* the sole representative. Great improvements have been made during recent years, especially by the Continental nurserymen, and, though names are now legion, it is possible to make a selection suitable for the choicest shrubbery. All the stronger-growing sorts are benefited by having the flowering shoots removed as soon as the blooms are over, which enables them to send up robust flowering wood for the next season. These include *grandiflorus*, *Lewisii* and *Gordonianus*. The smaller-growing varieties are very beautiful, and unsurpassed for their delicious scent by any other shrub. Chiefly remarkable in this respect are *microphyllus* and

with blue, are both desirable, and some excellent varieties are: *Ceres*, rose; *George Simon*, rose; *Indigo*, blue; *Albert Pittet*, rosy lilac; and *Gloire de Versailles*. The last-named variety makes a magnificent wall plant, but can also be successfully grown in bush form. Few shrubs make more ornamental specimens than

Eschulus parviflora when sufficient space is allowed for its full development, and it is perhaps seen to the best advantage when planted on grass. The soil should be broken up well when planting and made good, so that a free growth results. This Chestnut will then make an immense bush 8 feet to 10 feet high and twice as much through, and during the summer makes a wonderful display with its quantities of racemes, which carry pure white flowers with conspicuous protruding stamens. I must not omit to mention that beautiful Chinese plant

Clematis orientalis tanquica, as it is so distinct and attractive with its solitary golden flowers, which are succeeded by a profusion of silky white filaments.

Elaeagnus. A. E. THATCHER.

CLEMATIS MONTANA RUBENS.

ALTHOUGH normally a May-flowering plant, it is no uncommon thing to find specimens of this useful climber with a fair sprinkling of flowers during early autumn, and, as a rule, the blooms borne at this late period are richer in colour than those which are produced at the normal time. *C. montana rubens* is a Veitchian introduction, seeds having been sent to Messrs. Veitch by their collector, Mr. E. H. Wilson, when in China.

Although it has only been in general cultivation for a few years, it has already attained a fair amount of popularity. The rapid way in which it has crept into public favour is doubtless due to the ornamental character and good constitution of *C. montana*, for this is one of the most popular climbers we possess.

The variety grows quite as freely as the type, and, so far, flowers quite as well, while it thrives under similar conditions. It may be readily distinguished from the older plant by the red colour of the branches, leaf-stalks and flowers, this reddish hue also being discernible in the foliage. Cuttings root easily during summer, and the plant is suitable for placing against houses, arbours, pergolas or groups of rough Oak branches in the open ground. Good loamy soil suits it, while it also thrives in moderately rich but light ground. W. D.

THE TUPELO TREE.

So rare a tree is this in Britain that it is not even listed by so eminent a firm as Messrs. Veitch and Sons, yet at Strathfieldsaye it is a very striking and beautiful deciduous tree, and is so rare, as well as handsome, that no less an authority than Mr. H. J. Elwes is reported to have said it was worth going 100 miles to see. The botanical name of the species in question is *Nyssa biflora*. It is a native of the Central States of North America, hence is quite hardy here. While this fine tree is tall, probably some 60 feet in height, yet its semi-drooping habit of growth keeps the branches from spreading widely. The foliage is moderately long and lanceolate, in colour a glossy pale green, in the autumn dying off to a deep rich hue. A. D.



THE JAPANESE WINEBERRY CLOTHING A PERGOLA IN THE GARDENS AT TYLNEY HALL, WINCHEFIELD.

(See page 533.)

flowers. *P. Salessowii* has white flowers and very distinct foliage, which is quite silvery underneath. Another white-flowered variety is *P. davurica*, which makes a neat and pretty bush. *P. micrandra* and *P. fruticosa humilis* are both of dwarf habit, with large bright yellow blooms, and are effective on the edge of the shrubbery or in the rockery. It is to be regretted that the

Olearias are not hardy enough for general planting, because they contribute some of the most beautiful evergreen shrubs. In warm and sheltered districts several may be planted, and *Olearia Haastii*, which makes a round bush 4 feet high and is clothed with white flowers, is the hardiest of all. *O. stellulata* is a very beautiful evergreen, with a mass of starry white flowers, and is deserving of every endeavour to preserve it through a sharp winter. It is easily propagated by cuttings. *O. macrodonta* succeeds with us in a warm corner and as a wall

purpureo-maculatus, a hybrid having a purple blotch at the base of each petal. This latter variety is quite hardy and extremely beautiful.

Choisya ternata is one of the most beautiful of evergreens and much hardier than many suppose. On a cold clay soil here in an exposed position it has never been harmed and always flowers very freely. As a wall plant the Mexican Orange is a great success.

The *Tamarisks* contribute to the shrubbery a pleasing variety, and their fine, graceful growths always associate well with stiffer surroundings. The most beautiful is *T. Pallasii rosea*, which produces large racemes of bright pink flowers in profusion. This is a somewhat new shrub of great merit.

Ceanothuses.—Although these are generally looked upon as wall shrubs, there are many which can be relied upon in the open, and few shrubs give a greater profusion of bloom. *C. americanus*, with white flowers, and *C. azureus*,

THE ROSE GARDEN.

THE NEWER ROSES

(Continued from page 511.)

KONIGIN CAROLA (Turke, 1904).—Undoubtedly a seedling from Caroline Testout—satiny rose in colour, with silvery flesh on reverse of petal—all the characteristics of its parent, but coming rather more pointed, especially in the younger stages. I have had some quite good exhibition flowers this year. The plant is vigorous and very free-flowering.

Lady Helen Vincent (Messrs. Alexander Dickson and Sons, Limited, 1907).—This has been excellent on maidens, and I have seen many fine flowers, especially good under glass, of exquisite shape. The colour is a pale flesh pink with a deeper base. The Rose is very fragrant, and I think can be relied on. It is too early to speak definitely of its behaviour as a cut-back, but I must admit that the flowers from the laterals have been small and, therefore, disappointing. Very highly thought of by some of our leading exhibitors; undoubtedly worth trying.

La Detroit (Hoff, 1904).—A fine vigorous plant, the flower and habit showing the Testout strain; as growing with me hardly up to exhibition form; nice bright shade of pink.

Laurent Carle (Pernet-Ducher, 1907).—This Rose has hardly come up to expectations; it was supposed to be the best of this raiser's 1907 set. The colour is very fine, especially in the early summer, but it is hardly full enough. It should, however, be very useful in a cool season. Some fine flowers have been exhibited by the trade cut from maidens. Growth good, colour bright velvety carmine, not unlike a bright Marquis Lita.

Lohengrin (Schmidt, 1903).—If the colour would only stand, this would be a grand exhibition flower, as it has shape, form and size, but it loses colour very quickly when cut; perhaps in a cooler season it may last better. A fine pointed Rose, generally pale silvery pink that fades to a magenta tint, which is not pleasing; it comes much deeper in the autumn.

Lyon Rose (Pernet-Ducher, 1907).—This is undoubtedly a very valuable addition; its colour stands out as something distinct; reputed to be a seedling of Mme. Melanie Soupert. It has been frequently well exhibited, but I could not get enough petals into my flowers; at present, no doubt, suffering from over-propagation. Its colour will make it popular. Fragrant and a good grower, and a Rose that everyone who sees will want to grow; very good under glass. I

believe the other parent was a seedling of Soleil d'Or, so that we have not had to wait very long for something good out of Rosa lutea. A bloom of this Rose secured the silver medal at the National Rose Society's provincial show at Manchester this year for the best Hybrid Tea in Messrs. Hugh Dickson's box of twelve new Roses.

Mme. Charles de Luze (Pernet-Ducher, 1904).—This is a fine Rose, but I question if it is distinct

stage. A fine pointed Rose, very free-flowering and an excellent grower. I have not tried it on a standard, as all my plants are dwarf, but I am told it has come very fine this way. All these yellow-tinted Roses seem to be much finer in colour in the autumn, especially after rain.

Mme. J. W. Budde (Soupert et Notting, 1907). This just lacks size, otherwise a fine Rose; excellent shape, distinct carmine colour, free-flowering and a fair grower: what exhibitors call a front-row flower; will possibly improve with age.

Mme. Maurice de Luze (Pernet-Ducher, 1907).—A distinct Rose of a shape that is called cupped. It would be a pity if the pointed shape was to eliminate entirely all the others, as they have a distinct beauty of their own. The colour is deep pink, shaded carmine; a good broad petal. Good erect habit.

Mme. Melanie Soupert (Pernet-Ducher, 1906).—This Rose stands out by reason of its beautiful colour, and will become very popular. It has been frequently exhibited throughout the entire season, and is undoubtedly one of the best of the recently-introduced Roses. Like the majority, however, it is thinnish with regard to the number of its petals, but they are large and of good shape. Very fine under glass, and at its best in a cool season. Colour not easy to describe, as it is very variable—pale salmon yellow, suffused more or less carmine pink. An excellent garden Rose, as well as good for exhibition. Good erect habit and free-flowering; should be in every garden and will be much enquired after this season unless I am much mistaken.

Mme. Philippe Rivoire (Pernet-Ducher, 1906).—Another Rose sent out at the same time as Mme. Melanie Soupert that has been occasionally exhibited. I have only one plant, so can do little more than mention it. The colour is fine—apricot yellow with a lighter centre of nankeen; good bronze foliage. Very free with me, and, I think, worth trying.

Purley. H. E. MOLYNEUX.

NEW HYBRID TEA ROSE MRS. EDWARD J. HOLLAND.

As will be seen in the accompanying illustration, this Rose possesses exquisite conical form with rather narrow, somewhat reflexed petals. The foliage is dark glossy green, which contrasts well with the deep salmon rose colour of the flowers. When exhibited, the flowers did not possess much fragrance, but possibly this may not be characteristic of the variety. It was shown before the floral committee of the Royal Horticultural Society by Messrs. S. McGredy and Son, Portadown, Ireland, on the 13th inst., when it received an award of merit.



NEW HYBRID TEA ROSE MRS. EDWARD J. HOLLAND. (Natural size.)

enough to remain permanently with us. It is at its best in the autumn, when the colour at the base of the petals deepens into a good yellow. Not very full; colour, flesh white, deepening to nearly fawn.

Mme. Jenny Gillemot (Pernet-Ducher, 1905).—To my mind a better Rose than the last-named, but requires shading, as the colour bleaches very quickly in the sun; outside petals always go white with any age; saffron yellow in the bud

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE VEGETABLE GARDEN.—No time should be lost in gathering ripe seed-pods of the Runner Beans. Spread out the pods under glass, if possible, for ripening off, so that the seeds may ultimately be removed in good condition. Seakale required for forcing should be taken up as soon as the leaves are ripe; to complete the ripening, it is a good plan to lay them in under a north wall or any cool border. After a period of resting in cool surroundings they will force more readily. Parsnips should be lifted as required, and not taken up and stored as is the invariable practice with Beet and Carrots. Well trench vacant ground as opportunity offers.

The Hardy Flower Garden.—Anticipating a bright display in the spring, I am planting well-known, popular hardy flowers. In this connexion may be mentioned Daisies, Forget-me-nots, Primroses, Polyanthus, Wallflowers and the pretty little *Silene compacta*. Groups here and there in the hardy border will make these quarters attractive, while in small beds by themselves, or as edgings to larger beds, some of the dwarfier subjects are charming. The present is an ideal period for planting Roses. If the order for new Roses has not yet been sent, there should be no further delay, as it is well to have the bushes. I prefer to have the Rose quarters prepared some time previous to the planting, as this allows the ground to settle down beforehand.

The Cold Frame.—Advantage should be taken of every fine day to give abundant ventilation to the plants in the cold frame. Plants in bad health should be lifted and healthy specimens planted in their stead. Decaying and dead foliage should also be removed and the surface soil between the plants occasionally stirred to aerate the same and to promote healthy root action. I am busy putting in another batch of shrubby *Calceolaria* cuttings, as there is always



1.—A RASPBERRY PLANT NOT THINNED OUT. NOTE BOTH OLD AND NEW CANES.

a demand for these plants in the early summer. Many plants of the earliest batches of bulbs for forcing are growing apace, and for this reason I am removing the more forward specimens to the cool greenhouse.

Trees and Shrubs.—I am busy planting several of the better deciduous trees and shrubs at the present time, among which may be mentioned the deciduous *Berberis Thunbergii* and *B. vulgaris*; also the double and single Scarlet Thorns (*Crataegus*), Brooms (*Cytisus*), *Daphne Mezereum*, *Dentzia*, *Forsythia* (Golden Bell), *Genista* (Rock Broom), *Hibiscus*, *Hydrangea*, *Hypericum* (St. John's Wort), *Laburnum*, *Philadelphus* (Mock Orange), *Prunus* and *Pyrus* in variety, the Flowering Currant (*Ribes*), the shrubby Meadow-sweet (*Spiraea*), the Lilacs (*Syringa*) and the beautiful Snowball Tree (*Viburnum*). The foregoing and others may be planted with success during the present period. Do not attempt to prune evergreen trees and shrubs at this time; they are better when pruned in the spring.

The Hardy Fruit Garden.—The propagation of Gooseberries and Currants may be done at this season. Old trees provide an abundant supply of shoots from which to make cuttings, and these can be inserted in sandy soil outdoors, where the cuttings will root readily enough when the weather is fine and the garden soil workable. The prospects of stone fruits, such as Plums and Cherries, are improved when old mortar rubbish is forked in round about these trees at this period. Some growers use slaked lime when old mortar rubbish is not procurable.

The Greenhouse and Conservatory.—Cleanliness in the glass structures at this period is of the utmost importance if the plants are to be maintained in good health and the prospects of winter-flowering subjects made bright. See that the pots are made clean and the slimy surface soil in some pots scraped clean also. Give fire-heat to *Chrysanthemums* to assist the large blooms to open, and ventilate freely to carry off superfluous moisture. Water the plants in the morning. D. B. C.

THINNING AND PLANTING RASPBERRIES.

If the thinning of Raspberry canes has not been done already, this work should receive immediate attention. It is a mistake to leave this work until later, although many growers wait until the early spring before taking it in hand. For the guidance of the inexperienced we have given in Fig. 1 an illustration of a Raspberry plant that has borne fruit during the past season. Here, it will be observed, there are quite a large number of stems, representing both new and old canes. As a matter of fact, owing to the want of a proper thinning of the canes last year, rather more stems than is good for the plant have been allowed to grow, in consequence of which the canes are somewhat weakly and unsatisfactory. All the canes that have borne fruit during the past season should first be dealt with. After cutting back each of these to within 2 inches or 3 inches of the ground, the growths of the present year must be taken in hand. The weaklings should be cut right out and only the strongest retained. Fig. 2 illustrates how this thinning should be carried out. It will be observed how drastic has been the cutting away of both old and worthless canes as well as those of a weaker kind. In this way we have been enabled to retain two of the best canes, and with



2.—THE SAME PLANT WITH THE OLD AND ALSO THE WEAK CANES REMOVED.

these we are more likely to do well than would be the case were a larger number retained. If the Raspberries are planted in rows, the canes must be thinned out to anything between 9 inches and 1 foot apart. These should be secured with twine to strained galvanised wires running the whole length of the rows. Where the Raspberries are growing in clumps, it is well to allow five to seven of the strongest canes that are near to the centre to remain, all others being cut out. Insert stout stakes for their support, securing the canes to the stakes at the time the pruning is done.

Planting.—Raspberries may be planted at any time during the autumn and winter, but the best times for making new beds undoubtedly are the months of October or November. Planting done at this period enables the plants to establish themselves more readily than they do later in the year.

Soil.—Although this subject will thrive in most soils, yet special measures should be adopted in the preparation of the quarters for their reception. Ground that is trenched or bastard trenched causes the plants to yield better than when less pains are taken in the preparation of the soil. Poor soil may be made fertile by the free incorporation of some good lasting manure at the time the quarters are trenched or dug over. A fairly moist condition of the soil appears to suit Raspberries, and a partially shaded position invariably causes the plants to develop berries of good quality and large size.

Propagation.—Raspberries are usually increased by suckers, an old bed producing an immense number when the plants are doing well. The greatest care, however, needs to be exercised in removing the suckers from the old plants. The illustration Fig. 3 is a fair representation of one of a large number of young canes that have been acquired from these sucker-like growths.

THE TOWN GARDEN.

STORING DAHLIAS.—Many of these indispensable town garden plants will have been lifted before these notes appear in print; but, as a matter of fact, nothing is gained by hurrying the process along before the tops of the growths have been well blackened by frosts. However, my point at this moment is to allude to the storage of the stools after lifting. It is extremely common for amateurs to complain of serious losses during the winter months through the tubers rotting away. In those instances where the place of storage is itself damp, there is no trouble in finding the cause, and the remedy is equally obvious. But when the place is satisfactory we have to seek in other directions for the reason of the losses. I am of the opinion that the most frequent cause of failure is putting the stools away before they have been properly prepared. When the plants are cut down to within a foot or so of the surface prior to lifting, the basal parts of the stems contain a considerable quantity of moisture, and unless this is allowed to drain away, it is a prolific source of decay in the tubers beneath. The best course to pursue is to turn the clumps upside down on to the stumps of the shoots and allow them to remain in this position for a few days, when all the moisture will pass out of them, and storage is far more likely to be successfully accomplished. Any dark cellar or similar place that is free from drip will answer the purpose of a store, and if the time can be spared for an occasional examination of the stock, there will be few, if any, losses; in the event of one being found going wrong upon these inspections, it should be taken out and either destroyed at once, or have the bad portion cut clean away and the wound dressed with lime. It is not, of course, worth the trouble to store inferior varieties.

CARNATIONS IN THE GARDEN.—In those gardens where sparrows show a marked partiality for the growths of Carnations, it is an excellent practice to net them thoroughly with stout black thread, for the feathered visitors do not take at all kindly to plants that have been thus treated. The surface soil immediately round the plants should be carefully loosened, but the utmost care must be taken that the roots are not disturbed; after frosts, if it is found that the soil has cracked away from the collar, it must be firmly pressed down into position again, or the losses during the winter will be numerous. If a little short, sweet manure can be spared for mulching, it will do a substantial amount of good; but fresh stuff that will settle down into a close, impenetrable mass should be avoided as a plague.

WINDOW-BOXES.—If these have not been filled with bulbs for next season's display, there should not be any further delay. If two sets of boxes are at command the spare one ought now to be filled with the small shrubs kept especially for the purpose, and after the removal of the summer boxes the fresh ones should be put into their places. This done, the summer boxes can be immediately emptied and preparations made for stocking with bulbs. If the soil were new for the summer occupants, it will answer admirably for the bulbs with the addition of a little loam mixed into the top 4 inches or 5 inches, but if the soil has already produced two crops, it is desirable that it shall be displaced. A mixture of three parts of sound loam and one part each of sweet leaf-mould and thoroughly decayed manure, with sufficient sharp sand to keep it quite open, will fulfil all the demands made upon it by the Hyacinths, Tulips, Daffodils or whatever may be used.

HORACE J. WRIGHT.



3.—A VIGOROUS SUCKER-LIKE GROWTH SUITABLE FOR REPLANTING.

have sufficient holes in their bottoms to allow water a free outlet, each hole being covered with a fairly large piece of broken pot. Over this is placed a thin layer of soil, and the plant is then lifted with a good ball of soil and roots and placed in the pot or tub, working the soil well down into all cavities and making the whole moderately firm. Providing the natural soil is of a comparatively open character, this will answer very well for the purpose; but if it is at all sticky it must be rendered more open and friable by the addition of sand, road sweepings or even Coconut fibre refuse or old mortar.

After the plant is properly transferred to its new position, the soil and roots must be saturated with water, but subsequent watering will only be needed at long intervals. All growths must be securely tied to stakes firmly inserted in the soil.

H.



4.—THE METHOD OF PLANTING A NEW BED. NOTE THE CANES CUT BACK TO WITHIN A FOOT OF THE SOIL.

Readers will note the vigorous character of the roots. Beginners may readily acquire such plants from their own old Raspberry beds, but, failing in this, any reputable fruit specialist will supply them. The more popular method is to plant in specially prepared beds in rows. The rows are usually about 5 feet apart. The canes should be planted about 2 feet apart in the rows and ultimately secured to stout wire as described above. The first row of wire should be about 18 inches above the ground, and the second row about 2 feet higher. There may be readers who prefer to plant their Raspberries individually or in groups of four, securing the canes in each instance to stakes. Insert the stakes, of which there should be three to each plant, in triangular fashion, observing a distance between each one of about 1 foot.

Pruning.—Fig. 4 shows the method of planting and how the pruning of these newly-planted canes should be done. As soon after planting as convenient we make a rule of cutting back the canes to within about 1 foot of the ground. Some growers prefer to cut back the canes more severely, but in practice we have found the above rule to answer very well. The reason for cutting back recently-planted canes is to induce the plants to break away strongly from the base in the succeeding spring or early summer, and this they invariably do when treated as we have described above.

Subsequent Treatment.—Before the hot weather of the succeeding summer is experienced, the quarters should receive a heavy mulching of good manure, and in periods of drought or very warm weather copious applications of water and liquid manure will be highly beneficial. Sucker-like growths should be removed during the first year, and weeds should be kept under from the beginning.

Varieties.—The following are good and reliable sorts: Superlative, Baumforth's Seedling, Carter's Prolific and Norwich Wonder. For dessert the White or Yellow Antwerp deserve a place in every garden.

LIFTING CHRYSANTHEMUMS.

With the advent of frosty nights, the flowers of Chrysanthemums growing in the open garden will be considerably damaged unless some means are taken to protect them from the cold weather. Among the late-flowering varieties of the early Japanese decorative section will be found many beautiful sorts, capable of giving a display of flowers well into December providing the plants are given proper treatment. If a slightly warmed or even a cold greenhouse is available, matters will be much simplified; but, failing this, recourse can be had to the shelter provided by a spare room or even an outhouse.

I make it an annual practice at this season to lift the best of the plants which have buds showing colour and transfer them to large pots, small tubs, boxes and even old zinc pails with holes in their bottoms, and in this way secure an abundance of excellent flowers long after those left outside have been destroyed. The operation is really a very simple one. A few days before the plants are to be lifted the soil is firmly trodden round each; then a good watering is given and a spade thrust well in all round and about 6 inches away from the stem, thus cutting off any roots which may be outside the square or circle of roots and soil made. By doing this the check that must inevitably occur by the mutilation of the roots and lifting is spread over a period, and, consequently, is not so injurious to the plant. The pots, tubs, boxes or other receptacles used must

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

HARDY FRUIT GARDEN.

CONTINUE the planting and renovation of fruit trees, such as Apples, Pears, Gooseberries, Cherries and Currants. Gooseberries and Currants look exceedingly well and do well as trained cordons, which may be either double, triple, or even hexagon shaped. When these styles are chosen young Larch saplings of about 8 feet in length should be used. The same style of tree may also be put on wire strained to iron uprights; about four strands would be sufficient. Grown thus the trees or bushes can be attended to very much better, and also the fruit is more easily gathered, kept clean and netted. A list of good varieties of Gooseberries has been given quite recently on another page. Good varieties of Currants are: Black.—Black Naples, a fine cropper and large fruit, and Carter's Champion, a very fine variety. Red.—Red Dutch, Raby Castle, a very fine and late variety; and La Versaillaise, a heavy cropper. White.—White Dutch and White Versaillaise.

Raspberries.—Hornet, Norwich Wonder, Superlative and Baumforth's Seedling are all most excellent croppers, and if I were asked to name one only I should mention Norwich Wonder. The best autumn variety is, undoubtedly, Belle de Fontenay, from which we have been picking rare baskets of most delicious fruits. To grow Raspberries well they should have as little disturbance of the roots as possible and be heavily mulched with manure every season, and the stools renewed about every five years, though when the plants are well cultivated they will last quite double that time and bear profusely.

PLANTS UNDER GLASS.

Carnations.—Keep these tied as the growths demand it; the first batch should now be giving nice flowers. The blooms must be cut as soon as they are ready, in order that no undue strain is made upon the plants. Enchantress and Mrs. Burnett seem great favourites. Cuttings taken from old plants should be kept on shelves near the glass. These make much more robust plants than those taken in spring. Malmaisons must be kept on the dry side; more plants are lost from damp than from frost. Old plants flowering must have sufficient heat to keep them on the move, or the blooms will not develop.

Roman Hyacinths may be brought along in a little heat now, if they are required. The sweet scent of these and Lilies of the Valley are always appreciated.

Laroe-flowered Chrysanthemums will need air and fire-heat, or the flowers will soon damp. Late bush and single varieties should be kept as cool and dry as possible, taking care that the plants receive a thorough soaking when they require it.

KITCHEN GARDEN.

Hot-beds.—Prepare these for forcing Asparagus. Collect leaves (tree) and make the beds up with half long stable manure and half leaves, shaking it well up and thoroughly mixing it. If very dry add plenty of water to make it heat. When found to be at the right temperature, mark out the spot for the bed and make the foundation 2 feet wider than the frame, so that there is room to walk around and attend to the frames. For forcing, three year old crowns or stools at least should be used; but four year old plants are the most remunerative and produce stronger growths.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

Pot Roses.—It seems a pity to lose any of the numerous buds showing on the latest batch of pot Roses, more especially as we are getting so short of these and other flowers. Even if we were to allow these plants to remain out in the open, with the object of ripening them more thoroughly, I do not think this would be accomplished in a more satisfactory manner than by giving slight protection during the roughest weather. I find it a good plan to have the plants placed in a deep pit, and from these I can invariably find some clean and very acceptable blooms during rough weather. The lights are only put over them on clear nights when frost threatens and during heavy wind or rain.

FLOWER GARDEN.

Herbaceous Borders.—The arrival of frost and the necessity for making a clean sweep of all dead and decaying flowers will enable the planter to get to work on herbaceous borders as soon as possible, with a view to getting most of the work finished before severe frosts prevail. All things that do better for annual lifting and replanting should receive attention, and all stragglers be taken away. Borders of this kind should be planted as naturally as possible, but, at the same time, one does not want absurd mixtures, and to allow one species to encroach unduly on another will be greatly detrimental to the weaker plants. When replanting the front of a border, for instance, with such things as Hepaticas, Heucheras or the stay-at-home Campanulas, a wide berth must be given to the straggling Violet or the trailing Bellflower.

HARDY FRUITS.

The Planting Season.—It is a decided gain to get young trees properly planted before the winter fairly sets in. Before the late heavy rains, the ground, both in the open and particularly against walls, was much too dry for transplanting operations to be carried out without risk of failure; and I very much doubt if the borders sheltered by walls are yet well moistened. Before, therefore, trees are moved the borders should be examined and water given freely. If the soil is found to be at all dry or the soil that surrounds the roots after planting is done is also dry, or even on the dry side, a good soaking ought to be given before the surface is levelled over and mulched with straw litter.

Gathering Apples.—The work of gathering the latest varieties of Apples and Pears should now be completed. It has been good for the fruit to leave some late varieties until now on the trees, but after the end of this month the weather cannot be relied upon to assist them.

KITCHEN GARDEN.

Tomatoes.—These have been good and plentiful this season; but the glut will now be over, and the cultivator who can keep the late-sown plants healthy as long as possible will have good fruits well into December, or even longer, if late setting was encouraged. Keep the foliage rather thin, and remove all fruits as they show colour to a dry, warm house and place them on shelves.

Window Gardening.—Where boxss are used, no time should be lost in getting any bulbs intended for spring display planted. Use good, fresh, loamy soil, and plant such things as Hyacinths and the finer Narcissi at the back, and Snowdrops, Crocuses, Scillas and the pretty Chionodoxas in front. When filled, place the boxes in some sheltered spot and cover them with about 6 inches of fresh coal ashes or Cocoonut fibre. Here the bulbs will form roots freely, and in the course of a few weeks will commence to start into growth, when the boxes may be taken out and placed in their proper positions.

T. B. FIELD.

(Gardener to Baroness Berners.)
Ashwellthorpe, Norwich

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

AN INTERESTING FLORAL CONTRIBUTION FROM MOBBERLEY.

Miss W. Lloyd, Moberley Hall, Moberley, near Knutsford, sends a most interesting and attractive collection of flowers with the following note: "I am sending a box of flowers, chiefly off my small rock garden, which has not been made very long. With this spell of warm weather everything seems to be blooming freely again; in fact, most of the things I send have been flowering since the early summer, especially *Scabiosa caucasica* and *Gypsophila repens monstrosa*, which, I think, is the best of the *Gypsophilas*. The *Dianthus* is *Atkinsonii*, a beautiful colour. Of course, the *Cyclamen neapolitanum* has just started blooming. My Sweet Peas are very beautiful, and Countess Spencer is still giving four blooms on a stem. This weather is highly beneficial for the Roses, which will have their wood so well ripened for next year. The blue of the *Plumbago Larpentæ* shows up quite a long way off with its attractive red foliage."

ANOTHER CONTRIBUTION FROM SCOTLAND.

Dr. McVatt of Morelands, Duns, N.B., sends another interesting collection of hardy flowers, among which we notice several varieties of *Calluna vulgaris*, fine forms of *Gypsophila*, *Sedum Telephium*, *Michaelmas Daisies*, *Pyrethrums*, *Roses*, *Tritomas*, seedling *Delphiniums*, *Geums* and *Malvas*, all making a bright display in the autumn.

RASPBERRIES FROM NORTH FINCHLEY.

A correspondent signing himself "S. C. M." sends us good fruits of the Raspberry with the following note: "Enclosed are some Raspberries I picked at North Finchley on the 19th inst. Are they not very late, with exceptionally fine berries? Several more canes are promising for a still later crop should the weather remain mild."

PENTSTEMONS FROM SCOTLAND.

We have received from Mr. John Forbes of Hawick, Scotland, a most delightful box of Pentstemons, which are one of the chief autumn flowers in Scotland. Among the most noteworthy are John Deacon, which is a crimson shade; John Jennings, mauve-purple; Professor Pozzi, crimson; Sandringham, a very beautiful flower indeed, of a pretty self scarlet, one of the finest Pentstemons we have seen of recent years; Pink Beauty, self pink; Sir Dighton Probyn, deep crimson, with remarkably large flowers; Mrs. Callender, rich pink; Peach, white, just touched with pink; Mrs. Michie, bright crimson, with white throat; and Miss Stewart Peter, deep intense purple. All the varieties are distinguished by their remarkable strength of stem.

GUERNSEY LILIES FROM THE OPEN.

I am sending two spikes of Guernsey Lilies from the open ground. The scarlet one is *Nerine Fothergilli* major and the pink one the

new *N. Bowdenii*. In the majority of cases Guernsey Lilies are grown under glass, but in Devon and Cornwall they succeed admirably out of doors. With me they are growing in a narrow, raised border in front of a south wall and flower well every year. I have two patches of *Nerine Fothergilli* major, each with about a dozen bulbs. One colony flowers about a month earlier than the other, and the early one was a glorious sight in September, having twelve flower-heads with very fine trusses about 8 inches across, much larger than the one sent to-day. The individual flowers were about 2 inches across. When the flower-spikes are thrown up the plants have been leafless for about a month. Curiously enough, this is not the case with *Nerine Bowdenii*, whose leaves remained green right through September. Seeing this, I concluded that no flowers would be borne this year, as I felt certain that by the time the leaves had faded it would be too late for the spikes to be thrown up. I was extremely surprised to find, one day, two strong flower-spikes pushing up among the green leaves. The foliage is only now fading when the blossoms have reached perfection. *Nerine Bowdenii* is, as you will see, a very fine species, especially remarkable for the size of the flowers, which are rather over 4 inches across. The colour is also very pleasing, being a delicate rose-pink. It is a decided acquisition and evidently does as well in the open as *N. Fothergilli* major. This is a delightful thing, and a dozen great, fully-expanded flower-trusses, such as were to be seen here a month ago, are an extremely brilliant sight. The colour is the most intense and glowing scarlet, and when the sun is shining on the flowers the petals appear as if sprinkled with gold dust. Other plants in the border are *Cypella Herbertii*, which blooms through the whole summer and autumn, three species of *Zephyranthes*, the white, sweet-scented *Cyrtanthus McKenii* and the orange *C. Flambeau*, both of which flower well, the blue *Chilian Crocus*, *Tecophilea cyanocrocus*, the *Jacoba Lily*, *Sprekelia* or *Amaryllis formosissima*, *Ismene calathina* and *Pancreatium illyricum*.—S. W. FITZHERBERT, *South Devon*.

[A delightful contribution to our table.]

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Information about Phloxes (*H. Tyler*).—The following are among the best of the herbaceous Phloxes now in commerce: *Adonis*, salmon pink; *Aureo*, orange scarlet; *Coquelicot*, vermilion-scarlet; *Flambeau*, quite near the last, with crimson eye; *Etna*, bright scarlet; *Sylphide*, Mrs. E. H. Jenkins and *Mathilde Serao*, all grand whites; *Iris*, violet blue; *Le Mahdi*, metallic violet; *La Siècle*, rose pink; *Sesostris*, purple; *Eugène Danzanvilliers*, soft lilac, white centre; *Le Vengeur*, carmine, scarlet eye; and *Leonardo da Vinci*, white, maroon centre. "The English Flower Garden" should prove of much value to you, if not too expensive.

It may be had of any bookseller, or direct from John Murray, Albemarle Street, London. The price is 15s.

Violet plants gone wrong (*H. P. B.*).—At this time of the year Violets are very subject to attacks of fungoid diseases and red spider, which often cripple and weaken them beyond recovery, but we cannot find traces of either on the leaves sent by you. The leaves are very attenuated and without vigour or body in them, giving one the impression that they are growing in rather a too shady position and in poor soil, and probably suffering from want of water during the recent hot period. Clear away all the runners that may surround the plants on the ground, and give a mulching of rotten manure on the surface over the roots.

Garden border and soil (*Hopeful*).—You have, unfortunately, to contend against a very heavy and uncoagulated clay soil, which will require a very considerable amount of working before it can be made to grow many things. Were we in your position we should take up the whole of the plots, heel them in for the winter and then set about improving the soil. By deep trenching, the addition of light stable manure, grit, sand or the ashes from garden rubbish fires, much might be done. First trench the border deep and throw up the soil as roughly as possible for the frost to act upon it during winter; then get all the burnt ash possible to add to the surface. If you could collect rubbish and burn it and add the ashes to the border, you would be doing much to render it open and workable. In the spring add all the sand you can obtain and work it into the top soil. Avoid treading on it when wet. You need have no fear about the plants if you can, by the above means, render the soil more generally porous. If you could lightly burn half of it and mix the whole together, you would probably get soil of an ideal character.

TREES AND SHRUBS.

Maidenhair Tree in a bad state (*Moor Hen*).—Your *Salisburia* or *Ginkgo* is evidently in a very bad state of health, which is probably due to bad planting. It is quite likely that it has been planted too deep. You had better take it up carefully at once, taking care to cause as little root injury as possible, and plant it in some good, well-worked ground, such as a kitchen garden, and nurse it up for a year or two before replacing it in a permanent position. When placed out again, prepare a hole 8 feet in diameter and 2 feet deep, so as to thoroughly work the ground; then fill it up to within 9 inches of the top and ram it well, mixing sand with the soil if the latter is heavy. Plant the tree so as cover the top roots with about half an inch of soil; then over the surface place a mulch of decayed leaves.

Climber for north wall (*W. H. T.*).—You cannot do better than plant *Ampelopsis Veitchii* against your wall. It is more likely to succeed in the position you describe than any other plant.

Grafting Rose Acacia (*John G. Kirsten*).—The Rose Acacia is frequently propagated by root-cuttings, but is sometimes grafted on stocks of the common *Robinia*. Dormant wood is used in spring, and the work is done indoors in a warm house. It is a rather difficult subject to graft, and, unless you have special facilities for grafting, it is doubtful whether you will be successful. You can, however, obtain plants at fairly cheap rate. If your plant is on its own roots, you can try root-cuttings in spring.

ROSE GARDEN.

Marechal Niel in cold greenhouse (*P. F. P.*).—You should have retained the growths almost intact, but as you have pruned the plant you can only await its development. Do not attempt to force it into new growth, but allow it to come on quite naturally by giving air night and day for a time. When the new shoots are 2 inches or 3 inches long you can take off the side air, but still afford air from the roof during the day. By bringing up the plant in this hardy condition it will be able to stand any severe weather we may have during winter. It is always best to avoid exciting such Roses as this before Christmas, and it would have been better, seeing that your house is unheated, if you had not planted it until that time.

Basic slag as an autumn dressing for Roses (*Mrs. M. C.*).—Yes, you could not do better than give your Rose beds and perennial borders a dressing of this valuable phosphatic manure. It is best applied now and during the next few weeks. A good application would be about 4oz. to the square yard of surface. The usual dressing of farmyard manure could follow later in

November. It would be advisable to dig or hoe the basic slag into the ground as soon as applied.

Roses distinct (*R. R. R.*).—The varieties you name are absolutely distinct, and if you correctly named them the judges acted wrongly in marking your exhibit "not distinct," unless any specified group were named. Usually the schedule is worded, "Hybrid Perpetual and Hybrid Teas, distinct," or "Tea-scented Roses, distinct"; but if this were not done then your exhibit complied with the schedule.

Roses for new bed (*W. J. R.*).—The following selection would give you a splendid assortment. For the six standards, plant as follows: Fran Karl Druschki, Hugh Dickson, Mme. Abel Chatenay, Grüss an Teplitz, Phariæar and Mme. Ravary; for the five half standards, Caroline Testout, Lady Roberts, Commandant Felix Faure, Earl of Warwick and Antoine Rivoire; for the tea bushes, Prince de Bulgarie, Mme. Leon Pain, Florence Pemberton, Liberty, Mme. Hoste, Vicomtesse Folkestone, Gustave Grünerwald, Paul Ledé, Victor Hugo and Mme. Antoine Mari. Plant in the order as named.

Mildew on wall Roses (*M. A. R. C.*).—The hot position which a nearly south wall involves is very trying for Roses if they do not possess a good deep root run, and there are few varieties that would not become mildewed when the weather changes so drastically as it has done this year. We do not think there will be any need to artificially drain the border, but advise you to have the ground trenched to a depth of 2½ feet to 3 feet. This depth is much better than a wide border where the depth is not so great, as the roots can strike downwards and thus be away from the parching effect of bright sun. We think if you commenced to water the plants early in May, giving them good soakings once a week with diluted liquid manure, you would prevent mildew appearing to a great extent. If it should appear, syringe immediately with Lifebuoy soap-water, half a bar of soap to 3 gallons of soft water, and continue this every three or four days. A few good yellow or yellow shaded sorts that are rarely troubled with mildew are: Mme. Boursin, Billiard et Barre, Claire Jacquier, Duchesse d'Auerstedt, Réve d'Or, Belle Lyonnaise, Bonquet d'Or, Le Soleil, Mme. Hector Leulliot, Tea Rambler, Elise Robichon, Gardenia, Ernst Grandpierre and François Foucard. We recommend you to give the border a mulching of well-decayed manure, that from an old heap being best. This should be done before you commence to water. For planting under the Holly hedge we think you could not do better than plant own-root bushes of some of the wickuriana Roses, such as Hiawatha, Jersey Beauty, Sweetheart, &c. They always look cheerful even when their blooms are over. The type *R. wickuriana* would also do well. We could not recommend the hardy *Cypripedium*.

FRUIT GARDEN.

Pears cracked (*G. T.*).—The cracking of the Pears about which you ask is probably due to the Pear scab (*Fusicladium pirinum*). This fungus is capable of living through the winter in the fallen cracked fruit, and such should be collected and burned. It is also a good plan to collect and burn all the leaves as they fall. During the winter, and before the buds begin to swell in the spring, spray the trees with a solution of copper sulphate, 1oz. of the copper sulphate to 12½ pints of soft water. This must not be used after the buds begin to swell in the least. When the flower-buds begin to open next summer, spray the trees at weekly intervals for at least three weeks with a solution of sulphide of potassium or liver of sulphur, 1oz. of the sulphur to 6½ gallons of soft water.

Persimmon plants from seed (*A. E. S.*).—Fruits of all kinds when raised from seed take a much longer time to reach the flowering and fruiting stage than those propagated by grafting. In addition to this there is always a tendency in the case of seedlings (even when the seed is taken from one of the finest varieties) to revert to the original wild form, so that it is very probable, even in the event of yours fruiting, that it would be greatly inferior to the fruit purchased by you. There is no doubt that yours is the Japanese *Diospyros Kaki*. We have seen this bear fruits when not more than 6 feet high, but these were grafted plants, and even then a warm position is very necessary for it. As your plants are in such a thriving state it seems a pity to do away with them, and in two or three years more they may fruit. These remarks also apply to the seedling Custard Apple.

Failure of Raspberry canes (*A. M. T.*).—The unhealthy condition of the Raspberry canes is owing to the dry position and poverty of soil. This moisture-loving fruit is never successfully grown beneath trees. They do best when well out in the open garden and where their roots can be mulched with manure during May and June. The Raspberry requires generous culture, both in the shape of well-worked soil, liquid manure and mulching, if you would obtain a good crop of fruit. The young canes should also be thinned out to three or four when they show signs of overcrowding. By so doing, the energies of the plant are confined to these three or four canes, and, of course, to the fruit-bearing canes. You would do well to make a new plantation this autumn, taking care to start with well-rooted plants, and cutting them down to the ground the first season.

Grapes decaying (*B. E. C.*).—Your Grapes appear to us to be over-ripe, and this, we think, is the chief cause of the stalks of the berries decaying and the Grapes dropping. A too heavy application of water at the roots when Grapes are ripe will sometimes cause this, and especially if the vine is not well ventilated day and night. The best thing you can do now is to ventilate freely in warm weather during the day, leaving a small chink of air on both top and bottom ventilators all night, and providing at the same time a little heat in the hot-water pipes.

Black Hamburg Grapes not colouring (*B. A. J.*).—Seeing that the foliage of your Vines is healthy, free from disease and from insect pests; it is difficult to suggest a reason for their refusing to colour this year when they have hitherto coloured so well. It may be that the Vines are carrying too heavy a crop. A Vine will only colour a certain weight of fruit; once this boundary is overstepped then Nature rebels. This is the most frequent cause of Hamburgs failing to colour of any we know; or it may be (as you suggest) caused by the exhaustion of some necessary constituents of the soil which is vital to the well-being of the Vine, such as potash, which forms one of its chief constituents. In any case, you will be safe in applying the following artificial manure to the Vines while they are in a state of growth: Dissolved bones, 1cwt.; nitrate of potash, 56lb.; sulphate of lime, 56lb. Less or more in the same proportion as may be required. Apply 2lb. to the square yard, watering it in, giving a similar dressing in three weeks' time. Serve the Alicantes the same.

Spot on Peach leaves (*F. R.*).—The foliage sent is suffering from an attack of a small species of fungus named *Cercospora persicae*. It is most difficult to destroy, because it is situated between the two surfaces of the leaves, where no direct application of a fungicide can reach it. The only thing you can do is to destroy every leaf by burning as it falls, and even to pick off the worst affected ones and serve them the same way. The little brown spots on the leaves will in time burst, and the fungus be thus liberated. An occasional application of sulphur to the tree will help to prevent it spreading where it comes in contact with. The leaves are very thin and poor, indicating a want of tone and strength in the trees, and in consequence inviting the attacks of fungoid diseases. Perhaps the soil in which you planted out trees and those in pots are growing is poor. If so, replant and report this autumn in the best Peach soil you can procure. We have come across Fig leaves affected in the same way as yours, and have no doubt that it is some species of fungus that has done the mischief. The cause of such an attack, we believe, must be looked for in conditions of growth inimical to the health of the trees—either too much heat and moisture being given or the branches and leaves being allowed to become too crowded together. The leaves are thin and without weight or substance, and therefore an easy prey for such attacks. Bury the diseased leaves as they fall, and try what a fresh admission of air and a judicious thinning out of the weaker branches will effect.

KITCHEN GARDEN.

Carrots cracking (*A. A.*).—The cause of Carrots cracking or splitting is usually a heavy rain after a period of drought. During dry weather growth is checked and the tissues of the Carrots become hardened; then when rain comes the roots swell very rapidly and the tissues, being hardened, cannot expand fast enough, and the cracking is the result.

Cleaning Tomato boxes (*T. W.*).—The best method of thoroughly cleansing the boxes to be used a second time for growing Tomatoes will be to wash them out, if this be practicable, with a solution of Lysol dissolved at the rate of five parts by weight to the thousand of water (1oz. to 6 gallons), or they may be well dipped in this solution and allowed to drain after being cleansed of soil. If the dipping is resorted to, a solution of formalin may be used, diluting the commercial formalin with 500 to 800 times its bulk of water. Failing this, the boxes may be stood in a building that is as nearly airtight as possible and exposed to the fumes of sulphur burned in an iron vessel for a considerable time, and, if it be possible to have some steam about at the same time, the treatment will be the more effective.

Celery leaves diseased (*K. R. Image*).—You cannot do better than pick off and burn all the infested leaves. The eggs are probably all hatched by this time, and if they are not they are placed under the skin of the leaves and cannot be reached by any insecticide—G. S. S.

Tomato leaves shrivelling (*E. B. M.*).—We think the sudden collapse of the leaves of your Tomato plant must be attributed to a too strong application of guano, which would have the effect of injuring the roots of the plants even if it did not touch the stems. Guano, of course, is an excellent stimulant when carefully applied. We prefer to mix it in water and apply it in liquid

form rather than spreading it on the soil and then watering it in. A handful of guano to 3 gallons of water is the proper and safe quantity to use at one time, and this may be given once a fortnight to heavily-cropped plants while in active growth. Yes, by all means transplant the young Wallflowers as soon as you can; they will make far sturdier and better plants than if left in the seed-beds till wanted for planting out. A cool aspect should be selected for them, east or west, and they should be planted 8 inches apart.

Celery leaves browned (*Constant Reader*).—The spotting and shrivelling of the leaves of the Celery is due to the attack upon it of a fungus, *Septoria petroselinii* Apli. If all the leaves are attacked it is not possible to do anything for the plants; but if there is only one plant here and another there that has the disease, it would be best to remove that entirely and spray the leaves of the rest with potassium sulphide, dissolved at the rate of 1oz. to 3 gallons a water. Care should be taken to burn the whole of the refuse leaves from the plants when they are lifted, and not to dig them in or leave them lying about, nor put them on the rubbish-heap. The bed next year should be made as far as possible from that this year, and seed from another stock should be obtained. You omitted to enclose name and address and this creates delay.

MISCELLANEOUS.

Caterpillars to name (*E. Ballard*).—The caterpillars you enclosed are those of the "buff-tip moth" (*Phalera bucephala*), a very common insect. The caterpillars feed on the leaves of most trees. The moth is a large one, measuring 2½ inches across the upper wings, which are of a purplish grey colour with buff-coloured tips. The insect is seldom seen on the wing in the day-time, and when at rest with its wings tightly closed so resembles a piece of dead leaf that it is very difficult to detect it.—G. S. S.

Dead bees under a Lime tree (*Mrs. R. J. F.*).—Dead bumble-bees in a similar condition to those which you sent are frequently found under Lime trees. The bees are generally males, which gorge themselves with the honey, having little else to do, until they are quite drowsy and fall a prey to the tits and, perhaps, to other birds, who, having eaten the honey that they contain, drop the empty bodies. How these bees became mutilated was a mystery for some time, till a careful observer happened to be sitting under a Lime tree one day, when he noticed these dead bees falling from time to time, and on investigating the matter he found a great-tit emptying the humble-bees as fast as it could.—G. S. S.

Gardeners' mutual improvement societies (*H. W.*).—These are most excellent institutions and are productive of an immense amount of good throughout the country. Your own members will prepare and read papers upon which there would be a subsequent discussion, and occasionally you could get the services of a prominent lecturer. If your county council has a paid lecturer, you should make application to the secretary of the education committee for his services. The rules should be as simple as possible. If you write to Mr. R. B. Leech, The Cottage, Wood Hall, Dulwich, S.E., sending a stamped addressed envelope, we are sure that he will send you a copy of the rules of the excellent society of which he is the capable secretary.

Cooking vegetables for eating (*W. P. S.*).—Yours is a question in domestic economy rather than in gardening. Gardeners, however, have very intimate concern with vegetable cookery, as much of what they grow so well too often comes to table spoiled in the cooking. Still, in relation to the question whether certain vegetables are better steamed than boiled, this depends for reply so very much on habitual practice and on ordinary methods. So few care to practise methods they have had no experience in. Many vegetables, however, are better steamed than boiled, but their proper cooking depends very much on the force or heat of the steam generated, also in cooking quickly. Potatoes, Parsnips, Onions, Carrots, Broad Beans and Seakale are all better steamed. Still, the range may be wider. Why not try all vegetables that you cook both ways and see which you like best.

Names of plants.—*George Clark*.—1, *Crataegus Crus-galli* (Cockspur Thorn); 2, *Pyrus torminalis*.—*T. A. D.*.—1, *Aster dumosus*; 2, *A. Amellus*; 3, *A. Novi-Belgii densus*; 4, *A. turbinellus*; 5, *A. acris*; 6, *A. Novi-Belgii mala*; 7, *A. levis* variety; 8, *A. Nova-Anglie roseus*; 9, *Helianthus autumnale striatum*; 10, *Aster puniceus pulcherrimus*; 11, *A. levis* Robert Parker; 12, *A. Nova-Anglie pulchellus*.—*Grain*.—1, *Juniperus chinensis*; 2, *Calycauthus occidentalis*; 3, *Cupressus lawsoniana* variety; 4, *Ceratostigma plumbaginoides*; 5, *Cupressus lawsoniana aurea*; 6, *C. lawsoniana*; 7, *Populus deltoides*.—*J. M. B.*—*Alnus glutinosa imperialis*.—*B. G.*—*Medicago maculata* (Spotted Medick). A native plant!—*Mrs. Renshaw*.—*Sedum Sieboldii*.—*J. E. M. F.*.—1, *Verbascum thapsoides*; 2, *V. Blattaria*.—*F. C.*.—1, *Cupressus lawsoniana erecta viridis*; 2, *C. nootkatensis* variety; 3 and 4, *C. lawsoniana*; 5, *Thuja occidentalis*; 6, *T. orientalis*.—*N. Clarke*.—1 and 2, *Thuja plicata*; 3, *Cupressus lawsoniana*; 4, *C. pisifera*; 5, *C. nootkatensis*; 6, *Juniperus chinensis*.—*R. Dicknell*.—1, *Sedum spectabile*; 2, *Potentilla recta* var. *macrantha*; 3, *Linaria repens*; 4, *Aster Linosyris*; 5, *Hypericum mosenianum*.

Names of fruit.—*A. M. M.*—1 and 6, Cox's Orange Pippin; 2, Schoolmaster; 3, Cobham; 4, The Queen; 5, Blenheim Orange; 7, Allen's Everlasting;

8, Yellow Ingestre; 9, Margil; 10, Red Streak; 11, King of the Pippins.—*J. A. Walter*.—1, Blenheim Orange; 2, Jefferson; 3, Chatley's Kernel; 4, Sops o' Wine; 5, Fearn's Pippin.—*Rutland*.—1, Melster; 2, Queen Caroline; 3, Rosemary Russet; 4, Hollandbury; 5, not recognised; 6, Stafford.—*Wm. Ingall*.—A, Pickering's Seedling; B, Waltham Abbey Seedling.—*W. Martineau*.—1, King Harry; 2, Ross's Nonpareil; 3, Christmas Pearmain.—*Frank G. B.*.—1, Peasgood's Nonsuch; 2, Cornish Gillflower; 3, Striped Beaufin; 4, King of the Pippins; 5, Cox's Orange; 6, Rosemary Russet; 8, Bismarck; 9, King of the Pippins; 10, Fearn's Pippin; 11, Pickering's Seedling; 12, Round Winter Nonsuch; 13, Royal Nonsuch. Pear: Josephine de Malines.—*F. F.*.—1, Scarlet Nonpareil; 2, Yellow Ingestre; 3, Tower of Glamis; 4, Duchess Favourite; 5, Cox's Orange Pippin; 7, Brandy Apple; 8, a local seedling; 9, Newton Wonder.—*John Dixon*.—Mère du Ménage.—*W. R. Roberts*.—Apple Peasgood's Nonsuch; Pear Pitmaston Duchess.

SOCIETIES.

THE UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

THE twenty-second anniversary dinner of this society was held at the Waldorf Hotel, London, W.C., on Thursday, the 15th inst. There was not quite such a large gathering as we have previously seen, but a very pleasant evening was spent. Dr. Robert Boxall, who is an enthusiastic horticulturist, presided, and was supported by the Hon. W. Fawcett, P. Ladds, G. B. Mason, J. Ingram, J. McKechar, W. H. Divers, J. N. Cox (representing Messrs. Hurst and Sons), A. J. Brown, J. T. Anderson, and Messrs. Veitch and Sons were represented by several of the leading men of various departments. Messrs. Osman, Pollett and other firms were also represented, and among the members of the society were Mr. J. George and Mr. George Wheeler, two of its first members, and Mr. Mortimer, who has attended every anniversary for twenty-two years.

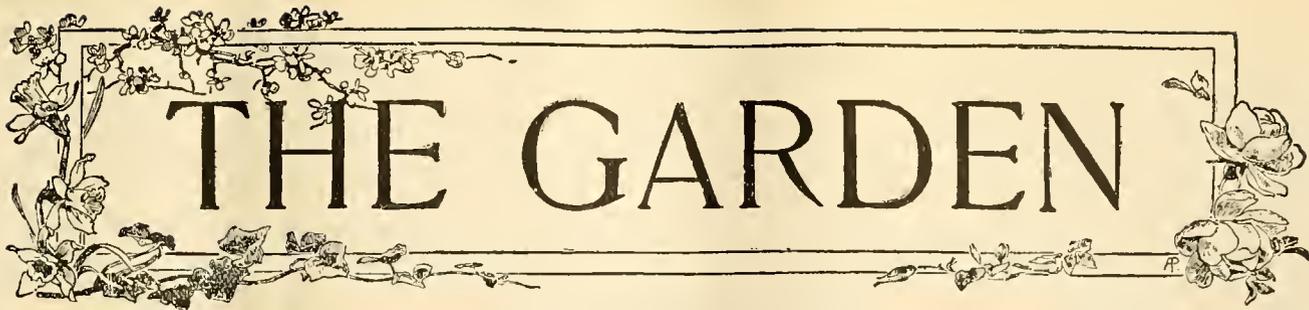
After the usual loyal toasts, the chairman (Dr. Boxall) proposed "Success to the Society," and in doing so referred to the excellent work of its officers, the splendid financial condition of the society and the advantages derived from the benevolent fund, from which those who are over seventy years of age receive more than is offered by any other self-supporting society; also to the convalescent fund, which was started by N. N. Sherwood, Esq., V. M. H., and supported by Messrs. Veitch and others. After referring to the small cost for management and other details of the advantages of the society, he strongly recommended that all young gardeners should join as early as possible. The number given of members now on the books was 1,246, but there has been some added since. The value of the assistance of the Press was referred to.

Mr. C. H. Curtis (chairman of committee), in responding, announced that £1,100 had already been invested this year, new members were being added at every committee meeting, and suggested that the even and pleasant manner in which all the workings of the society were carried out made members rather inclined to leave smooth waters still. The toast of "The Life and Honorary Members" was proposed by Mr. A. J. Brown of Chertsey, and in doing so he referred to the great advantages derived from the subscriptions from this source and the many advantages which young gardeners would derive from joining the society, and suggested that the older members should be more energetic in advocating the advantages of joining the society. Mr. Cox (of Messrs. Hurst and Sons), in responding, regretted the absence, through unavoidable causes, of many who in the past had done much good service in various ways, and expressed a hope that on future occasions more might be present. Mr. J. Harrison Dick proposed the toast of "The Visitors," and remarked that he, being the baby member of the committee, could not say much except to express the thanks of the committee for their presence. In response, Mr. Bowles (of the Royal Horticultural Society) made a humorous speech, strongly supporting the advantages of all gardeners joining the society.

The musical programme, under the direction of Mr. T. Winter, was well carried out, and a pleasant evening closed by the singing of "And Lang Syne."

EAST ANGLIAN HORTICULTURAL CLUB.

At the October meeting of this club, the members present, numbering nearly 100 professional and amateur gardeners, were treated to a "pot-ponri" of subjects. At the invitation of Mr. E. Peake, the leader of the botanical section, five of its members contributed short essays as follows: Mr. H. Perry upon "How Plants Feed," touching mainly on root action; Mr. H. Goude upon "Leaves," in which he detailed their important work; Mr. L. Smith upon the "Leaf Insect and its Life," as watched by himself; Mr. T. Nottley upon "Our Native Poisonous Plants," which he had well supplemented by bringing specimens collected; and Mr. C. Burtenshaw upon "Summer Bedding" he had noticed on his holiday. These brought out a very good discussion, which was most instructive to those present. The exhibition was a keen one and splendid specimens of fruits (especially Apples), flowers and vegetables were staged. Messrs. Daniels Brothers, Limited, Norwich, sent some fine examples of their new sterling Potatoes, Prince Edward and Royal Norfolk, staged for their special prizes. Hobbies, Limited, made a display of Roses from their local Rose fields at Dereham, and included in it the new sulphur China Rose Chin-Chin China.



THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

SPRING FLOWERS.

AUTUMN PREPARATIONS.

(Second Prize Essay).

HOW eagerly we all of us look forward each day in the new year to finding the first spring blooms—Iris reticulata, Aconites, Snowdrops or Hepaticas—and what a bounteous

harvest of bloom appears if we are prepared to make due preparation the previous autumn! Yet, how many neglect their opportunities at this season, under the mistaken idea it will intertere with their precious summer bedding. This is a great mistake, for not only can the beds be cleared in ample time, but there is no time hardly in the whole year when flowers are more looked forward to, and when they are more welcome. When we consider how easily the necessary plants can be raised and how cheaply the best bulbs can be purchased, there is no reason why every garden worthy of the name should not be a perfect feast of bloom and the slight trouble and expense repaid a hundred-fold. In these few suggestions of beds for effect during the early part of the year, I have in most cases associated bulbs with some perennial or biennial plant. This plan has several advantages, not the least being that the latter clothe the ground when the bulbs are dormant, in flower they associate together, the colours of each tending to show the other off; also the foliage of the one prevents the rain splashing the soil on to the flowers, thus helping to preserve them and saving that bedraggled appearance rain-washed flowers possess. Again, most of the combinations used are of two only; a simply laid out bed is generally the most effective. They are arranged under the months; some plants are mentioned twice, as these have a longer season of flowering.

February.—Erica carnea (pink, 6 inches to 1 foot) with Snowdrops freely intermingled; Hamamelis or Witch Hazel (shrub, yellow flowers), with a thick carpeting of Chionodoxa Lucilize (3 inches, blue) 4 inches apart. The above two are permanent beds. Wallflower Early Parisian (1 foot, brown), with edging of Chionodoxa Lucilize. This Wallflower will often flower right through the winter. Aconites (3 inches, yellow), with Iris reticulata (4 inches, blue and gold); plant in clumps all over bed 3 inches apart.

March.—Polyanthus (1 foot, cream shades), planted 1 foot apart, with a carpeting between of Scilla sibirica (4 inches, blue), plant 4 inches apart; Polyanthus (brown shades) arranged similarly with Snowdrops; Alyssum saxatile (1 foot, yellow), 1 foot apart, carpeted with Scilla sibirica; Wallflower Harbinger (1 foot 6 inches,

brown), with edging of yellow Crocus, 3 inches apart; Leucojum (Snowflake) vernum (6 inches, white and green), 6 inches apart, with Scilla sibirica between. The Leucojum should be planted by August, to enable it to get established. It will often do where the Snowdrop gradually dwindles away. Anemone Hepatica (blue, 6 inches), 1 foot apart, with yellow Crocus intermingled; Anemone Hepatica rubra (red), with Scillas between; Anemone fulgens (9 inches, scarlet), 1 foot apart, with Chionodoxa between; Saxifraga cordifolia (Megasea) (1 foot 6 inches, rose), planted 2 feet apart, with Scillas between. The last five should be regarded as permanent. Doronicum austriacum (1 foot 6 inches, yellow), 18 inches apart, with a groundwork of Silene pendula compacta (6 inches, pink). The above Doronicum is to be preferred to the stronger Harpur-Crewe—a fine perennial—for this purpose, but the latter can with great effect be used for bedding, say, with an edging of any dwarf early blue flowering bulb or as a background to the bed of red Wallflowers.

April brings a regular blaze of colour. In addition to most of the foregoing during the early part of the month we have the following: Wallflower Eastern Queen (1 foot 6 inches, pink and apricot), with a broad edging of Myosotis (Forget-me-not) dissitiflora (1 foot); Wallflower Vulcan (1 foot 6 inches, crimson), with edging of Arabis alpina fl.-pl. (1 foot, white); Wallflower Golden King, with edging of double red Daisies (4 inches); Anbrieta Leichtlini (4 inches, rose), with dot plants, 18 inches apart, of Alyssum saxatile compactum; Iberis sempervirens, perennial Candytuft (9 inches, white), intermingled with Phlox Newry Seedling (6 inches, pale blue); Polyanthus, cream shades, 1 foot apart, with Muscari conicum Heavenly Blue (9 inches), intermingled, 4 inches apart; Iberis sempervirens, planted just clear of each other with Tulip Duc van Thol (8 inches, scarlet) between, 4 inches apart; Arabis alpina fl.-pl., 9 inches apart, with Tulip Keizer Kroon (1 foot 4 inches, scarlet, edged yellow) planted between, 5 inches apart; the same Arabis arranged with Tulips Prince of Austria (1 foot, orange scarlet) and Yellow Prince (9 inches) at 6 inch intervals alternately; Saxifraga cordifolia, 18 inches apart, with Narcissus Emperor (1 foot 9 inches), at 9 inch intervals between; Myosotis dissitiflora, 9 inches apart, with Narcissus Duchess of Westminster (1 foot 9 inches), at 6 inch intervals between. Waterwitch would be lovely here, if only cheaper. Silene pendula compacta, 9 inches apart, with Narcissus Sir Watkin (1 foot 6 inches), at 6 inch intervals between; Iberis sempervirens, 9 inches apart, with Jonquil Campenelle (1 foot 4 inches), at 4 inch intervals between; Daisy Bellis (double white), 6 inches

apart, Muscari conicum Heavenly Blue between; and Daisy (double pink) 6 inches apart, with Narcissus Empress (1 foot 9 inches) between. Hyacinths, which begin flowering this month, are best arranged in colours together; they do not associate well with other plants.

May.—Myosotis (blue) 6 inches apart, with Scilla nutans (Bluebell) rosea major (1 foot 4 inches, pale rose) planted between 4 inches apart. This Scilla should be planted quite 8 inches deep; it will thrive well in the shade, should be treated liberally, and left as a permanency. Dactylis glomerata variegata, a variegated grass, 6 inches high; plant 9 inches apart, with Darwin Tulip Clara Butt at 6 inch intervals between. This Tulip grows 1 foot 6 inches and is a lovely rose shade. Any of the Darwin Tulips could be used in this manner, while almost any carpeting plant could be used. It is advisable to clear the carpeting off after the Tulips have flowered, so as to well ripen the Tulip bulbs in the sun. Myosotis (blue) 6 inches apart, with May-flowering Tulip Bouton d'Or (1 foot 6 inches, deep yellow); Ixiolirion tataricum (1 foot 6 inches, blue) 6 inches apart, with Narcissus Poeticus plenus (1 foot 4 inches, double white) 6 inches apart. In addition to these most of the April beds will still be in full glory.

June.—Saxifraga Stansfieldii or S. hypnoides, perhaps the last (9 inches, white), small pieces 6 inches apart, with mixed Spanish Iris, blue shades (1 foot 6 inches). The same Saxifrage could be used for the English Iris, which is later than the Spanish, but larger—there are no yellow shades in the former, but they are, if possible, more beautiful—the beautiful Iris juncea, which is a deep yellow, could be used; this flowers just after the Spanish and is a gem. Ranunculus, French or Persian (various colours, 1 foot) could be planted 9 inches apart, with either the above Irises between them. Plant the Irises during the autumn and Ranunculuses in the spring (March). Dactylis glomerata variegata, 9 inches apart, with Calochortus (1 foot, various colours) between at 4 inch intervals. The Calochortus should be covered during the winter with some litter. Take this off before the plants have made too much growth. They are beautiful flowers and too little grown.

WILLIAM P. WOOD.

(Head-gardener to A. W. W. Gordon, Esq.)
The Gardens, Oaklands Court, St. Peter's, Kent.

PRIZES FOR READERS. NOVEMBER.

FLOWERS FOR A SMALL GREEN- HOUSE IN WINTER.

A First Prize of **FOUR GUINEAS,**

A Second Prize of **TWO GUINEAS,**

A Third Prize of **ONE GUINEA,**

And a Fourth Prize of **HALF-A-GUINEA**

are offered for the best essays on the above subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The essays must reach this office not later than Monday, November 30. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

November 5, 6 and 7.—Forest Gate and Stratford Amateur Chrysanthemum Society, Town Hall, Stratford.

November 10.—Royal Horticultural Society's Exhibition of Flowers, Plants, &c., 1 p.m. to 5 p.m.; Lecture at three o'clock on "British Wild Flowers in the Garden," by Mr. John W. Odell; admission, 2s. 6d.; Royal Horticultural Hall, Vincent Square, Westminster. West of England Chrysanthemum Society's Show. Leeds Baxton Chrysanthemum Society's Show. Horticultural Club, Mr. C. D. McKay on "The French Garden," Hotel Windsor, 6 p.m.

A famous Beech hedge.—This year the cutting of the famous Beech hedge at Meikleour, the estate of the Marquess of Lansdowne, in Perthshire, has again been taken in hand. The task is by no means a light one, seeing that the hedge is about 100 feet high and a third of a mile long. Telescopic apparatus is brought from London for the purpose, and with this the greater portion of the height of the hedge can be reached. Above it the foresters have to climb the tree-trunks and fasten themselves with straps to the limbs, so that they can have their hands free for working. The platform of the telescopic structure sways greatly with the wind, and the necessary operation of cutting has often to be steadied by guy ropes. The hedge is cut every few years, and was last cut in 1900. It may be mentioned that this famous hedge was planted in 1715.

In Aster time.—Mrs. Danske Dandridge, who lives in West Virginia, writes: "One of our poets thus describes the upland Asters." [At this season we think of the beautiful autumn flowers, and the Aster is the sweetest.]

WILD ASTERS.

We dwell in arid places,
We lift our starry faces
From the bleak cliff.
Poising so fairly,
Tossing so airily
To the wind's whiff.

Fragile but brave are we,
Nestling at autumn's knee,
While her leaves fall.
We, with the Golden-rod
Along the highways nod
Welcome to all.

When falls the killing frost,
Count not our lives as lost,
We, for a while,
Dream o'er the happy past;
Look on the skies our last;
Die with a smile.

Dr. J. H. Wilson's new Potatoes.

At the seed and root show of the Fife Agricultural Society at Cupar, on the 20th ult., Dr. John H. Wilson of St. Andrews exhibited seventeen sorts of his new Potatoes, obtained from crossing nine varieties. They were exceedingly interesting, and, being accompanied by details of their parentage, afforded an opportunity to growers of observing the effects of the different crosses. The parent most frequently employed was Reector, one of Dr. Wilson's own, ten of the seventeen having this variety as one of its parents. One of the most promising appeared to be a variety derived from Reector and Bejant, another of Dr. Wilson's raising. The whole exhibit was valuable and created much notice.

South-Eastern Agricultural College.—A meeting of the governors of the South-Eastern Agricultural College, Wye, Kent, was held at Caxton House, Westminster, on Monday, the 26th ult., under the chairmanship of the Right Hon. Lord Ashcombe. The

principal, Mr. M. J. R. Dunstan, reported an entry of 129 students for the session, of whom 124 were in residence, this being the largest number on record. A resolution was passed agreeing with the conclusions of the report of the committee on Agricultural Education and Research. A special horticultural course has been instituted under the superintendence of a practical fruit-grower, and will commence next January. A fruit-growers' conference will be held at the college on November 27, when insecticides, spraying, the packing and grading of fruit, &c., will be discussed.

National Sweet Pea Society.

This society will hold its London show in 1909 at the Royal Horticultural Hall, Westminster, on July 23, and the provincial show will be held at Saltaire, in conjunction with the Saltaire Horticultural and Rose Society, on July 13. The annual meeting of the society for 1908 will be held at the Hotel Windsor, on December 11 at three o'clock. Arrangements have been made for holding trials of Sweet Peas in the gardens of the University College, Reading, in 1909, and it is proposed to make a charge of 2s. 6d. per variety sent for trial, and to receive varieties only from the raisers or original distributors. Any information respecting the forthcoming trials, &c., will be given by the hon. secretary, Mr. Charles H. Curtis, Adelaide Road, Brentford.

Forcing Snowdrops.—Speaking in a general way, this is almost impossible, although I know they may be brought into bloom slightly in advance of those outdoors. At this season many are now thinking of a supply of flowers from Christmas onward, and not a few are inclined to try forcing Snowdrops. If they are wished for very early, then the best way is to pot or box them early in the autumn, putting them in a cold position and covering with ashes. When growth is advanced, remove them into a cold pit. About Christmas they may be brought into a moist structure where the night temperature does not exceed 45°, giving them a light position with plenty of air, and if the temperature is not above 40° they will be more robust. Last year I tried forcing Snowdrops in a stove for an experiment by placing in six potsful of well-rooted bulbs in the middle of December; they were put in a moist and cold corner. Out of the lot we never had a dozen blooms, all going blind. I have seen excellent Snowdrops grown with Seillas and Tulips in pots and boxes for the house, when brought on slowly in frames kept close and free from frost. Another way to obtain them early is by taking them up in clumps from the open ground when just showing flower. These may be forced well.—J.

The Leamington Onion Show.

When it was first announced by Messrs. Rogers of Leamington that they would award £100 for the best specimen of their Leamington Giant Onion, it was expected that a large competition would ensue, and on Saturday, the 24th ult., no fewer than 1,700 bulbs were staged. The fortunate possessor of the first prize bulb was Mr. A. R. Searle, Castle Ashby Gardens, Northampton, who had a perfect specimen of over 3lb. in weight and well finished. The second prize fell to that well-known grower, Mr. S. J. Baker, Weir House Gardens, Hereford, who also had an extremely fine Onion; third, Mr. W. Turnham, Culham Court Gardens, Henley-on-Thames; and fourth, Mr. A. G. Gentle, Little Gaddesden, Berkhamsted. In addition to the substantial first prize, sixty others were awarded, and the majority of the Onions were large, well grown and sound. Prizes were also offered for a collection of vegetables grown from Messrs. Rogers's seeds, and the first, £5 and a gold medal was won by Mr. W. Folkes, Dunstable Street, Amphill, Bedfordshire, with very high-class produce. So pleased were the promoters of the show with the large competition that they propose offering some very substantial prizes again next year.

Paris Chrysanthemum Show.—

The annual show of Chrysanthemums, fruit and vegetables, to be held by the National Horticultural Society of France in the greenhouses on the Cours la Reine, will take place on November 6 to 15. As this will be the last show held there and the twenty-fifth Chrysanthemum exhibition held by the society, it is expected that a very fine display will be made. The city authorities have decided to demolish these greenhouses, which were erected during the time of the great 1900 International Universal Exposition. A large and varied schedule is provided, and there will be an interesting special exhibition of books, pamphlets, prints, pictures and engravings relating to the popular autumn flower.

United Horticultural Benefit and Provident Society.—

The monthly meeting of this society was held in the Royal Horticultural Hall, Vincent Square, Westminster, on Monday, the 12th ult., Mr. C. H. Curtis presiding. Eleven new members were elected, making a total of sixty-three this year so far. Sick pay was much lighter during the last month, the amount being £25 10s. against £39 13s. the previous month. Mr. A. C. Hill of West Kensington was co-opted on the committee to fill the vacancy caused by the resignation of Mr. A. Hemsley. The usual quarterly payments were passed for old members on the Benevolent Fund.

A curious Carrot.—Curious growths frequently occur among vegetables. In pulling Carrots a few days ago, Mr. S. Hunt, gardener to Mrs. Willis, Ipswich Road, Norwich, drew out one which had evidently, in its young state, gone through the neck portion of a broken meat-extract bottle which was in the soil. At this point it naturally had to contract itself, but it had developed on either side to its usual proportions.—P.

Daphne Dauphnil.—This shrub is flowering very freely at the present time (October 19), rather earlier than usual, owing, most likely, to the recent warm weather. Here in the South it continues to produce flowers in mild weather until spring. Its neat habit, bright evergreen leaves, rosy purple buds and lilac flowers make it a most welcome addition to a collection of shrubs. Like many other Daphnes, it is very sweet-scented, and for that reason may be planted near the house in a sheltered nook not too much exposed to bright sun. We have it planted near a west wall, where it seems quite hardy. It makes, in a young state, an annual growth of about 9 inches, and, judging from this example, becomes a low, spreading shrub of about 3 feet in height.—J. COMBER, *Nymans Gardens, Handcross, Sussex.*

Edinburgh Public Parks Committee.—

Baillie Maxton, who has occupied so usefully the post of convener of the Edinburgh Public Parks Committee, retires at the present time from that office. During Baillie Maxton's term of office much good work has been done, and consideration of matters affected by the Saughton Park being occupied by the National Exhibition has necessitated a good deal of attention being paid to many involved questions, so that the convener has rendered much valuable work. It is to be hoped that the new convener will give the same hearty support to Mr. M'Hattie, the able superintendent of parks.

National Chrysanthemum Society.—

On Monday evening, the 26th ult., a meeting of the executive committee of this society was held at Carr's Restaurant, Strand, when Mr. Thomas Bevan occupied the chair. A good deal of time was taken up in the appointment of the various judges for the coming show and other details in connexion therewith. The Hendon and District Chrysanthemum Society applied for admission in affiliation, which was granted. The annual dinner to be held at the Holborn Restaurant was definitely arranged for November 26th, when Sir Albert Rollit, the

president of the society, will preside. The Dean Memorial medal will be allotted at the coming show to exhibits in the decorative classes, and awarded by the floral committee on the recommendation of the judges. The classes included are 25 to 30, 34 and 38 to 41 inclusive. Twenty-nine new Fellows and members were elected.

A British Fern Society.—Although the British Pteridological Society established at Kendal has done good service as a centre of the British Fern cult for many years, there is no doubt that its purely local character militates against its wider usefulness, and that, now our beautiful and, in many cases, unique British Ferns are becoming popular, a society on a more extended basis is desirable. The object of such a society should embrace a periodical publication describing and illustrating new "finds" and fresh developments in cultural selection, and also providing such general data as may assist the amateur in growing and propagating and acquiring a knowledge of what is being done generally in this particular direction. In the

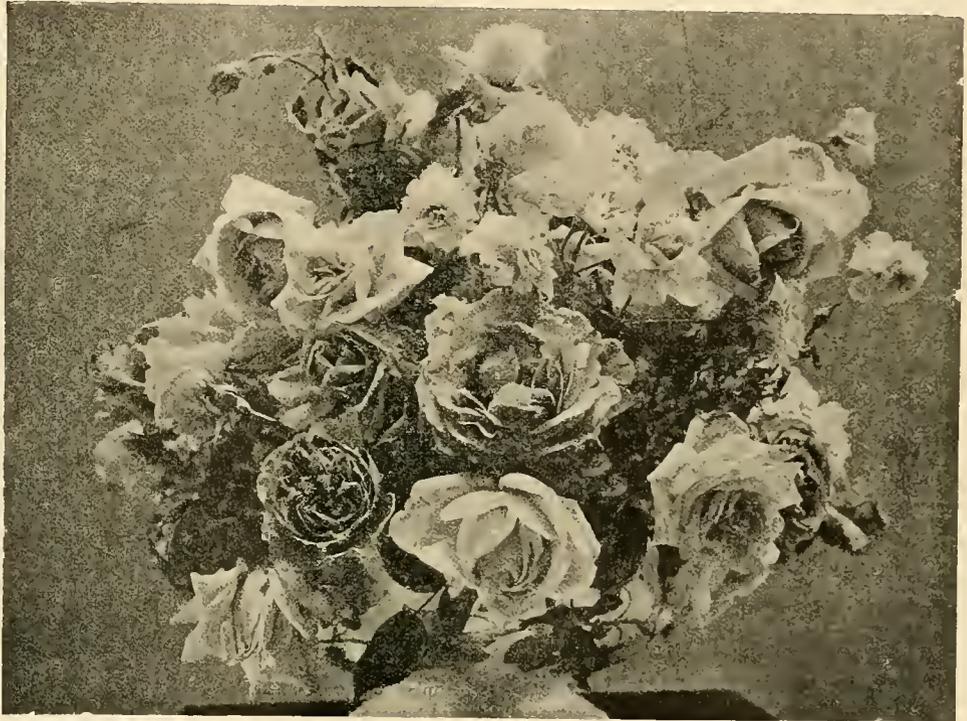
Other papers please copy.—CHAS. T. DRURY, V.M.H., F.L.S., 11, *Shaa Road, Acton, London, W.*

THE EDITOR'S TABLE.**ASTERS FROM SCOTLAND.**

Dr. McWatt sends a most interesting collection of well-grown Asters from Morelands, Duns, N.B., which show the great beauty these flowers give to the garden at this time of the year. The varieties are very fine in colour and size.

MORE FLOWERS FROM DUNS.

Dr. McWatt of Morelands, Duns, N.B., from whose garden we have received many interesting contributions, sends us another fragrant and beautiful collection, the Roses being particularly sweet. He writes: "I send you some spikes of nice white flowers cut from *Escallonia philippiana*. It is a very hardy, handsome evergreen, and makes a good bush and flowers freely. *Escallonia*



A BOWL OF ROSES GATHERED IN LATE OCTOBER.

United States there are several societies devoted to indigenous Ferns and their varietal forms, and periodical publications are issued with contributions from inside and outside sources which are very interesting. In Great Britain the only periodical issued is the brief annual report of the above-named society, although the amount of material in the British Isles is, from the varietal point of view, inexhaustible, the comparatively few species having yielded several thousand distinct varieties, which are constantly being added to by fresh discoveries of wild sports or new developments under culture. Under these circumstances, the writer, who for fully thirty years has been practically the champion of British Ferns in the British horticultural Press and in his two standard works, "Choice British Ferns" (Upcott Gill), now out of print, and "The Book of British Ferns" (Newnes), would be glad to hear from their admirers by a simple post-card, in order to judge whether such a society is practicable on the basis of a moderate subscription sufficient to cover printing and other expenses incidental to the programme indicated.

pterocladon also flowers freely and is quite hardy. It has a peculiar form of growth. The branch laden with scarlet berries is from *Cotoneaster frigida*. This forms a small tree and is sub-evergreen. The flowers are white. *Hydrangea paniculata grandiflora* is with me a free-flowering, hardy, deciduous plant. Among the Roses are *Stanwell Perpetual* (Scotch), the best of all Scotch Roses; *Dorothy Perkins* and *Dwarf Dorothy*. *Coronilla Emerus* with its Pea-shaped flowers and *Ceanothus de Plantières* with its blue flowers like *Gloire de Versailles*, but hardier, are also included."

LILIUM NEPALENSE FROM NEWTON ABBOTT.

Mr. G. L. Patey of Aller View, Decoy Road, Newton Abbott, sends us flowers of the beautiful *Nepal Lily*, *L. nepalense*, which is one of the most handsome Lilies we have, the rich golden petals with their maroon bases giving the flower quite a unique appearance. When fully opened the petals reflex, thus showing the maroon markings to advantage.

NEW PLANTS.

CHRYSANTHEMUM HILDA LAWRENCE.—This is a single or semi-double flowered variety of much merit. The lilac-pink blossoms are of large size and well formed, and, naturally grown, the plants furnish sprays of the flowers on long and stiff stems. The variety is an exceedingly useful and attractive one, and should be of much value for conservatory decoration or in the cut state. Exhibited by Mrs. R. Gregory, Shoreham (gardener, Mr. Lawrence). Award of merit.

Chrysanthemum Mrs. R. H. B. Marsham.—A very fine exhibition variety of large size, pure white in colour. It is said to be a seedling from the well-known yellow F. S. Vallis, and, judged by the dozen fine blooms staged, is full of promise. Exhibited by Mr. Marsham, Bifrons, Canterbury. Award of merit.

Chrysanthemum H. W. Thorp.—A pure white incurved variety of excellent size and finish, and stated to be a seedling from Buttercup. From Mr. H. W. Thorp, Tunningtoun, Worthing. Award of merit.

Chrysanthemum Sir Frank Crisp.—A distinct Japanese variety of a reddish chestnut hue, and of exhibition size. The centre of the flower is of golden hue, the reverse of the petals being of the same tone. Award of merit.

Chrysanthemum Master David.—A splendid Japanese variety, with the broad strap-shaped florets that go to make a very handsome bloom. The colour tone, a shade of glowing crimson-scarlet, is one that is much admired, and doubtless the variety will become very popular. Award of merit. These two excellent varieties came from the raiser, Mr. Henry Perkins, garden-r to the Hon. F. D. Smith, Henley-on-Thames.

Chrysanthemum Felton's Favourite.—A capital market variety of the reflexed type of Japanese. The colour is ivory white, a shade which is seen to great advantage under artificial light. The florets possess a firmness and crispness that denote good lasting properties, while the flowers are borne on long and stiff stems. From Mr. Phillip Ladds, Swanley. Award of merit. All the above were shown before the Royal Horticultural Society on the 27th ult., when the awards were made.

Vanda cœrulea Charlesworthii.—This is an albino form of the well-known blue-flowered *Vanda cœrulea*. The flowers on the plant shown were of good size and substance and of the purest snow white. Shown by Messrs. Charlesworth and Co., Hayward's Heath, Sussex. First-class certificate.

Lalio-Cattleya Lustre gigantea.—This is a very large-flowered variety, with a remarkably rich-coloured labellum. The sepals are long and comparatively narrow, the petals being very much broader and crimped at the margins and slightly reflexed. The labellum is large and reflexed at each side, the margins being beautifully frilled. The colour of the sepals and petals is the usual rosy mauve, and the labellum is rich carmine. Award of merit.

Brasso-Cattleya Mme. Hye superba.—As its name implies, this is a superb or improved form of the well-known Mme. Hye, and forms a beautiful addition to this bi-generic family. The labellum is particularly well fringed, and the colour zones of deep lemon, cream and mauve are most refined. Award of merit.

Lalio-Cattleya Ostrude superba.—A unique coloured flower of much attraction. The lanceolate sepals are purple, suffused cream, the broader petals being pale purple, with heavy flakings of dull carmine. The large, beautifully-shaped labellum is of the richest possible carmine hue, and contrasts well with the remainder of the flower. Award of merit. Each of the three named above were shown by Lieutenant-Colonel Holford, C.I.E., C.V.O., Westonbirt, Tetbury, Gloucestershire.

Brasso-Cattleya Queen Alexandra Glenthorne variety.—This is a very beautiful form of a well-known and lovely Orchid. The variety in question is larger, yet more refined than the type, the fringing of the large labellum being very delicate. The lemon tint in the throat is also much richer, and the whole flower is a good improvement. Shown by Gurney Wilson, Esq., Hayward's Heath. Award of merit.

At the meeting of the floral committee of the National Chrysanthemum Society, on the 25th ult., the following new Chrysanthemums received awards:

Lady E. Letchworth.—This is a very handsome English-raised seedling of ideal Japanese incurved form, the petals being very long, loosely incurving in very regular fashion, and building up a large, deep flower of exquisite form. The colour in this instance is lemon yellow with a paler reverse. First-class certificate to Mr. G. Mileham, Emlyn House Gardens, Leatherhead.

W. J. Davis.—A very handsome and striking Japanese reflexed flower, having broad petals of good length that build up a very deep flower of exhibition standard. The colour is a beautiful shade of rosy chestnut with a golden reverse to petals of good substance. Height about 5 feet 6 inches. First-class certificate to Mr. Mileham.

J. Lock.—Another very handsome Japanese reflexed flower of abnormal proportions, and one of the largest we have seen for many years. The petals reflex pleasingly, curling at the ends, and build up a monster flower, devoid of coarseness. The colour may be best described as yellow streaked red. Height about 6 feet. First-class certificate to Mr. Mileham.

Exquisite.—Another monster bloom of the most beautiful description, being a very much glorified *E. Molyneux*. The petals are very long and broad, and are pleasingly disposed in building up a flower of high quality. The colour is a bright shade of chestnut with a rich golden reverse. First-class certificate to Mr. Mileham.

Lady Crisp.—One of the monster Japanese blooms, quite devoid of coarseness, and possessing all that goes to make a valuable exhibition flower. The petals are long, broad, somewhat flat and slightly pointed at the ends, building up a massive flower of a golden yellow colour with pale reverse. Height 5 feet. First-class certificate to Mr. Perkins.

Rose Pockett.—This is evidently a variety of Antipodean origin, having very long florets of good width that make a large, spreading flower, though of somewhat shallow build. The colour in this instance is a shade of buff-yellow. First-class certificate to Messrs. W. Wells and Co., Limited, Merstham, Surrey.

In addition to the awards given by the Royal Horticultural Society, the varieties *Hilda Lawrence*, *Mrs. R. H. B. Marsham*, *Sir Frank Crisp*, *Master David* and *H. W. Thorpe*, described before, each received a first-class certificate from the National Chrysanthemum Society.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Rosa Verschuren.—In reply to Mr. A. Saunders, this Rose can be obtained from L. Naylor, St. Hilda's Nursery, Harrow.—J. B. SHACKLE.

Bottles for fruit.—In consequence of changing my address, I had not been kept up-to-date with my copy of THE GARDEN. "J. H." (Richmond) will kindly excuse delay in answering the query on page 478. The clamp bottles used by me are manufactured by Abbott Brothers, bee experts and makers of all appliances for bee culture, Southall, near London (Great Western Railway). My bottles (No. 214) are 4s. 6d. per

dozen. Though they may be had in a larger size (this could be ascertained on application), I prefer the smaller ones, as they hold just the right quantity for use at one time.—E. ARNOLD, *The Gardens, Carron Hall, Carron, Stirlingshire.*

Carnation Hon. R. H. Eden.—As I am receiving letters enquiring about the new rosy apricot Carnation Hon. R. H. Eden, I shall be much obliged if you will kindly insert a little note in the next issue of THE GARDEN saying it may be obtained from the West of England Rose Farm, Henlade, Taunton. It seems likely to be as popular as you predicted when I first sent you some blooms for your table a year or more ago.—E. J. LLOYD EDWARDS, *Bryn Oerog, near Llangollen.*

The National Rose Society.—Please allow me a small space in your columns to express my views on the great advance in the competitions of the above society since the revision took place in its schedule. It goes to show the deep interest taken among the smaller class of growers. The keen competition and increase in the number of competitors really seem amazing. I think the committee has done wisely in introducing more classes; it gives greater encouragement for young members to join the society. When they see there is a chance of obtaining a prize, it stimulates them to greater exertions, they will increase their stock, and so go on climbing up into the higher classes, thus giving a better chance to those who are left behind. Great credit is due to the committee for introducing these additional classes; but there are a few points which I think still require attention. For instance, in the amateurs' classes there is a large gap between the growers of 1,000 and 2,000 plants. Suppose a man has 1,100 plants. He is not eligible to compete in the class for 1,000 plants, but must do so in the 2,000; consequently, he is heavily handicapped and the competition is unfair. I think the committee would act wisely if it introduced another class between the two, say, 1,500. Again, in the class for Teas and Noisettes a new class is required between the growers of 200 and 500 plants. I think if that were done the competition would be more even and give greater satisfaction to all concerned.—AMATEUR.

London County Council Parks.—I was much interested in reading "V.'s" impressions of the various parks under the London County Council, and it is gratifying to know that they have not, as was predicted by many, suffered under the new régime at Spring Gardens. I can quite enter into "V.'s" feelings, and small wonder that he is enthusiastic over the exceedingly beautiful floral display on every hand, or write lovingly of the sub-tropical garden in Battersea Park. Never in the history of this noble breathing-space has it presented a more beautiful appearance in every respect than during the past few years of Mr. Rogers's tenure of office. He may be termed an enthusiast, and I am sure it must prove quite contagious to amateurs and professionals alike who may be brought into contact with him. I have noted with much pleasure the improvements that have been effected from time to time. Shrubberies that were in existence under or in close proximity to very large trees, and, consequently, anything but satisfactory, have been entirely altered in character, and have given way to plants that present a beautiful appearance under these conditions. A big space that for a long time was a rubbish-heap has been transformed into a thing of beauty, and is altogether one of the most interesting parts of the park, while beautiful views have been opened up. I should like to express my admiration of the infinite pains that have been taken to maintain the high standard of excellence Battersea Park has always had for sub-tropical gardening, and those who have seen the arrangement this season will agree with me.—WALTER H. AGGETT, 70, St. James's Road, S.E.

Earthing-up Celery.—Regarding the article on earthing Celery in a recent issue of THE GARDEN, I find the better way (when not using paper) is to earth up just above the raffia ties; these then rot off before injuring the plant. I find by untying them, especially when the soil is dry, there is a danger of disturbing the leaf-stalks and some soil getting into the heart of the plant.—THOMAS DAVIES.

Rose Prince de Bulgarie.—Your correspondent C. O. Jones (page 467) has undoubtedly got this Rose true enough. It is really astonishing how much it changes in colour. At the time of writing (late September) it is very bright here; but my earlier flowers had no more of the deep saffron and orange yellow than one finds in an extra bright Clara Watson. It is constantly changing its colour, but is always pleasing.—A. P.

Perfume in flowers and insects. Mr. Barwise seems to infer that perfume in flowers is there specially to attract insects. That is a questionable assumption. No flowers are richer in perfume than double Pinka and Clove Carnations, yet insects do nothing to help fertilise them; indeed, as a rule, they do not seed. In how many plants does not rich perfume lie in the foliage? In what way can that perfume attract insects? It is so easy to reason from imperfect conclusions.—D.

Calceolaria alba.—What an interesting, as well as a useful, plant is this evergreen species of Slipperwort, flowering as it does so freely during the whole of the summer and autumn. As a groundwork in a large bed of Plumbago capensis it would have a pleasing effect, or more striking still would a mass of it be associated with Commelina cœlestis. The deep blue of this annual would be emphasised by the pureness of the white of the Calceolaria. As it was introduced from Chili in 1884, it is, of course, not a new plant, but it is a comparatively rare one, as it is seldom met with in gardens. Treated in the same way as C. amplexicaulis as to propagation and growth it will do well.

Fabiana imbricata.—The photograph displaying this plant so faithfully as reproduced on page 511 should incite gardeners of all sorts to grow this handsome subject much more than is now the case. Where the soil is heavy and retentive of moisture, and, consequently, cold in spring, the plant is not hardy in the open without any protection, even here in South Hants. At the base of a wall in almost any aspect, but preferably a southern one, is the site this plant loves, especially if the soil is of a light character. In such a site, with the addition of copious supplies of water at its roots during the growing season—July and August—growths 1 foot or more long are made, terminating in a full crop of blossoms next year.—E. M.

A comparison of garden features.—I think the idea mentioned by "F. B." (page 507) in connexion with this matter is excellent, and may be a real help to some of the readers of THE GARDEN. When looking over the gardens of friends, one often meets with a striking feature which seems so attractive and effective that one wishes that all their garden acquaintances might witness it and pass their opinion on the subject. It is not always large things that attract the visitor; indeed, sometimes the simple planting affords the most pleasure. As an instance of this, the writer well remembers under his charge a batch of the pretty little Cyclamen europæum. These were planted under the shade of a variety of the Cratægus, and each season the flowering of these humble little plants was looked forward to with pleasure, and they always gave a wealth of their pretty, bright red flowers during the months of August and September. They were planted in the turf, and the soil, being loamy, suited them to perfection. A much larger and more striking feature may be

produced by planting a large bed in the pleasure grounds with Pampas Grass, Michaelmas Daisies and, round the margin (but not too thickly), plants of Cotoneaster horizontalis. During the autumn this is very striking, and, when backed up by trees, shrubs, &c., the combination is decidedly good and attractive. There are many other features one might name, some fitted for large gardens, some for small; but I am afraid of taking up too much valuable space. A bed planted with Phlox Coquelicot, intermixed with Monarda didyma Cambridge Scarlet, in a partially-shady position has been much admired by visitors.—C. RUSE, Watford.

Apple Worcester Pearmain.—I think Mr. W. Baylor-Hartland is by no means the first grower who has a poor opinion of the above Apple, and refers to a less-known variety, Thorle Pippin, as an excellent early variety. At the same time, he says that Worcester Pearmain has nothing to recommend it but its colour and constant fruiting. These, however, are two strong points. I have not seen the Apple referred to; but I feel sure that growers who market their fruits will not lose sight of the older sort, on account of its free cropping, as good fruits always command a ready sale. Its earliness is a great gain to growers, and by many it is a great favourite on that account. Another point I would touch upon—and this is one, I am sure, Mr. Baylor-Hartland will not agree with me—and that is, I do not think the Worcester Pearmain eaten from the tree deserves the aweeping assertion that it is poor; indeed, I think, gathered fresh (not stored), it is by no means so inferior as described. Tastea, of course, vary; but in the South I have had some really good fruits of Worcester Pearmain late in August. Dr. Hogg says, in the "Fruit Manual," this Apple "is crisp, juicy and sweet, with a pleasant flavour."—GROWER.

Layering Carnations.—As I have read in THE GARDEN about various methods and opinions, I send you mine. I like to start layering the third week in July when possible. This year I saw advertised a layering knife, and procured one from Bees, Limited, and I have not used a finer or more useful tool for the work. In place of the old, but still good, upward cut, with this knife it is downward. Place the point of the blade between two joints and bring it out just below the bottom joint; the operation is then complete. I should think it a great waste of time making two cuts in a layer when one would suffice. I put down close upon 1,000 layers in two days. One great mistake in layering is to put the tongue too deep; a handful of road scrapings is enough for six or eight layers, and, if a piece of slate or broken pot be placed on the tongue, it will root within three weeks. All the shoots on a plant not layered should be cut off. When rooted the layers should be detached from the parent plant, and, if left for a few weeks, this other tongue will be rooted also. Do not coddle or pot them. If they cannot be planted where they are to flower by the end of October, leave them where they are and you will not have shoots 1 inch between the joints; I expect three or four in the same space.—W. WALLACE, Trinity House, Edinburgh.

—Reading recent notes in your valuable paper on the above subject, I give my experience for the benefit of your correspondents. I always layer a good batch, and successfully. When making the upward cut use a sharp knife, cutting into the stem immediately below the joint, running the knife straight up the centre to the next joint. Stop when the knife is through the joint, for if one stops in the middle of it the tongue is apt to break. Insert the tongue in the soil firmly and peg down into some nice light compost, such as old loam, leaf-mould and sand. Plenty must be put round the layer, which should be pressed in firmly, as birds sometimes are troublesome.—JAMES HOGARTH (gardener to Captain Tancred), Weens, Hawick.

THE FLOWER GARDEN.

PROPAGATION OF THE DOUBLE SCOTCH ROCKET.

(HESPERIS MATRONALIS PLENUS.)

AS is well known, this beautiful border plant has been lost in many gardens simply because annual propagation was neglected. I do not go to the length of saying that it is only by taking cuttings every season that it can be saved, as I have myself quite a number of plants from two to four years old, and they still remain quite healthy and vigorous. At the same time, this plant very often dies off suddenly and unexpectedly, causing a great amount of annoyance, so that to ensure an abundance of fine healthy stock a number of cuttings should be inserted each autumn in pots or boxes, which can be wintered in a cold frame or in a cold greenhouse. It is difficult, usually, to secure good cuttings in August; but I have successfully rooted this plant as late as the end of October. The cuttings should be taken with a heel, and, although they are often very short, that matters little if care be taken to see that they are kept firm in the soil. Any good sandy compost suits them as a rooting medium, and the frame should be kept close and shaded for a fortnight or more, afterwards giving abundance of air on all favourable occasions, as this plant resents coddling. Where the shoots are too short to make cuttings, the plants should be lifted and carefully divided with a knife. Each piece with a crown and a few roots attached can then be potted into 3-inch or 4-inch pots, and also kept in a frame all the winter. If these little points are attended to each autumn with a section of the plants, there need never be any fear of losing this Rocket. The true variety is greatly superior to the tall French form, and both white and purple are equally desirable. I find the purple the more difficult from which to obtain good cuttings, and so have usually to resort to the division of the old stools. C. BLAIR.

AUTUMN FLOWERS IN LINLITHGOWSHIRE.

ATTER having a very fine, dry summer, September set in both cold and wet, and at one time it looked as if even the hardy Asters would be entirely ruined by the long spell of dull weather. During September we recorded 4.71 inches of rain, which brings the total for the nine months up to 22.03 inches, which is fully 1.25 inches more than for the corresponding period of last year, which was considered an extra wet season. September slightly redeemed itself at the very end by giving us a few remarkably fine days, and as October is, up till the time of writing, quite summer-like (the glass registered over 75° in the shade for three consecutive days), the autumn flowers have come out very fine.

Of Roses, Caroline Testout, Grüss an Teplitz, Viscountess Polkestone, Killarney and Grace Darling have done best, and early in October were giving some really fine clean blooms. Asters are better in colour and cleaner than in most seasons, and are blooming freely. Rudbeckia Newmanii is much larger and brighter than ever before, and the same can be said of Helianthus Miss Mellish. Montbretias flowered well, but were rather spoiled by the wet, foggy weather. Some Delphiniums have thrown up a second crop of bloom, which is very rare for this locality. Pentstemons are extra good, as are also late Phloxes.

The dwarf Nemesias were sadly spoiled by rain, but with the warm weather have again opened quite a number of fine-coloured flowers. Dahlias are not now grown to any extent in the district, having been almost entirely superseded

by the Chrysanthemum, which seems to be specially suited to this locality. They are certainly extra fine this season, the best being Polly, Rosie, Nina Blick, Rabbie Burns, Carrie, Harrie, Market White, Lady Mary Hope, Wells' White, Lillie, Blush Beauty, Claret, Roi des Blancs, Horace Martin, Crimson Massé, Maggie, Champ d'Or, Craigmillar Park, Emily, Jenny and Orange. All these, and many others, make a wonderful display in the garden, besides being so valuable as cut flowers. Taken all round, the autumn flowers here are as fine as ever they have been at this season.

Preston House, Linlithgow.

C. BLAIR.

DRY WALLS FOR ROCK PLANTS.

WHATEVER degree of knowledge we acquire about certain plants, either through practical work or study, the more deeply must the conviction be forced upon us that we can never exhaust their capacity for garden adornment, so much less are we likely to estimate correctly their powers to endure extremes of drought and moisture.

Many instances of a practical nature have brought this forcibly before me with regard to what are known as rock plants, and particularly in those instances where we employ them in dry walls, for in some districts this system of growing rock plants, *i.e.*, walls built of stone or brick with soil instead of mortar, is a comparatively simple operation, especially so where stone is available in good-sized pieces of moderate thickness, as, in these circumstances, fairly large courses of soil can be laid without endangering the stability of the wall, and the pockets may be correspondingly larger. Here, however, brick forms our staple building material, and such stone as I have managed to obtain lately has been uniform in shape and measurement, so that it is anything but ideal material for constructing walls for plants. However, as the event proved, success has been obtained by indifferent material, and it is quite evident that, where favoured with larger and rougher stones, dry walls have no limitation as suitable homes for beautiful and interesting plants. Of course, where retaining walls are built on dry-wall principles there is less likelihood of the plants suffering from drought, as the soil which backs the wall will always hold moisture, but it is quite otherwise when sun and air have free access to every surface of the wall structure; then it is that dry walls present the double problem of how best to supply and conserve moisture, and, in a lesser degree, it demonstrates what plants are best suited for this work.

This latter aspect I thought of the greatest importance a few years ago, but recently I have learned that the diversity of plants succeeding under these artificial conditions is much greater than I had supposed, and that the final test of

growing plants in dry walls is a practical one, namely, how and when to apply moisture.

Fig. 1 shows a small pillar in course of construction. In this instance I adopted the system of mortar bedding in the courses, but maintained a free exit for water in the joints. In these the plants were inserted, and both joints and the centre cavity were firmly packed with soil as building proceeded. The stone is of a regular thickness of $4\frac{1}{2}$ inches, bedded level, and I think the illustration is sufficiently clear to show the method of cross-jointing, bedding and also the system of introducing soil.

Fig. 2 shows the same pillar completed and three months later; the Snapdragons form the most conspicuous feature the first season, the other plants will be more effective in future years. In both types of pillar water can be supplied at will from the top; in the moulded cap some holes are cut, 3 inches in diameter, for this purpose, while in the needle pillar the top is in the form of an open receptacle.

Fig. 3 illustrates a needle-like structure of stone some 7 feet 6 inches in height and built 18 inches square throughout; the stone varies but little in thickness, 2 inches to 3 inches forming the average. Each course is bedded in sifted soil, and, these being necessarily narrow, the stones were laid so that they dip slightly inwards to the centre of the pillar, thereby forming a cavity, which, except for an occasional stone bonding the sides together, was firmly packed with soil as building proceeded. Planting took place concurrently with building, only tiny scraps of rooted cuttings and seedlings being employed, and to this method I attribute much of the subsequent success of the work; further, this practice has much to commend it, as the roots are never broken and the plants have no difficulty in becoming established, so that steady progress is made from the start, which is, of course, impossible when plants are forced into a wall after completion.

The plants suitable for growing in pillars and dry walls are innumerable, and there appears no reason why *Cerastium*, *Aubrietia* and *Snapdragon* should monopolise to the exclusion of many equally beautiful and effective subjects. Among suitable dwarf shrubs we have all the forms of *Cistus* and *Helianthemum*, which latter, besides the forms of *vulgare*, includes a few erect evergreen species of singular beauty, such as *H. formosum* and *halimifolium*, many *Genistas*,

as *horrida*, *prostrata*, *pilosa*, *radista*, and, where room can be found, *præcox* and *kewensis* are excellent. *Cotoneaster congesta* is a beautiful evergreen, and the newer *adpressa* promises to have merits for this work. *Olearia stellulata* is a mass of white in July. *Hypericum* are all good, and *Rosemary*, *Rue*, *Lavender* and *Santolina* are invaluable for the quiet tone of their grey leaves. I have recently planted a colony of *Artemisia brachyphylla splendens* in the wall, and the silver grey leaves are most effective when developed in full sun.

I think the dry wall is a great boon in gardens where the soil is heavy, and, consequently, many plants perish under ordinary conditions in winter; *Antirrhinum glutinosum* is an instance, though



1.—A SMALL PILLAR IN THE COURSE OF CONSTRUCTION.

Silene, *Onosma*, *Dianthus* and similar kinds all contain examples which are most reliable in a dry wall, and under these conditions their vigour is maintained from year to year and the plants give us their blossoms very freely.

THOMAS SMITH.

Walmgate Gardens, Louth, Linco.

AN AUSTRALIAN DAFFODIL.

The illustration of the seedling Daffodil on page 548 is from a photograph recently sent to Mr. Hartland of Cork from Australia, and shows the success that hybridists there have attained in raising new varieties. It is a cross between *maximus* and *Henry Irving*, the former being the pollen parent, and was raised by Mr. L. Buckland of Camperdown, Victoria, who is an enthusiastic reader of *THE GARDEN*. Its well-balanced, deep yellow flowers are refined in texture and of great substance, and are borne on tall, stiff stems, which in Mr. Buckland's garden reach the height of 22 inches. It has strong, broad, blue-green foliage, which one can only hope is the outward sign of a vigorous constitution. It is a first-year, flowering with *maximus* and about two weeks before *King Alfred*. It is of great historical interest, as being the first Colonial-raised variety to obtain the highest award from the Royal Horticultural Society of Victoria, *viz.*, a first-class certificate, which augurs well for its future career. Unfortunately I am not able to give its name, but I will endeavour to obtain it, and if I am successful I will at once place my information at the disposal of readers of *THE GARDEN*, as it is just as well to keep in touch with any good variety raised in our Colonies.

JOSEPH JACOB.

NEMESIAS IN SCOTLAND.

WHY are these lovely annuals so much neglected? They succeed well in any kind of season, and yet I fail to notice them in any but a very few gardens which I visit. This year they have been grand, both the large and small-flowered types. There can be no doubt that the latter is being wonderfully improved year by year, and this season the range of colour has been very much extended and brightened. I have had some grand deep crimsons, bronzes, oranges and pinks, besides the violets, lilacs and pale yellows that so much predominated a few years ago. In the large-flowered section I noted this year a beautiful lemon and an almost pure white. These were new to me. I have heard it said that the *Nemesias* remained for only a short time in flower, which, if true, would certainly be a drawback. Here they start to flower early in July and go right on until frost cuts them down. This applies to the small-flowered type; the other does not last quite so long. I grow Sutton's strains and find them suit my garden admirably, cold and late though it is.

Preston House, Linlithgow.

C. BLAIR.



2.—THE SAME PILLAR THREE MONTHS LATER.

THE ROSE GARDEN.

THE NEWER ROSES.

(Continued from page 535.)

MARICHU ZAYAS (Hybrid Tea, Soupert et Notting, 1907).—This has been quite good with me. The raisers' description of the colour can hardly be improved on—soft clear strawberry cream, shaded brilliant rose. It is not a deep strawberry, but what is generally called crushed. It has a deliciously sweet perfume, and the flowers are of good size, full and imbricated rather than pointed. Altogether a good Rose that can be recommended. Vigorous growth and free-blooming.

Marthe Bernardin (Hybrid Tea, Guillot, 1907).—Not too good a grower and not too good a shape; a white rose with golden yellow centre, cupped shape that opens flat.

Marquise de Sinety (Hybrid Tea, Pernet-Ducher, 1906).—If this Rose was only a better grower, what a fine variety it would be! It is, I think, the deepest in colour of all the yellow Roses, but, I am afraid, rather tender. Deep golden yellow, outside petals tinged carmine. It requires shading if colour is to be kept. Hardly large enough for exhibition. If its constitution improves, it is better than *Le Progrès* or *Instituteur Sirdey*; but I should hesitate to say it was a better bedder than *Mme. Ravary*, and *Harry Kirk* will be found generally more useful.

Marquise Jeanne de la Chataigneraye (Hybrid Tea, Soupert et Notting, 1902). A good Rose handicapped by its name, and, like *Mme. Wagram*, particularly useful in autumn. A fine, large flower, requiring warm weather to open properly. It is very good with me as I write; white, with a good point, and a very vigorous grower.

Mrs. A. M. Kirker (Hybrid Perpetual, Messrs. Hugh Dickson, 1906).—I am surprised this Rose has not been more often exhibited. It is large enough, a good bright carmine in colour and grows freely.

Mrs. Aaron Ward (Hybrid Tea, Pernet-Ducher, 1907).—As seen under glass this was very fine, but outdoors the flowers have been very small with me, and have, therefore, been rather disappointing. It is variable in colour, but a good flower is very distinct; white outer petals, deep chrome or Indian yellow centre. Very pretty buttonhole flower, but so far not large enough for exhibition.

Mrs. Conway Jones (Messrs. Alex. Dickson and Sons, Limited, 1904).—This is a pretty Rose. A deeper-coloured *Bessie Brown*, but not, of course, quite so large as that variety and not so impatient of wet; it is freer flowering, especially in the autumn. I do not think the qualities of this Rose have been sufficiently appreciated.

Mrs. David Jardine (Messrs. Alex. Dickson and Sons, Limited, 1908).—I have already referred to this Rose in your columns, and can recommend exhibitors to try it. As seen growing it is one of the best of Messrs. Dickson's 1908 set, being a good grower, very free-flowering and with a delightful perfume.

Mrs. E. G. Hill (Hybrid Tea, Soupert et Notting, 1906).—This Rose is similar in colouring to *Grand Duc Adolph de Luxembourg*, but holds its head erect. A good bedder, but not often up to exhibition form.

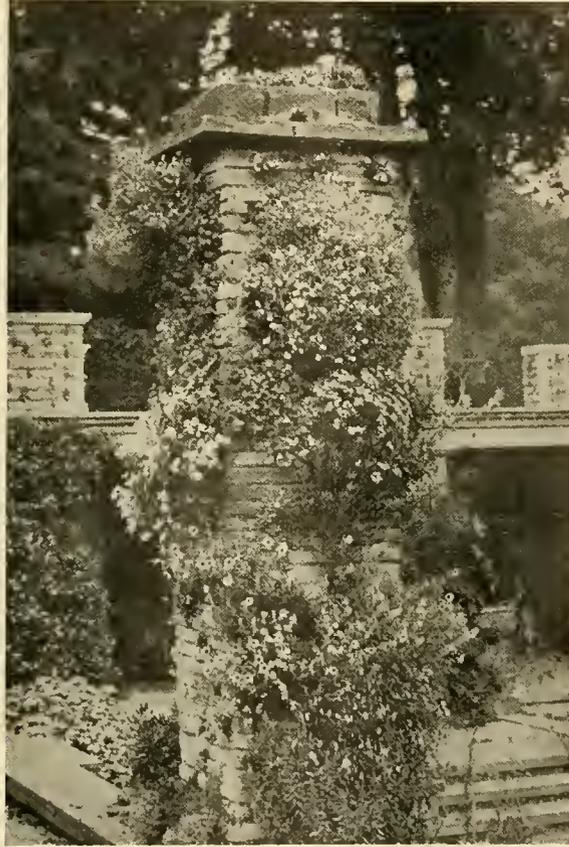
Mrs. Harold Brocklebank (Messrs. Alex. Dickson and Sons, Limited, 1907).—This is a very beautiful Rose that I think highly of; delicious scent, and a fine decorative variety all the time, with an occasional flower good enough for the exhibition table. Exhibited by the raisers at Manchester and the Autumn Show. A

good grower. Colour creamy white, deepening in autumn to a soft yellow.

Mrs. John Bateman (Messrs. Alex. Dickson and Sons, Limited, 1905).—This Rose should be in every exhibitor's garden, as its form is so fine, seldom coming split, it is a Rose that will last when cut. The colour seems to have been much better with me this year, and I have been able to exhibit it on several occasions.

Mrs. Stewart Clark (Messrs. Hugh Dickson, 1907).—A Rose of similar colour, not quite so good in shape perhaps, but larger than *Mrs. John Bateman*. With me it is a tremendous grower, after the style of *J. B. Clark*; almost too vigorous, and probably would do best on a pillar. Good pointed centre and sweetly accented (above the average in this respect). Has been well shown in fine form by the raisers.

Mrs. Theodore Roosevelt (Messrs. E. G. Hill and Co., 1903).—Only mentioned here in case



3.—A STONE PYRAMID CLOTHED WITH BEAUTY.

there is any exhibitor among your readers who does not grow it. It has become indispensable, and will take a very high place in *Mr. Mawley's Analysis*.
HERBERT E. MOLYNEUX.

ROSE BARONIN ARMGARD VON BIEL.

THIS is a grand Rose and one that has apparently escaped the notice of exhibitors. It is a seedling from *Kaiserin Augusta Victoria*, and is equal in form to that superb Rose, but with a colour and tinting very near *La France*. I believe it will eventually become as popular as *Mrs. Theodore Roosevelt*, a variety it resembles in all respects except colour. It is a splendid full, weighty bloom, and likely to last well on a hot day. Its fragrance, too, is very sweet. There is no doubt that *Kaiserin Augusta Victoria* is a fine Rose to breed from, and it is strange it yields so many pink seedlings, P.

THE GREENHOUSE.

EARLY TULIPS FOR POTS

VERY much that I said about Daffodils for borders holds good with regard to single Tulips for pots. Any of them may be selected from a catalogue according to the fancy of the buyer and grown with an almost certainty of success if—and this is an important "if," for the beginner especially—they are not required to flower too early. It is difficult to get satisfactory results in January, but it is comparatively easy to do so in February, and easier still in March. Of course, some varieties, considered as effective decorative flowers, are better than others, and hence a list may be of service to those who are not very familiar with all the different sorts. Again, some are more suitable than others to bring on as first earlies, and these will be marked "early" in my descriptions.

With regard to double Tulips, many are exceedingly effective, and make a desirable change from the singles; and, with the same proviso about early flowering emphasised, they are just as easy to manage. I wonder sometimes why more of them are not grown, and can only surmise as the reason that the charm of their disordered petals and the length of time that they last in flower are not known.

These are not cultural notes, but I would, all the same, like to add a little advice to what I have already said. First, that an important point is to allow adequate pot room. Three bulbs in a 6-inch pot and five in an 8-inch is what I recommend. And secondly, that as the long, fine roots are produced in great abundance, they want plenty of water when they are in active growth; but care must be taken to have good drainage, as if waterlogged the buds turn yellow and eventually wither.

The small *Duc Van Thols*, of which the all-scarlet is the best and most popular, are a distinct type, and these may easily be flowered early in the year if they are well rooted before being brought into heat. I have divided my list into two parts, viz., veterans and new recruits. There are a certain number of early single varieties which seem to have crystallised from the general mass to form an inner circle from which pot varieties are almost invariably chosen. These are the veterans. They are all good, and my selection must not be taken as exhaustive. The new recruits contain the names of some of the lesser-known older sorts, a few of the newer ones and a proportion of striped and edged flowers, as I consider many of these types very beautiful and worthy of much more extended cultivation.

VETERANS.

Singles Alba regalis, strong grower with beautiful frosted-looking leaves and creamy white flowers, splashed and speckled with fascinating bits of orange and carmine; scented. *Cottage Maid*, rather dwarf, pretty pink flowers edged with white. *Duchess of Parma*, a most reliable Tulip with long orange red flowers borne on tall stems. *Keizerskroon* (early), a large red with a broad margin of yellow round each petal; a robust grower. *Le Matelas* (early), a beautiful Tulip; a sort of deeper-coloured *Cottage Maid*. *Prince de Ligny*, a long, elegant-waisted, deep yellow flower; an uncommon shape in the early-flowering section. *Prince of Austria*, an exquisite shade of orange brick red; the flowers are borne on long wiry stems and are deliciously scented. A "Tulip of Tulips," *President*

Lincoln (syn. Queen of the Violets), a pleasing shade of pale violet; rather late. Proserpine (early), large globular flowers of a lovely rose-carmine, and a popular favourite. Vermilion Brilliant (early), a real bright scarlet; unsurpassed for pots. White Pottebakker (early), a fine reliable pure white. Yellow Prince, dwarf pale yellow, very sweetly scented; a good contrast to Prince de Ligny and all other yellows.

Doubles: Couronne d'Or, yellow flushed and tipped old gold. Emperor Rubrorum, fine large crimson self; the flowers are carried on good stiff stems. Murillo, a very popular and reliable Tulip; blush white, which deepens to a pleasing rose with age. Premier Gladstone (syn. Gladstone), a beautiful rose self; full flower. Princess Beatrice, delicate rosy pink flushed with white. Tournesol, red, edged yellow, very bright and gay-looking; the earliest double to flower.

NEW RECRUITS.

Singles: Admiral Reinier, red and white striped; one of the best of this combination. Brunhilde (syn. Unique), pure white with a flame of gold on each petal; a very taking flower and a robust grower. Cerise Gris-de-lin, cerise, with a broad edge of ochre yellow; it is the unbroken form of Spendonck; but little known, or it would be much more popular. Couleur Cardinal, a late-flowering variety, which, although probably best outside, lends itself very well for late pot work; it has a fine erect habit with deep rich crimson flowers and a plum coloured shading on the outside of the petals. Globe de Rigint, a tall showy purple-violet with white feathering; may be called an early-flowering byblumen; good for late pot work. Golden Bride of Haarlem, a particularly bright little flower of a brilliant crimson-red, striped and flaked gold. Grace Darling is a large crinkled globular flower of a rich orange scarlet, with a sort of bronzy flush on the exterior of the petals; a robust grower. Golden Lion of Hillegom, a glorious combination of sunset shades of orange, scarlet and gold; long pointed flowers; its weakness lies in its stem, which lacks strength to hold the bloom. Jenny, my favourite Tulip for pots; it has a stiff, sturdy habit and the flowers always keep their shape, even in old age; its colour is a beautiful cherry rose with a creamy base and creamy flames on the exterior of the petals; most deliciously scented; lasts a long time in good condition. La Remarquable, rich plum with a broad, pale primrose margin to the petals. A most distinct flower of the very oldest type of colouring, such as we get in the "Laes," Le Rêve (syn. American Lac or Hobbema), an art-shaded Tulip, salmon rose, blended with orange in imperceptible gradations; enormous flower; strong sturdy grower; it is historically interesting on account of the sudden rise in its price about 1901, when in a single season it quadrupled its value. Queen of the Netherlands, a queenly Tulip indeed, tall and stately and yet of the most refined and delicate blush white colouring; a shapely flower. Spendonck, rosy red markings on a buff ground, with a salmon flush over the whole bloom; a dwarf, sturdy grower and very distinct.

Doubles: I must mention just two, viz., White Murillo, a grand pure white, not too full, and with the centre petals rather tending to form a distinct middle, round which the others are irregularly arranged (no Pæony could be more charming); and Safrano, a lovely Tulip of the colour of a deep Maréchal Niel Rose; exquisite for ladies' dresses; with age it becomes flushed with rose.

JOSEPH JACOB.

LANTANA SALVIFOLIA.

THIS Lantana readily lends itself to various methods of treatment, and though the blossoms are not so brilliantly coloured as in the case of some of the garden varieties, it is certainly by far

have experienced. A mass of this Lantana in full flower suggests at a little distance, at least in colour, one of the darker-tinted Heliotropes. H. P.

COLOURED PLATE.

PLATE 1360.

THE LYON ROSE.

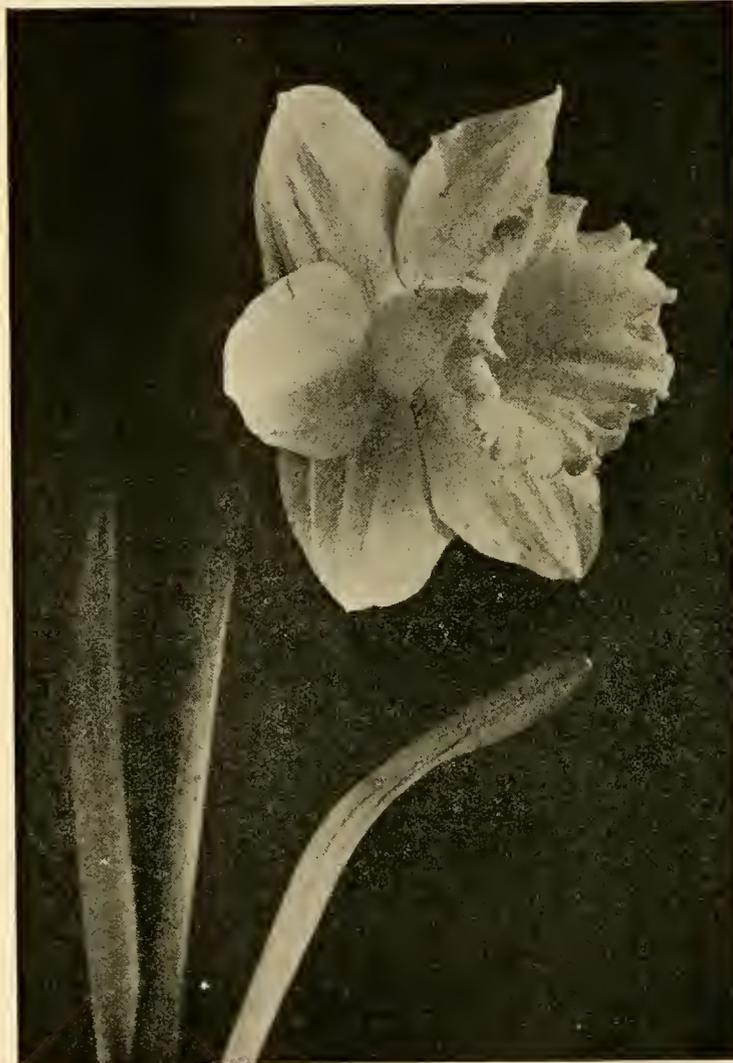
THIS beautiful novelty is a triumph of the hybridist's art, and it practically commences a new race or group, which the raiser has termed pernetiana. All who have studied Roses and their cross-fertilisation have been impressed with the possibilities awaiting development by the employing of species and varieties of very opposite affinities.

It is generally known that M. Pernet-Ducher produced his Soleil d'Or by crossing the Hybrid Perpetual Antoine Ducher with a variety of Rosa lutea, known as Persian Yellow. Soleil d'Or is a splendid Rose of an orange gold colour with a reddish centre. By using the pollen of this Rose the raiser has produced a number of remarkable coloured seedlings, and it is from the pollen of one of these seedlings that the raiser fertilised the Hybrid Tea Melanie Soupert. The result is seen in the superb Rose represented in the coloured plate.

The Lyon Rose will undoubtedly become a popular favourite, for it combines in itself all the attributes that go to the making of a good Rose, namely, colour, form, vigour, free flowering and fragrance. To describe its colour one needs the aid of the colour chart of the Royal Horticultural Society. The raiser calls it shrimp pink, with coral red centre and shaded with chrome-yellow. It is a wonderful tint, one that catches the eye immediately; but it will need careful location so that other Roses do not "kill it."

I have seen the Lyon Rose so badly grouped this season that its grand colour was not accentuated as it should have been. Unless a bed of it can be planted, I would suggest that either white or deep crimson Roses be placed on each side. The buds are not specially beautiful, but they open into large, full and somewhat globular blooms of very symmetrical form. The Hybrid Tea characteristics of free flowering have been imparted, although the flowers are not produced in large clusters such as this tribe is noted for. No one can mistake the relationship of the variety to the Briar family. The growths with their greyish colour and reddish prickles proclaim this fact. As a standard it will be splendid, making a fine spreading head such as one admires on a standard Rose.

For forcing purposes, especially in a cool house, the Lyon Rose will be a welcome addition, and it has remarkable staying powers, which will make it valuable for culture under glass. It is being sent out this season by Messrs. H. Merryweather and Sons, Limited, Southwell, Notts (who kindly supplied the flowers from which the accompanying coloured plate was prepared), and by Messrs. Hugh Low and Co. of Enfield, Middlesex. P.



A NEW DAFFODIL FROM AUSTRALIA.

the most popular of all the Lantanas in cultivation. Under the name of Lantana delicatissima it is to be met with in nearly all parks and gardens where summer bedding is carried out, being largely employed in the beds of mixed subjects now so much in vogue. For this purpose it is occasionally grown as standards, but more generally in the shape of loose pyramids, for, being of a semi-pendulous habit, it is very pleasing when grown in this way. Under these conditions the slender branches, partially drooping towards the tips, are thickly studded with compact, rounded clusters of deep lilac-coloured flowers, their tint varying in intensity according to the amount of exposure and sunshine they

TREES AND SHRUBS.

ELÆAGNUS MACROPHYLLA.

THIS large-leaved species belongs to the evergreen section of the genus, and is quite distinct in every way from others. It forms a large, dense bush, with ovate leaves 2 inches to 3 inches long, silvery on both surfaces when young. The upper surface of the young leaves is covered with coarse, greyish hairs, which disappear to a great extent with age. The branches in a young state are bright brown in colour, and the under-sides of the leaves and their margins are plentifully sprinkled with small dots of the same hue. The flowers, which are generally borne singly from the leaf-axils, are small, white and very fragrant, their presence being noticeable from a considerable distance during late autumn, which is the blossoming period. Like the other species, this Japanese plant thrives in light loamy soil, grows well and quickly forms an ornamental specimen. It may be increased from seeds or cuttings, but is frequently grafted on to stocks of commoner sorts. For beds, isolated specimens or groups in the shrubbery it is equally desirable; for either purpose, however, it should be planted in permanent quarters while young, as it does not transplant well after it has attained a considerable size. W. D.

HINTS ON PRUNING
CLEMATISES.

PERHAPS no phase in the culture of these beautiful climbing plants is less understood by amateurs than the pruning of the many varieties that now exist, yet the operation is comparatively simple when we know to what section a variety belongs. Clematises are grouped into six main divisions or types, viz., *montana*, *patens*, *florida*, *lanuginosa*, *Viticella* and *Jackmanii*. Plants belonging to the first three sections flower on the old wood in late spring or early summer, and very little pruning will be needed for these, all that is necessary being to thin out old, worn-out wood and leaving the vigorous young shoots their full length. The best time to prune these is November.

The *lanuginosa* section is one of the most beautiful of all, the flowers being produced on short shoots that emanate chiefly from vigorous shoots of the previous year. Pruning of this section is best done in February, shortening last year's shoots back one-third or one-half of their entire length. The *Viticella* and *Jackmanii* varieties flower in autumn on wood that is produced during the summer, and these are best pruned to within a few inches of the ground in early spring, so as to encourage the formation of vigorous growths from the base.

The training of these plants is frequently much neglected, the shoots being in very many instances allowed to look after themselves and twine their leaf-stalks around each other at will, the result at the end of the summer being a tangled mass that is exceedingly difficult to deal with. Attention should be given to the work of training during the growing period, thinning out all weak growths and thus giving the vigorous shoots the full benefit of the sun and a free circulation of air. I have been asked so often questions as to the pruning of Clematises that I thought the above information would be most welcome. The family is split up in many groups, and all are beautiful.

D.

THE FRUIT GARDEN.

APPLE CULTURE IN DEVONSHIRE.

SOME attention has recently been drawn in the public Press to the general neglect of Apple culture in this country and to the extension and improvement of which, with proper care, it is capable. There is no denying the fact that the fruit produce of this country ought to be considerably larger than it is, and especially so with regard to the Apple. In all parts of England, more or less, the orchards do not receive the attention in pruning and cleaning they ought to do, the result being not only diminished crops, but an untidy and uncared-for appearance.

In this county, noted as it is for its cider and, consequently, for its Apple produce, the orchards are, as a rule, the most neglected part of farm lands. The Apple trees, generally, are left to look after themselves, except at the time of fruit-gathering. They are

covers one side of the house, to push its way through the window frame into one of the rooms, where it is now growing on one of the internal walls, and, apparently, will grow on unmoleted.

But to return to the Devonshire Apple trees, it is satisfactory to learn that the agricultural committee of the Devon Education Authority has recently had an offer of some 300 trees of different varieties of Apple from the National Fruit and Cider Institute, and it is proposed to plant 200 of these on a farm at Howton, near Newton Abbot, and the remainder at different centres in South and North Devon. The secretary of the Education Authority explained that the numbers and varieties of the trees were arranged by the director of the National Fruit and Cider Institute, and in order to get a proper blend for cider-making he had taken eight trees each of a sweet, bitter-sweet and sour variety, making twenty-four in all, to each experimental ground.

It is to be hoped that this will bring renewed interest to the Apple culture, and promote the growth of the Devonshire cider industry.

Lymstone, Devon.

JOHN R. JACKSON.



THE OLD ORCHARD OF BRAMLEY'S SEEDLING APPLE IN MESSRS. MERRYWEATHER'S NURSERY AT SOUTHWELL.

of all kinds of shapes, and the trunks and branches usually bear a thick coating of grey lichen. It seems never to enter the minds of owner or tenant to prune and clean, any more than it does to stop the growth of Ivy from completely enveloping the trunks and branches of timber trees either on roadsides or in hedges or fields.

Whether this state of things is due to absolute neglect or to an inherent dislike to pruning or removing any clinging plants, however beautiful, it is difficult to say. Many years ago I knew a lady living at Fulham in a house surrounded by large grounds in which were some fine trees. Close to the dining-room windows grew some large spreading Cedars which shut out almost every gleam of daylight, and, moreover, in high winds the branches lashed against the glass, which was being continually broken; but she preferred to keep the glazier employed, and to endure the darkness and want of fresh air, rather than to remove or shorten the offending branches. Another lady in the neighbourhood has allowed the Ivy, which

HISTORY OF BRAMLEY'S SEEDLING
APPLE.

THE splendid variety we illustrate from a photograph taken in Messrs. Merryweather and Sons' Nurseries at Southwell was a chance seedling there. Two Apple pips were put in a small pot; both grew, but one of them eventually died. The other one developed into a large tree and became the parent tree of the now wonderful variety.

The sowing of the seed and the planting of the tree were done by a Miss Brailsford, originally of Easthorpe, Southwell. This lady died, or left the town, and sold the garden, including this Apple tree, to a certain Mr. Matthew Bramley, a butcher in Southwell. The tree by this time was developing into full bearing, and eventually Mr. Merryweather's attention was drawn to it. Mr. Merryweather soon recognised its great merits, began to develop a stock of it and eventually sent it out. It got "highly commended" in 1876 and a first-class certificate in 1883.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

CHRYSANTHEMUMS.—To maintain the plants in good health avoid a too close condition of the atmosphere in the glass structure. Ventilate without creating a draught on every favourable occasion. On damp, foggy days less air should be given and the lower ventilators opened, so that the air is



1.—A TYPICAL SIDE SHOOT OF THE YELLOW BEDDING CALCEOLARIA SUITABLE FOR MAKING A CUTTING.

warmed as it passes the hot-water pipes. Water very carefully. Blooms that give evidence of damping should have the decaying florets removed by the aid of forceps or tweezers, pulling out each floret at its base.

Trees and Shrubs.—The present is an excellent period in which to deal with evergreen trees and shrubs. Any that require to be lifted and replanted should be taken in hand at once. I prefer autumn planting for these subjects, and usually begin in the latter half of October, completing the operations by the middle of November, or thereabouts. Unless the replanting can be done during the above-mentioned period, I find it better to leave this work until the succeeding April. Should warm or dry weather succeed the planting, it is a good plan to syringe the plants frequently. Deciduous trees and shrubs may also be moved now with perfect safety.

The Hardy Flower Garden.—The planting of bulbs should be completed within the next ten days or so. In most gardens there is a surplus of Daffodils and other bulbs. I make good use of the former by planting them in the orchard, where, under Apple and other trees, they make a beautiful display in the spring. Crocuses and Snowdrops may be used in similar fashion with considerable success. Make good use of every dry day to get the hardy flower border into good condition. Many of the plants will be better if they are lifted and divided, and by these means it should be possible to plant in groups the

different kinds that were formerly represented by just one or two plants.

Orchids.—Blinds that have been so useful during the past summer and early autumn to screen the plants from the direct rays of the sun, may now be removed and stored away until another season. They may be required, however, during spells of severe frosts for covering the glass at night.

The Greenhouse and Conservatory.—When these structures are not being used for the purpose of flowering the Chrysanthemums, I make it a rule to go through the whole of the occupants, making everything clean and tidy before the wintry weather sets in. Not seldom the different subjects are unduly crowded together, so that the appearance of these structures is far from pleasing. Dirty pots, walls and benches should be made thoroughly clean and the plants be disposed tastefully throughout. Fuchsias, particularly large plants, must now be kept almost dry at the roots. Weak wood and dead and decaying leaves should be cut out of roof climbers. For early winter displays I am potting up imported roots of Lily of the Valley. I use selected single crowns and clumps, potting up these in either 5-inch or 6-inch pots. This subject flowers satisfactorily when grown in leaf-mould and loam, with just a dash of coarse silver sand to assist the drainage of these soils. Afford ample drainage for each pot. D. B. C.

HOW TO PROPAGATE THE BEDDING CALCEOLARIAS

YEARS ago the bedding or shrubby Calceolarias were more popular and were grown more extensively than they are to-day. They are free-flowering and easily-managed plants, and they are increased and perpetuated with comparatively little trouble. The shrubby Calceolarias are varieties of *Calceolaria rugosa*, a species of Chilean origin. These bedding types are somewhat tender, and need the protection of a cold frame during the winter. They are raised quite easily from cuttings in the autumn months, also by the aid of a hot-bed in the spring season. To increase and preserve the plants, the use of a cold frame is imperative. The work should have been done in October, but it is not too late now if it is carried out at once. The preparation of the soil in the cold frame is a matter of some importance, and therefore should be done well. Light, sandy soil is what this subject will root in very readily, and this can be prepared by sifting good heaps of loam, leaf-mould and sand in equal quantities, subsequently mixing these thoroughly to ensure an equal distribution of each. We pass our soils through a sieve with a half-inch mesh, this being quite fine enough. The prepared soil should be at least 6 inches in depth all over the bottom of the frame, and this should be spread evenly all over, levelled, and made quite firm by using the back of a spade or by the aid of boards and these trodden over. To complete the cutting-bed a layer of coarse sand should be evenly distributed over the surface soil. A few hours before it is proposed to insert the cuttings, the soil in the frame should be well watered, using a fine-rosed can for the purpose.

Our next concern is to know what kind of growths to procure from which our cuttings are to be made. As the yellow and dark varieties differ in their character, we have thought it better to illustrate both. Fig. 1 is a good example of the kind of shoot to procure for the purpose of making a cutting. This is the yellow

variety, which is certainly the less tender of the two, being really more "shrubby" in its character than its dark-coloured companion. Note the sturdy, vigorous character of the shoot, which has just been detached from the old stock plant. Fig. 2 represents a typical growth of the dark-coloured bedding Calceolaria. These growths are really the side shoots of the old plants.

The next consideration is, how are cuttings prepared in readiness for propagation? This is a simple enough matter. A good, sharp knife is essential, and assuming this is available, shorten back the growths to about 3 inches to 4 inches. The lower leaves should be trimmed off close to the stem of the cutting, and the latter cut through immediately below a joint. This treatment of the shoots completes the preparation of a cutting. Fig. 3 portrays a prepared cutting of the yellow variety. This is about 3 inches long and is trimmed of its lower leaves and cut through below a joint as advised above. Fig. 4 reveals the growth of the dark-coloured variety made into a cutting. These last-mentioned cuttings, as a rule, are rather larger than those of the yellow variety, and are more often made 4 inches long.

The preparation of the cuttings of this stronger-growing variety is very similar to that of the other shrubby sort. Insert the cuttings in rows in the cutting-bed, observing a distance between the cuttings of the yellow sort of from 2 inches to 3 inches, and in the case of the other variety fully 3 inches or rather more. The rows should be quite 3 inches apart, and, if there is



2.—A SIDE SHOOT OF THE STRONGER-GROWING BROWN-FLOWERED BEDDING CALCEOLARIA.

ample accommodation, allow more space between the cuttings in the rows. We have to remember the lifting period in the succeeding spring, and sufficient space must be left to do this comfortably.

When inserting the cuttings, first make the hole with a blunt dibber, then insert the cutting, allowing the base to rest on the bottom of the hole, and by the aid of the dibber



3.—A CUTTING OF THE YELLOW BEDDING CALCEOLARIA PREPARED READY FOR INSERTION.

press the soil firmly to the base of the cutting. Assuming this has been done in proper fashion, the cutting should be secured firmly in position, and this must be done in every individual instance. Give the bed of cuttings a good watering-in by the use of a fine-rosed can and then cover the frame with the light. Keep the frame close for a week or more, shading the same for an equal length of time. Subsequently, when the cuttings assume a fresh condition, shade during bright sunshine and admit air daily. Protect the occupants of the frame when frosts prevail by covering with mats, &c., and by placing littery matter round the sides of the frame as an extra protection.

A FEW HINTS ON FORCING BULBS AND PLANTS.

Good bulbs and plants may soon be spoiled through mismanagement while they are being forced. Inexperienced persons very often fail to water the bulbs directly they are potted, and so plunge them in the comparatively dry soil, under a bed of ashes. Bulbs so treated are slow in beginning to grow, and when the roots are formed they lift the bulbs partially out of the soil, because the latter is not set firm enough around them, owing to the neglect to water them at the time of potting. So you must give a thorough watering immediately the bulbs are potted, then the new growth will be free and even.

Removing Bulbs from the Ashes.—The new growths should be about 2 inches long at the time the pots are taken from the ashes. It is a mistake to remove them earlier, as also to leave them for a longer period. If empty, inverted flower-pots be placed over the newly-potted bulbs, the covering material will not come into contact with the new growths.

Exposing the Bulbs and After Treatment.—When taken from the ashes or sand, the bulbs should be placed in a frame. For three days leave the empty pots on them and, in addition, put a mat on the glass; then remove the empty pots, and three days afterwards take off the mat. The bulbs will now be ready for placing in the forcing-house. During the first week keep the temperature at about 58° by day and 50° at night. When the spikes show signs of growing freely give 10° more heat.

Feeding.—Weak doses of soot-water, liquid manure or artificials should be given to assist the growth of the flower-spikes. Cease applying stimulants when the flowers are about three parts developed.

Roses.—If the plants are lifted and potted this autumn, they should not be placed in a forcing

temperature before next spring, in order to get the very best returns from the plants. Established plants in pots will withstand forcing best, and these should be the ones to force first. Keep the plants outside, but have the roots well protected from frost by packing dry litter or leaves around them. Teas and Hybrid Teas should have the protection of a cool frame if one be available.

Azaleas.—It is very important that the ball of soil be kept moist. These plants, too, should be kept in cool frames, from which they should be taken to the forcing-house. Do not give the plants any manure water before the flower-buds commence to open, else the buds will drop off.

Lilacs.—These plants may be forced soon after they are potted. They should be placed under a stage or in a Mushroom-house, kept in darkness, and syringed daily until the flowers are developed. A rather high temperature and moist atmosphere are necessary until the flowers open. Then the plants should be gradually exposed to the full light; but it is advisable to shade them from the sun's rays. Only clear water is needed. Do not expose the plants to cold draughts.

AVON.

SNOWDROPS IN GRASS.

THE amateur who possesses a healthy grass plot can produce a beautiful effect thereon in early spring, and at very little expense, by planting now bulbs of the common Snowdrop, which is such a universal favourite with all. Even where the grass has to be mown at a comparatively early date these bulbs may be planted, because their growth is usually finished before mowing need be done in the spring. The one thing to avoid above all others is a formal design; plant in irregular clumps with a stray bulb or two, forming a sort of connecting link between each cluster of bulbs. Where beds of standard Roses or other shrubs are present in lawns, Snowdrops may be planted under them to great advantage. When planting these bulbs in grass it is far the best to lift a good square of turf, then well loosen the soil beneath, and if it is lacking in plant food incorporate with each square yard a good handful of finely-ground bone-meal. After the bulbs are inserted the turf can be replaced, and the whole made snug and tidy for the winter. The pretty little Winter Aconite (*Eranthis hyemalis*) is also a splendid subject for planting in grass at this period.



4.—A CUTTING OF THE BROWN BEDDING CALCEOLARIA READY FOR PLANTING.

THE TOWN GARDEN.

LAYING TURVES.—One of the easiest and best methods of renovating lawns which have become patchy through constant wear is to cut out the bad sections and lay down new turves. There is, of course, one obvious disadvantage in this, and that is the trouble experienced in procuring turves which are free from weeds; but if this can be ensured, then the work should be put in hand at once. It may be done at any time during the winter, but if they can be got in position now it is far more likely that they will have grown together perfectly satisfactorily by the time the lawn is required for regular use again next year. The first thing is to procure the necessary turves, and the second is to cut out the patches; this must be done with care, and if the soil beneath is poor it is excellent practice to dig it fairly deeply, incorporate some good decayed manure with it, and make the soil as firm as the surrounding area before the turves are put in place. These must join closely up to the grass on all sides, and some fine soil should be worked in round the edges; this completed, beat the whole down firmly and the operation is finished. If the turves were cut about 1½ inches thick and well beaten down on to good soil, the plants will soon make a fresh start, and it will scarcely be possible to see where the patches have been put in the spring.

BASIC SLAG FOR LAWNS.—Although the principal feeding of grasses on lawns is put in hand in the spring when growth is recommencing, it is possible to do much good by starting the operation now. Amateurs who fully appreciate the fact that grasses demand food just as the plants in the borders do are the people who achieve the most satisfactory results, and one of the simplest ends to this is to dress the entire surface of the grass during the present month with basic slag. It is extremely slow in yielding up its food virtues; hence the necessity for autumn application if full value is to be derived. The precise amount of the dressing must obviously depend upon the condition of the grass and the feeding that it is proposed shall be done in the spring, but one may safely use 6oz. to the square yard, while in many cases 8oz. will not be too much. In all points of this nature it is essential that each grower shall use his own judgment, bearing in mind that over-feeding is as bad as the reverse.

HARDY PLANTS.—The planting of these should be pushed forward with all speed, as the end of the month may bring weather which will render it impossible for anything to be done of this nature for many weeks, or even months. As has been previously advised, the soil must be deeply and thoroughly cultivated, and some good manure should be put into the second spit, the planting being done firmly in all cases, and only when the soil is in a suitable condition for working. Practically all kinds may be dealt with this month.

ROSES.—There is no need to reiterate the fact that these are by no means the most satisfactory plants for the town garden, in which there is commonly a deficiency of light and air and where the drainage is almost invariably excessive. Notwithstanding this fact, it is certain that amateurs will continue to endeavour to grow them, and they will find their reward in occasional gratifying successes. This month of November is the best that can be chosen for planting the Hybrid Perpetuals and the Hybrid Teas, but I would recommend the Teas being held over until the spring, as the percentage of losses in the first winter after autumn planting is often considerable. The soil must be deep and in good heart, and if it is possible to mix in a large proportion of strong, new loam the chances of success will be immeasurably increased. Lay the roots out to their full extent and work new soil firmly between them.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

HARDY FRUIT GARDEN.

THE BLACK CURRANT MITE.—This, commonly called big bud, is causing much anxiety, and therefore steps should be taken, wherever it is present, to combat it, either by rooting up the trees and burning them or, if they are not very bad, by picking off now all affected buds and burning them. These buds contain quantities of whitish mites, which feed upon the embryo leaves and flowers. After the buds have been picked off, throw a quantity of lime under the bushes and spray thoroughly at intervals in the spring with alkali wash. New plantations should be made as soon as possible of all Currants and Gooseberries, and pruning of these bush fruits may be started.

Apples and Pears.—Finish planting these as soon as possible, and get them tied or nailed in position to protect them from damage by wind.

Peaches and Nectarines.—These may be transplanted now, taking care to secure a nice ball of earth, and well ram the soil when the trees have been replanted.

FRUITS UNDER GLASS.

The Early Vinery.—The Vines may be pruned now if all the leaves have fallen. Cut the spurs hard back to two eyes. Clean the house thoroughly by washing the glass and woodwork with warm water and paraffin soap. Afterwards the Vines may be painted with XL Insecticide, and, if dirty, this operation may be performed several times before the Vines are started into growth. If mealy bug is present, more drastic remedies must be employed—the Vines should be scrubbed and all the loose bark taken off, and on bright days the rods be carefully looked over, using a small brush and petroleum or methylated spirit, as these pests can be seen crawling about on sunny days.

Peaches and Nectarines in the early house may be similarly dealt with, and, when the house is clean, finish off by whitewashing the walls with hot lime into which a handful of sulphur has been placed. This gives off fumes very distasteful to red spider in the spring. Prepare soil for top-dressing both vineries and Peach houses.

FLOWER GARDEN AND SHRUBS.

Rhododendrons may be planted now, choosing nice snug positions for early varieties. There are some Rhododendrons that flower in the beginning of the year when frost is not severe. *R. nobleanum* is often in flower in January, and *R. præcox* and *R. ciliatum* are most charming early varieties and look well in beds or borders.

Roses may be now planted. Do not allow any to remain out of the ground longer than is necessary; cover over the roots at once, and if any come in from the nursery it will be well to dip the roots in water and syringe the bushes as soon as planted. Existing Roses that are not satisfactory may now be taken up, the beds retrenched and some good loam added.

KITCHEN GARDEN.

If the hot-beds have been made as recommended, some Asparagus may now be planted in frames. Put about 3 inches of soil over the hot-bed, then place the crowns as thick as possible, put over about 3 inches of fine soil and give a good watering to settle it. Put the lights on and tilt them up at the back to let off vapour. Klubarb and Seekale can now be put into a dark room or Mushroom-house, either in pots, boxes or in a border. W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)

Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CARNATIONS.—The early batch of winter-flowering varieties will now be commencing to flower. Before the buds open, those which show any sign of splitting at the calyx should each have a small indiarubber ring slipped over it ready to be drawn up slightly over the base of the calyx when the flower commences to open. Winter Carnations are amenable to a little forcing, but are best when kept rather cool, a night temperature of 55° being sufficient to keep them going. A gentle circulation of air should be given to prevent too sappy or flabby growth. Watering must be done with care.

Where the roof of the greenhouse or conservatory is at all thickly covered with climbers of any kind, the growth of these ought to be reduced as far as possible at once. It is impossible to grow flowering plants of any kind successfully during the winter season where the roof is darkened to any extent by climbing plants.

FLOWER GARDEN.

Planting Irises.—In gardens where cut flowers are needed during May and June, the English and Spanish Irises are regarded as indispensable. I like to get my bulbs in during the early part of November, as by keeping them light and the blooms are in consequence smaller. I plant on both a west and north aspect, and thus prolong the season. Many of the mixed varieties of Spanish Irises, as well as the named self-coloured sorts, are exceedingly beautiful, rivaling the choicest Orchids. The English Irises flower about a fortnight later than the Spanish section, a great advantage where a succession of flowers is wanted. The present is a capital time to plant that beautiful little gem, *Iris reticulata*. This is exceedingly hardy, blooming in the keenest spring weather and possessing a fine aroma not unlike Violets. It is most useful for forcing in gentle warmth, and then comes in for mixing with small Ferns in baskets for the drawing-room or dinner-table.

Summer-flowering Chrysanthemums.—I have never known these to be so satisfactory as they have been this year. For brightening up our shrubberies and borders at this season nothing can surpass them; cuttings of these ought now to be taken off and rooted—five or six in 3-inch pots—using good sandy compost. These will strike readily in a cold frame, in which they may be wintered.

KITCHEN GARDEN.

Autumn-sown Onions.—The first time the ground becomes fairly dry, go over the autumn-sown beds and firm them well, as if much frost catches them when in a loose condition it injures the young bulbs, especially on heavy soils. Before firming these, run the Dutch hoe between the rows and remove all weeds, drawing a narrow rake through them after firming is completed. Apply soot and wood ashes in equal parts, as, although the grub does not usually attack the bulbs at this season, by incorporating this mixture with the surface soil there is less liability of attack during March and April.

HARDY FRUIT.

Wall Trees.—Usually at this time of the year the days are fairly warm; therefore any work that can be done with comfort should be pressed forward as much as possible. We often find the work of pruning and nailing left till frost sets in, but no greater mistake can be made. Where Pear trees are affected with scale the branches should be scrubbed with an old brush, using Gishurst Compound or some other well-known insecticide. T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Lilium candidum not seeding (*Lilium*).—The Lily in question in this country seeds but sparsely and only occasionally, and out of thousands of plants not a seed-pod has been seen for years. There is, as you say, abundance of pollen produced, but the plenitude of the pollen is of far less importance in such cases than is its fecundity. The pollen grains of most Lily species are of a coarse nature as a rule, and artificial pollination might be better achieved by your collecting the pollen in a small box or phial, the former preferred, and exposing it in a warm room for a day before applying it. In this way and by repeated attempts, assuming always that the stigma is in the receptive stage, you may presently attain your desires. If you merely wish to obtain seeds of the species referred to, you have not much to gain, as the plant is easily increased from scales; but if you are experimenting at cross-breeding the case is different. *L. testaceum* is said to be a cross between the above species and *L. chalcedonicum*.

Androsace sarmentosa in winter and treatment of Banksian Rose

(*C. E. B.*).—You will be able to winter *Androsace sarmentosa* quite well in the open if you cover it with a sheet of glass, elevated about 5 inches or 6 inches above the plant, so as to throw off rain but to allow plenty of air. If you prefer, however, you can lift and winter it in a frame or greenhouse, but it must have plenty of air. *A. lanuginosa* would have wintered with the same treatment. You can divide the tufts, but this should be done now, when the plants may also be lifted. It is best to put the tufts at the ends of the runners in small pots separately. The Banksian Roses are not everywhere good bloomers, and the method of pruning which is found most satisfactory is merely to thin out the dead wood and to shorten slightly the long, strong shoots, the flowers coming from the laterals or side growths. Even with this treatment it is a shy bloomer with many.

Sweet Peas for inspection from Hampstead (*E. G.*).—The flowers sent were very small, although, of course, most welcome at so late a date. There is nothing unusual in being able to gather flowers from these plants for four months; but considering your locality, we think yours have done very well indeed. Try and do them even better next year; then perhaps you will get more threes or even some fours.

Plants for tree trunks (*Ge.*).—We have no Fern in mind that would be likely to succeed in the position you name, and would rather suggest planting *Yucca recurva* for the purpose. Other useful subjects would include *Megasea cordifolia purpurea*, *Cotoneaster microphylla* and *C. horizontalis*, while the common Sabine (*Juniperus Sabina*) would also prove a most effective plant. All those named are perfectly hardy and far more likely to succeed in the position indicated than any member of the Fern family.

Chrysanthemum leaves failing (*E. J. W.*).—It is somewhat difficult to say definitely the cause of the leaves of your Chrysanthemums failing. We think that the trouble is to be attributed to overwatering. It is quite a common failing with growers who appear to possess a desire to treat their plants in too generous a

fashion, in consequence of which they naturally resent a surflet of good things, and their leaves are of no further service to them. Water your plants more cautiously in future, and never apply water in any form unless the soil is dry.

Dividing *Yucca filamentosa* (*Alpines*).—The best time to divide a clump of *Yucca filamentosa* is in late spring. The whole plant should be taken up carefully without breaking off the somewhat long roots, then the different stems should be separated with a sharp knife and not merely torn apart. After planting again they must be shaded for a time and syringed occasionally to keep them from flagging. With reference to *Ethionema grandiflorum*, it would be wiser to keep the young plants as they are in the cold frame during the winter, and plant them out in March or April, choosing a hot, sunny ledge, and using a compost of gritty loam with a good depth of soil and perfect drainage.

***Iris Kempferi* for pots (*L. S.*).**—The members of this group are not usually grown in pots, but if so grown should be treated exceedingly well. For the winter, and while the plants are at rest, the pots should be removed from the water and either plunged in the open garden or placed in a frame or pit. Drying off, as this term is usually understood, would be most harmful, and the removal of the plants from the water will afford them rest enough. Early in April next, or in March, give the plants a shift into pots two sizes larger than the present ones, removing a good deal of the old soil and giving a fresh supply of rich material in its place. Weak liquid manure may be applied to plants in full growth; but if you replot the plant as suggested, it will not, if the pot is immersed in water, require any stimulant of this kind following the replotting. You do not say what the size of the plant is or whether it has flowered.

TREES AND SHRUBS.

Fungus on Beech tree (*W. Caird*).—The fungus upon the Beech tree is *Polyporus squamosus*, one of the commonest of the "bracket" fungi. The bracket-like outgrowths which are so conspicuous in this case are formed annually, and are the fruit of the fungus, the vegetative part, or mycelium, of which lives inside the tree, feeding upon the wood and causing it to rot. If the fungus has been growing for long on the tree the mycelium has probably spread for a considerable distance in the wood, and will be very difficult, if not impossible, to destroy. The only thing that can be done is to cut out the affected part to the depth of 1 inch around the healthy wood and paint the wound with Stockholm tar. It is very important that old wood should be removed from trees and that all wounds, however caused, be painted, for it is through unprotected wounds that fungi such as this first gain an entrance. All the fruits of the fungus should be destroyed by fire. If the trouble is old-standing it is probably too late to do much to save the tree, since the cutting would have to go too far, but the destruction of the fruits will help to prevent other trees from being infected.

Information about a *Jasmine* (*Grace Gardner*).—Your shrub is a form of *Jasmine humile*, sometimes called *J. revolutum*. You can prune it any time between now and March. Thin it out well and reduce it in height; there is no special pruning necessary. You may use ordinary dubbin or cart-grease for greasing fruit trees. You must, however, place grease-proof paper between it and the bark. It is not of use for Cherry trees; Apples and Pears are the principal trees for which grease-bands are required.

Pomegranates not flowering (*R. Heyworth*). It is difficult to account for the behaviour of Pomegranates, for in the same garden, under apparently the same conditions, some plants will flower well and others rarely bear a blossom. All you can do is to give them as sunny a position as possible, in order to get the wood well ripened. Any necessary pruning should be done in early spring. Should growth be very vigorous, a little root-pruning will probably do good. You might obtain information from your friend who possesses a flowering specimen as to the method of culture adopted.

Shrubs for exposed position in Ireland (*J. Smyth*).—The following shrubs are suitable for the position near the sea you describe in Ireland: *Olearia Haastii*, *Veronica speciosa* and all varieties, *V. Traversii* and any shrubby New Zealand species, *Tamarix pentandra* (*hispidula aestivalis*), *T. gallica*, *T. tetrandra*, *Escalonia macrantha*, *Euonymus japonicus* and varieties, *Laurustinus*, *Forsythia suspensa*, *Berberis stenophylla*, *Pyrus floribunda* and *Spiraea* in variety. With a good shelter belt of these things you may grow many other shrubs in the more sheltered parts of your garden. For your low-lying ground near your pond you can plant *Alnus glutinosa* and var. *imperialis*, *A. incana*, *Salix babylonica*, *S. alba*, *S. fragilis*, *S. vitellina*, yellow and red-barked varieties (these should be cut down annually); Golden Elder, *Weigela*, *Cornus alba*, *Bamboos* in variety

and *Arundinaria nitida*, *A. Simonii*, *A. anceps*, *Phyllostachys fastuosa*, *P. viridi-glaucescens* and *Arundinaria japonica* for preference. Good *Water Lilies* are *William Falconer* and *James Bryden*, red; *Millicia caroea*, flesh; *gladstoniana*, white; and *tuberosa flavescens*, yellow.

Planting flowering shrubs (*A. H. W. D.*)—You cannot do better than trench your ground, keeping the surface soil to the top each time. Trench 1½ feet to 2 feet deep and break up the bottom of each trench. In the bottom place a good layer of cow manure, then through the remainder mix in a good quantity of leaf-mould. The other manures had better be left out at present, but in twelve months' time, after your plants have become established, you may give a light dressing of bone-meal with advantage. A surface dressing of cow manure and leaves mixed may be applied after the planting operations are completed.

Increasing white Heather (*J. B.*).—This may be increased either by cuttings or layers. Cuttings 1 inch or so long are inserted in pots of peaty soil and placed in a moderately warm propagating case, or under hand-lights in a shady border out of doors. July to September is the best time for taking cuttings. Layers are put down any time during spring or summer. The branches are usually weighted down with stones and are left for two years before being disturbed. When young, it is a good plan to cut the plants back each year after flowering to keep them sturdy. It is not, however, any use cutting branches back into old wood.

Information about Azaleas (*E. H. Greenwell*). The most suitable Azaleas for your purposes will be calendulaceum varieties. If you order from a nurseryman and state the colours you desire he will supply you with them. The varieties you describe are termed Ghent Azaleas, from the fact that many of the earlier hybrids were raised in Ghent. It would be advisable to keep *Philadelphus Lemoinei* separate from the Azaleas, as it requires rather different treatment. Spring is a good time to plant. It will, however, be better for you to obtain some peat to dig into your ground rather than use the moss litter as you describe. Your Azalea mollis will probably grow more rapidly presently; growth is frequently slow for several years after plants have been grown in pots.

Pruning shrubs (*Amateur*).—The best time of year to prune your evergreen shrubs is in April. If you prune them hard now, you will make them look bad for the winter, and if you have to cut any of the branches back into the thick wood, they will probably die, as they will have to wait so long before they can begin to grow again. If you prune in April, new growths will quickly appear and the plants will furnish up again during summer. You will have to sacrifice the flowers of some of your shrubs for one season. If you plant strong pieces of *Seakale* now, you ought to obtain strong crowns for forcing next year. Cover the crowns up with pots, boxes or barrels, and make a hot-bed round and among them. Have the tops of boxes loose, so that by removing a little manure and loose boards you can see how the forcing is going on without disturbing the boxes.

THE GREENHOUSE.

Hints about Nerines (*F. F. Jones*).—As soon as the Nerines show their flower-spikes, a little stimulant, such as weak liquid manure and soot-water mixed, will be helpful, but great care must be taken not to overdo it; indeed, some cultivators prefer not to give any stimulants at that time, but the majority are in favour of a few weak applications. Not only must liquid manure be applied with care, but water also. An excess of moisture at the roots is very injurious to Nerines in general. Another point with regard to the culture of these beautiful plants is that they should not be disturbed at the roots more than is absolutely necessary; but if replotting must be done, it should be carried out directly the flowers fade. A suitable compost is two parts of good yellow loam to one part of peat or leaf-mould and silver sand mixed. This will remain in good condition for years, an important consideration in the successful culture of Nerines. Those that are not replotted may, without disturbing the roots, be top-dressed with the same compost. This brings us to another matter of great importance, and that is, the Nerines make their growth during the winter and spring months, hence at that time they should have a good light position assigned them, and an occasional stimulant is then most helpful. As yours are now throwing up their spikes, we presume that you have mastered the necessity of keeping them absolutely dry when dormant. The old tunics had better be allowed to remain till they become quite detached from the bulbs.

Heating a small greenhouse (*X. F. Z.*).—We have seen particularly good results in such a greenhouse as you specify by the use of a hot-air paraffin stove by

Rippingille. The price is about 30s. Of course, the heater must be as far from the plants as possible and ventilation carefully attended to, while the trimming of the lamp is also of great importance. The quality of the oil is, in addition, a great consideration.

Keeping Pelargoniums (Geraniums) in winter (*G. H. W.*).—To keep Geraniums through the winter without artificial heat is not easy, especially if the winter season be a severe one. We believe you can succeed, however, by giving early attention to the plants it is intended to winter, getting the wood well ripened by exposure to the sun and by withholding water gradually from the roots. Have you a spare room or a window with a warm, sunny aspect? If so, you should winter them there very well. An oil-stove in a spare room should carry you through successfully, provided you keep the soil fairly dry at all times.

Pelargonium for inspection (*A. W. Perry*).—The petals had all dropped from the flowers sent, but we were enabled to see that the variety of Pelargonium is a very good one. It belongs to the Regal section, and is much in the way of *Prince Henry* and *M. Emmanuel Lias*. Whether it is distinct therefrom cannot be definitely stated without actual comparison, and we advise you to take a good representative truss, gum the flowers securely and forward to Messrs. H. Cannell and Sons, Swanley, Kent, asking their opinion thereon. Anxious as we are to oblige in all respects, florists' flowers are better left to florists themselves.

Water Lily in heated greenhouse (*R. G.*). Whether the hardy Water Lilies would do much good depends entirely upon the heat of the greenhouse; but if heated in the ordinary way, the forms of *Nymphaea odorata*, which may be had in several colours, would be most suitable. There are, of course, many sorts that prefer more tropical conditions, while the fine blue-flowered varieties of *N. stellata*, which send their handsome flowers fully 1 foot above the surface of the water, always make a telling display. The stellata varieties should be planted for starting in January, the others would be best done between October and March.

Ivy-leaved Pelargonium for inspection (*C. Daines*).—Your seedling Ivy-leaved Pelargonium is a very pretty one, but the season is too far advanced for a specialist to give an opinion thereon. It seems to us to be a good deal in the way of some others, but, of course, habit, freedom of blooming and other particulars have to be taken into consideration. We advise you to take some cuttings at once and next year grow on a few plants, and when these are in good condition send a specimen to some specialist, such as Messrs. H. Cannell and Sons, Swanley, Kent. In such a place a comprehensive collection is grown, and comparison with the best forms is therefore easy.

ROSE GARDEN.

Black spot on Rose foliage (*M. R.*) Your plants seem to be badly affected with this fungus. The insecticide was not the cause of its appearance. It is very rife this year, especially in certain districts. You should have all diseased foliage burnt as it falls, and next spring, following the pruning, have the plants sprayed every week with Mo-Effic or some other good fungicide. If this were carefully carried out we think you would gain the upper hand of the fungus. We do not think the plants will suffer much from this fungus, although it must have a certain injurious effect upon their vitality.

Protecting Niphetos grown as a standard (*T. W. M.*).—It seems a pity to disturb your tree in order that you may protect it in the greenhouse. We have grown this grand old Rose in quite as cold a position as you describe. If you cannot obtain Fern or Furze, some dry straw-bands or some sheets of brown paper would make fine protective material if hard weather sets in. Tie the branches up to form a cone as nearly as possible previous to wrapping them up in the straw or paper. Should you be able to plant the Rose out into a good border in your greenhouse, you would, no doubt, be well repaid, as here it would develop into a huge tree, larger than one could expect outdoors, because the protection of the glass ensures a more thorough ripening of the wood. We do not, however, advise you to pot up the tree, as very rarely such plants are a success in a cold greenhouse.

Rose cuttings in water (*C.*).—We do not hold ourselves responsible for the statements of our correspondents. Doubtless some varieties of Roses would form roots when placed in a vessel of water; but it would be much more satisfactory to root them in silver sand, the latter being kept well moistened. If a bottom-heat be provided, and 2 inches or 3 inches of sand placed above, Rose cuttings taken from blooming shoots will root most easily. The foliage should be retained and

frequently sprinkled with water during the day for the first two or three weeks. The cuttings should be in a sunny position, but kept shaded from the sun by sheets of newspaper laid on the glass.

Classes of various Roses (G. C. Oakley).—All the varieties you name, save one, belong to the Hybrid Perpetuals. The exception is *Robusta*. This is a Bourbon Rose, or rather a hybrid of this group, but minus its late-flowering propensity. All five varieties are dark crimson.

A Rose freak for inspection (M. F. Bullock). The fern-like formation of the calyx of the bloom sent is very peculiar and interesting. We believe the Rose to be one of the Mosses, possibly *Eugene Guinoisseau* or *James Veitch*, but could have been more certain if you had sent a piece of the growth. We have seen a similar freak upon the old Moss Rose *Salet*. You should try and propagate your Rose by budding from the shoot that produced the bloom or putting in a cutting at once.

Rose Philadelphia Rambler (F. D. Wilmstow). We do not consider this a satisfactory Rose. It is rather a shy bloomer until it has made a lot of old wood, and its blooms often appear with deformed centres and much mildew. A much more beautiful sort would be *Rubin*. This is a grand colour, although not so deep as *Philadelphia Rambler*. *Hiawatha* and *Delight* are two fine coloured varieties that approximate more nearly to the *Dorothy Perkins* type in growth. If you desire an early summer-blooming sort, plant *Rubin*; if a late July and August bloomer, then *Hiawatha* would be best.

Rose buds blighted (E. R. J.).—The buds with growth attached are taken from the variety *Her Majesty*, probably the worst Rose grown to be attacked by mildew. It is rarely free from it at this season of the year, although the July blooms generally come clean. You should cut away the shoots which look as though they have been whitewashed and burn them. Probably you will have to cut away 2 feet of growth on each shoot, as we have had to do this year. We do not think you need be concerned about next year's attack, because if you spray the plants before you see the mildew you may be able to check the fungus. A solution of Lifebuoy carbolic soap is a good remedy for mildew if applied in the early stages and persevered with at intervals of a few days. Half a bar of the soap to three gallons of soft water is the proportion to employ. There is also a good preparation called *Mo-Etic*, which is very effectual.

Roses for round bed (H. A.).—We think of the two sorts named, *Killarney* and *Caroline Testout*, the latter would be the most satisfactory all-round sort for a pale pink, and as you desire a second variety you could not do better than plant *Marie Croibier* with it, as the latter is a deep pink sport of the former. They both possess the same habit of growth. If you desire half-standards and half-dwarfs, you should have *Caroline Testout* as the half-standards, because you might find a difficulty in obtaining half-standards of *Marie Croibier*. As an alternative, *Gustave Grunerwald* or *Lady Battersea* would associate well with *Caroline Testout*. *Mme. Jules Grez* would be a splendid contrast in colour to *Caroline Testout*, but it is scarcely so strong in growth. *General Macarthur* would be a good red variety, but it has a little tendency to change to "bluish," which you have an objection to, although this could be overcome by frequent removal of the old blooms. It is a splendid fragrant sort that should be in every garden.

KITCHEN GARDEN.

Supplying a large family with vegetables (R. W. D.).—We are absolutely certain that no gardener, however clever, can supply an average of twenty-five persons with vegetables, including Potatoes, for a three months' supply from an area of ground only three-quarters of an acre, especially as from such a garden has to be taken out paths and, doubtless, some trees and bushes. At the very least, a vegetable garden for twenty-five persons should be of not less than 2 acres, as to supply so many mouths entails, on any gardener, a big demand. No one having the slightest claim to practical knowledge would assert that from three-quarters of an acre such a supply as you need can be had; still further is such a result impossible when soil is of very moderate quality. To expect so much from so small an area of ground, and to blame the gardener for any lack of the supply, is most unreasonable.

Tomatoes with curled leaves (T. R. F.).—There is no sign of fungus or insect upon the leaves sent. If, in addition to the curling mentioned the whole plant wilts, it is no doubt affected with "sleepy disease." For this there is no cure, as the fungus, which is its cause, enters the plant from the soil and grows upwards so as to fill the vessels by which water is conveyed from the root to the foliage with its mycelium, and thus cuts off the supply of water. All such plants should be removed, as the spores of the fungus are produced upon their stems near the base. The soil should not be again used for Tomatoes, nor should they be grown in the house again until it has been

disinfected by washing with a 2 per cent. solution of Lysol or a similar disinfectant. If this wilting of the plant is not seen, send us further specimens to include the stem and some of the fruits which are going wrong.

Cucumber stem for examination (T. L.). There is no evidence upon the roots of the plant of attack by eelworm. When eelworms attack the roots of Cucumbers or Melons nodules are produced upon them. Your plant appears to have gone off at the collar with a sort of collar-rot, so far as can be seen from the specimen sent, which had, when it reached us, become rotten and infested with the grubs of some dipterous fly. Cucumbers sometimes go off at the collar through becoming too wet just at that part. A sprinkling of lime around the base of the stem tends to check this trouble.

Peas decaying (Ignoramus).—The fresh, undecayed manure would certainly not be conducive to the successful growth of the Peas, especially in a period of dry and hot weather such as we have had this summer. The spasmodic watering of Peas does more harm than good; but if given in moderate quantities once or twice a week while the Peas are in full pod in dry, hot weather, heavier and better quality crops will result. For the promotion and maintenance of healthy growth in Peas from the time they are sown until they are taken up there is nothing so effective as the frequent application of the hoe to the surface of the rows. It should be applied at least once a week in dry weather. We are inclined to think that it was the raw manure which sickened your Peas.

Slugs infesting the Cabbage tribe (Restless Richard).—There is a wash on the market, said to be non-poisonous, which the maker claims to be death to all aphids, caterpillars and other garden pests. It is named *Abol*. It may be had of all seedsmen and nurserymen or of the manufacturers, Messrs. C. A. White, Hop and Fruit Growers, Paddock Wood, Kent. You might give a shilling tin a trial and spray the Cabbage and Cauliflowers with it as per directions given with each tin. We deprecate the use of poisonous washes of any sort to vegetables which have afterwards to be eaten. Lime and soot mixed together is the old remedy, and is still effective in driving slugs away if carefully applied in dry weather. This nourishes the crop as well, and is easily washed clean afterwards.

Potato tumour (Cheshire).—The Potato tubers sent show an exceptionally bad attack of what is known as Potato tumour (*Edomyces leproides*), a disease first seen in this country in 1901. Happily, so far it has been very local, but it is one of the worst diseases of the Potato known. If all the tubers on your allotment resemble those sent, the crop is utterly ruined. Not a tuber or any portion of the eruptions on it, which are full of fungus, should be left. All should be collected and burned. The ground should then be at once dressed with gas-lime at the rate of a bushel per rod, evenly spread, and at once well forked in to mix with the soil. Do not plant Potatoes on that ground for a couple of years, but other diverse crops sow in March. Where it is proposed to grow Potatoes next year, dress in midwinter with a bushel per rod of fresh kiln lime. Put it down in heaps of a bushel and cover with soil. It will soon slake; then spread about and at once fork in. If preferred, ground fresh lime not slaked may be applied and forked in.

A new kitchen garden in Wales (H. P. P.). Of the three alternative ways mentioned of building a garden wall in a district so exposed to high winds, we should decidedly choose the hollow brick wall. Wood, besides being perishable, is one of the worst possible mediums to plant fruit trees against. As an alternative plan, we should like to suggest that you build a composite wall instead, part stone and part brick, which, we think, you would find more satisfactory in every way; that is to say, build in the first instance walls of stone and mortar to the necessary height, facing the same with bricks cemented in. We suggest this as we presume that stones are plentiful and cheap in that part, and therefore the cost would be much less, and certainly the walls would be more substantial and warmer than a hollow one. Against such a wall buttresses would have to be built at intervals of 20 feet, in order to protect the trees from strong, sweeping currents of cold winds in spring. They would have the effect of breaking them up. They would also act as supports to the portable glass coping.

FRUIT GARDEN.

Pears diseased (H. Waters).—The Pear is very badly affected by the fungus *Fusicladium pirinum*. The deep cracks are due to an early attack, which destroyed the skin and prevented further growth, while the smaller spots are due to a later attack. The fungus attacks not only the fruit, but the leaves as well, and probably the shoots. A similar fungus attacks the Apple and produces similar spots upon the fruits and leaves. The method of control is to drench the tree during the dormant period with iron sulphate solution, made in a wooden vessel by pouring 1 pint of strong sulphuric acid on 25lb. of iron sulphate and adding by degrees 50 gallons of water. This must not be used in the spring or summer when the leaves are on the tree. Just as the buds begin to burst spray the tree with Bordeaux mixture of half the usual strength,

again when the petals have fallen, and twice more at intervals of about three weeks. All dead leaves should, as far as possible, be destroyed, and damaged fruits as well, while the tree should be kept free of dead wood. Persistence in this will doubtless reduce the disease to a minimum, but unless these points are attended to the disease is likely to spread and do damage to surrounding trees.

Late Grapes mildewed (F. E. Chambers).—The Grapes are badly infested with mildew, which should be destroyed as soon as possible or the crop will be ruined. The way to do this is by dredging sulphur thickly over the bunches, using a pepper or some other dredger for the purpose and holding a newspaper under the bunch to catch the falling sulphur. The sulphur may be blown off with a pair of bellows after it has been on for two whole days. It will then have destroyed the mildew. The Vine leaf appears to us as if it had been scalded by sun-heat consequent on defective ventilation, and possibly, as you suggest, from insufficiency of water at the roots. Give the Vine border a thorough good soaking of weak manure water. Ventilate freely by opening the front and back ventilators fairly wide on warm and sunny days, closing them entirely up at 4.30 p.m. after first having syringed the walls, border and all available surfaces (excepting the Vines themselves) copiously. By doing this the temperature of theinery will probably rise to 85° or 90° for a short time. This moist, warm atmosphere will force into the Vines a good and wholesome growth each day. Towards 7 p.m. admit a small chink of air again both on the front and back ventilators, applying at the same time slight heat to the hot-water pipes.

Name and information about an Apple (Apple, Brockley).—The name of the Apple is *Mr. Gladstone*, one of the best early Apples we have and ripe in July and August. It is of compact and moderate growth, and succeeds well as a standard in the orchard or as a bush in the garden. The tree should not be pruned too hard; but the weakest branches should be thinned out in winter to prevent any overcrowding.

Muscat of Alexandria and Foster's Seedling Grapes decaying (P. H. R.).—The Grapes appear to be dead ripe, and the cause of the decay in the berries must be attributed, we think, to the want of a little heat in the pipes to keep the air of theinery more buoyant and dry. Heavy watering at the roots when Grapes are ripe we have known to cause the same injury, especially to Muscats. The other varieties mentioned are not so sensitive to these conditions.

Loganberries and Hollyhocks (Town Gardeners).—The Loganberry could be planted in September or October, and plants may be obtained from anyone advertising fruit trees in our columns. The *Gladioli* must be lifted each year as soon as frost appears, the corms to be stored in a frost-proof shed till the end of March, 1909. The *Montbretias* and *Lilies* will be safe in the open ground, as they are quite hardy. The best way to obtain a hedge of *Hollyhocks* is to plant strong seedlings in May in the required positions, when rather more than a year hence they will give you the desired reward. As you have not done this, your next best plan will be to plant strong plants in September, arranging them in double or treble lines. The best way to combat blight on fruit trees is to syringe them once a fortnight with *Cannell's Fruit Tree Wash*. Write to Messrs. *Canuell and Sons, Swaleay*, and obtain an *Abol Syringe* for applying the wash. Grease-bands will prevent the moth from ascending and laying its eggs, but this will not deter the blight. An emulsion of soft soap and paraffin is also excellent for general application.

MISCELLANEOUS.

A plague of slugs (G. W.).—Your garden seems to be exceptionally troubled with slugs. We have found, by long experience, that it is possible to rid a garden of such pests in time, as their production does not go on for ever, by night hand-picking, by laying down Cabbage and Lettuce leaves in all directions as traps, under which they shelter during the day, by putting down small heaps of brewers' grains, into which they creep and may thus be destroyed, by watering close to walls or fences with brine or strong soot or lime water, also watering with strong lime water over plants infested by slugs at night and soon after dusting thickly with fresh slaked lime or fresh soot. The constant following up of the enemy in this way ultimately results in success. Ducks running in a garden devour many. The frequent forking up of the soil exposes eggs to birds to prey upon. All these are aids to slug destruction. Specially put down many leaves as traps, as these prove very effective.

Caterpillars for inspection (*R. Bendle*).—The caterpillars you forwarded are those of the peppered moth (*Amphidasis betularia*), a common insect. They feed on the foliage of the trees they infest, but do not do much harm as they are not found in abundance.—G. S. S.

Ladies' horticultural colleges (*A. G. W.*).—Other than the Swanley Horticultural College for Ladies, female students are included at the University College, Reading, a first-class institution. For admission application must be made to the Principal. You may also care to write to Miss May Crooke, a talented horticulturist who has, we believe, a ladies' college for garden instruction at Manor Farm, Bredons Norton, Tewkesbury. We cannot tell you as to fees. Information concerning these can be obtained from the respective Principals.

Moss litter and spent Hops as manure (*H.*).—To have these materials in good condition mix one cartload of spent Hops with two cartloads of peat moss litter manure, throw all into a heap, well damping it as put together and allow it to lie to partially heat. Thrust a pointed stick into the centre of the heap, and by drawing it out occasionally the heat of the heap can be tested. So soon as hot turn the heap again, and again damp it in the turning. Allow it to lie to heat again, then turn once more and allow it to slightly heat. It will then be in first-class condition for application to the soil. If, however, the manure is not required for some time, make the heap flatter or longer so that it heats less rapidly. When treated as above advised, the moss litter has parted with certain acid properties, and the whole more readily decomposes in the soil.

Catching shallow-working moles (*Puzzled*).—In common with yourself and, doubtless, many readers of THE GARDEN, we have in the past greatly suffered from the working of moles in light soils, in seed-beds, flower-beds and in various other directions. Two courses only were ever open to us, both needing very keen sight and attention. Many of the moles we have killed by standing with a narrow, long-tined steel fork watching their work, and the moment there was evidence of the creature lifting the soil near the surface, to thrust in the fork close by and lift the mole out, killing it at once. The other course was to stand with a loaded shot-gun or a large loaded pistol close, and the moment the creature was seen lifting soil to discharge shot into it. That either killed it or scared it away for good. Traps in these surface runs are useless, and there may be no evidence of the whereabouts of the deep main runs.

Plants attacked by pests (*Anxious*).—The Vine is attacked by mealy bug, a pest which calls for immediate and strenuous efforts towards its eradication. The Peach leaves seem to be swarming with red spider. This usually multiplies very rapidly when the house has been allowed to become too dry and hot. In the case of both the Vines and the Peaches, proper and thorough cleansing of the houses during the dormant period should not be neglected. The leaves of the stove plants are covered with a black fungus. This fungus is not attacking the leaves, but is growing upon the honeydew deposited upon the leaves by aphides (or fallen upon the leaves from aphides attacking other plants), and is harmful to the plants only indirectly. But the honeydew covers up the breathing pores of the leaves and the black fungus checks the access of light to them, thus preventing them from fulfilling their functions. The leaves, where possible, should be sponged and the house fumigated at intervals with one of the approved fumigants now on the market.

Insect for identification (*K. R. Image*).—The insect you send is a male specimen of one of the many species of hover flies belonging to the genus *Syrphus*. They are among the most useful insects in our gardens, as their grubs destroy large numbers of aphides. The females lay their eggs on the shoots of some plant infested with aphides, and the resulting grubs are blind and legless, about half-an-inch long, with a body which gradually tapers towards the head. The mouth is furnished with a double hook. A grub is able to retain its position on the shoot by means of some fleshy protuberances near the tail, and it is very interesting to watch one of them feeding, as it stretches out its body to its full length and feels about until it finds an unfortunate aphid, into which it immediately strikes its hooks, and, raising its head, holds the insect up in the air so that it cannot possibly escape, sucks it dry, turns its head on one side, drops the empty skin and then searches for another victim. I have seen one of these grubs suck out the contents of a full-grown aphid in the course of a minute and a-half, and they will continue for some time killing one after another as fast as they can catch them.—G. S. S.

How to raise "bent" grass from seeds (*T. M. B.*).—The seeds should be sown in spring in the open ground; but some difficulty would probably be experienced in getting a good crop of this grass established in the stifling sand dunes, unless more than ordinary trouble was taken to prepare the ground. This grass roots deeply as well as on the surface. From the nodes of the stems roots grow and enter any soil which they come into contact with, so that the habit of the plant is spreading. This being so, it would be advisable to sow the seeds in duly prepared patches of ground, the small plots being about 2 feet across and several feet apart; then the young plants forming the clumps would soon meet and so hold the surface soil in a firm grip. The plots should be prepared by adding a small quantity of heavier soil in which to sow the seeds. The latter part of March or early in April would be a good time for the sowing. Also, seeds should be sown generally all over the sand dunes. If the weather proves to be wet, the seeds will germinate freely. The variety vulgaris (*Agrostis vulgaris*) is the name of this

common bent grass. Seedsmen advertising in THE GARDEN would supply you with seeds.

Fence across a garden (*Sulphurland*).—The fence across the lawn would only partly protect the border at "A," which would still be exposed to the wind at each end and down the pathways. Moreover, it would render the lawn one-sided and out of proportion. A much better protection would be afforded by your erecting against the west wall and through its entire length a sort of wind-shield. By sinking Larch or other good posts that could be bolted to the wall and rise at least 5 feet above it, a cross-barred Larch or other trellis of wood could be affixed thereto quite easily. Then, by planting Irish Ivy in a well-dug and manured trench at the base of the wall, a good and permanent covering would quickly ensue and provide a wind-screen of the most effectual kind, and one also that could be kept in excellent order by being closely cut with shears each year.

Marestall weed (*J. B. W.*).—The weed you have under the above name is an *Equisetum*, and is known under various local designations. When you say that the weed is no sooner cut down than it comes up strong almost directly and chokes ordinary plants, it is but too evident the soil must be very full of the deep-running fleshy roots. Unless you can have the ground trenched or deeply worked, the roots so far as possible being picked out in the process, the chances of freeing the soil of the weed seem poor. Failing doing that, there is no other resource but to keep the hoe constantly in use, cutting the growths hard down to the soil so fast as they appear. When that is done, it is possible and probable that in time the roots, for lack of top growth, will die out. The presence of the weed indicates that the soil is sour and wet. Draining it and also giving it a heavy coat of lime should also help to kill the weed.

Artificial manuring (*W. D.*).—No doubt the peat moss litter manure applied to the garden soil you mention was ill-prepared, and had not parted with the acidity so common in that manure until it has been expelled by occasional part heatings and turnings. With respect to artificial manures, the most rapid in solution are steamed bone-flour, finely-crushed kaimit and sulphate of ammonia. The two former, in equal proportions, should be dressed on land in January, and well forked in at the rate of 6lb. per rod area of 30 square yards, the sulphate of ammonia, at the rate of 3lb. per rod, being sprinkled between growing crops during April, May or June, all at once or in two diverse dressings, and at once well hoed in. Your soil would probably derive benefit from one or two dressings of coarse salt, at the rate of 2lb. per rod between crops and hoed in, applied in June and July. Soils become exhausted only from lack of proper manuring and when one form of crop is grown in constant succession.

What to do with a small town garden (*H. L. Cairns*).—We can quite imagine your soil has become exhausted, and we advise you to have the ground properly trenched and a heavy dressing of good, partially rotted horse manure incorporated at the time. By all means add bone-meal if you can procure the same. Ichthemic and other guanos should be used in liquid form and applied to the plants when they appear to need a stimulant or are coming into bud. You should be able to grow a *Pyrus japonica* satisfactorily on your wall with a south aspect. We should grow in the same aspect *Violas* and *Pansies*, *Delphiniums*, *Lupines*, *Pyrethrums*, *Heleniums*, *Veronicas*, *Phloxes*, *Erigerons*, *Galegas*, *Lilium candidum*, *Geums*, *Potentillas*, *Gypsophila paniculata*, *Lathyrus latifolius albus*, perennial *Sniflowers* and early-flowering *Chrysanthemums*. For shady borders plant *Solidago canadensis*, *Spiraea* in variety, *Foxgloves*, *Lythrum virgatum* *Rose Queen*, *Rudbeckia Newmanii*, *Michaelmas Daisies*, *Alyssum saxatile*, *Campanula macrantha*, *Arabis albidiflora*, *Primroses* and *Polyantuses*, *Solomon's Seal*, *Funkia Sieboldii*, *Heimerocallis flava*, *Heliborus niger* and *Chrysanthemum uliginosum*. We hope that the above lists will meet your requirements.

Diseased Gooseberry leafage (*H. S.*).—There is undoubted evidence of the presence of fungus on your Gooseberry shoots sent, but not sufficient to indicate that it is an attack of Gooseberry mildew. It is noticeable that the worst evidences are found on the very weak shoots, while, with the exception of spotted leaves, the strong shoots seem free from fungus. Even the spotted leafage seems more due to that minute sucking insect, thrips, than to any other cause. Most certainly, in any case, at once spray the bushes twice at intervals of eight or ten days with a solution of sulphide of potassium or Bordeaux mixture, but the former is best for this special purpose. Half an ounce of potassium sulphide dissolved in a gallon of hot water is the proper proportion. After the bushes have dried, severely prune out all weak shoots, rake or sweep them up and burn, also every leaf that falls during the autumn. A heavy dressing of manure should do the bushes great good.

Mealy bug on Vines (*J. W. P.*).—Mealy bug is a most troublesome pest in a vineyard, and must be tackled at once. Hold a basin or some receptacle in one hand and scrape off into it all the insects you can find, scalding them later. Where you find any, at once touch the place with spirits of turpentine, using a small paint-brush for that purpose. It is just possible you have grown some infested plants in pots in your vineyard, and these had bug on them unseen by you. Paint over your Vine stems in every part with a mixture of soft soap 2lb., sulphur 2lb., and half a pint of turpentine. Make these into a stiff paste, then boil or scald 1lb. of Tobacco in a gallon of water, strain that and mix water with the paste, add more water and a little clay to make it thick, then well

coat over every part of hard wood. That should be very effective. Paint house or wood crevices also.

Black Hamburg Grapes mildewed (*W. M.*).—In the first place, the mildew should be killed, or it will be sure to appear year after year. The simplest way to destroy it is by dredging sulphur over the Vines while they are dry, leaving it on for three days and keeping the house close and shading densely. The sulphur may be blown off afterwards (still being dry) with a pair of bellows, and the Grapes will be none the worse and the mildew killed. Be careful the house is dry all the time. The overflow water mentioned, if it finds its way to the Vine border, is most likely accountable for the mildew. The best thing to do will be to make provision to divert it into some other channel. The name of the Plum is Orleans, the Prune Monsieur of the Continent. It is a second-rate dessert Plum, but excellent for preserving or for culinary purposes. It is hardy and prolific.

Mushrooms in a malt house (*P. G.*).—Mushrooms would succeed grandly in such a structure, summer and winter. Whether you can make it pay as a business depends greatly, in the first place, on whether you can command a good supply of fresh manure from corn-fed horses delivered at your place at a moderate price of, say, 4s. per ton; and, in the second place (and this most important too), management comes in. If you do not understand the business, it is easy to learn, that is if you are in earnest in the matter and short of actual experience gained in working under a practical Mushroom grower. We know of no better way of learning the business than by investing 1s. 2d. in a little book on the subject written by Mr. J. F. Barter, Mushroom grower, Napier Street, Wembley, R. S. O., Middlesex, one of the most successful growers of the day. Now is a good time to begin to grow them.

Charred bones as a fertiliser (*Hopeful*).—If you can char the bones you refer to without burning them to ashes, but enabling them to be crushed fine, they will make excellent phosphatic manure, while the ash of burnt wood furnishes excellent potash. These manures may be mixed before applying it to the soil, but the proportions would have to be determined by the respective quantities you may have. Soot is always a good fertiliser if it comes from house chimneys or flues; but if from a furnace it is of little value. If you could apply the bone and wood ash at the rate of 10lb. per rod of ground and the soot a peck per rod great good should result. To have a fairly enduring nitrogenous element in your mixture, add to the previous-named quantities 5lb. of Rape dust per rod. This is cheap and can be had from any manure merchant. If your bones are not charred, but broken up fine, they will make better manure, but will be much slower in action. Soil returns crops in proportion to the way it is fed or manured.

Inoculation of leguminous plants (*E. W. C.*).—The literature on inoculation of legumes is very scattered, but an excellent review of the whole subject is given in Bulletin 71 of the United States of America Department of Agriculture, Bureau of Plant Industry, and a considerable mass of additional information is to be obtained in the bulletins of the various States experiment stations. A full report of the effect of inoculation of Peas in a garden soil will be found in the forthcoming volume of the Journal of the Royal Horticultural Society. An excellent account of the influence of different coloured rays of light upon plant growth is given in Pfeffer's "Plant Physiology" (English translation), where also there is a good bibliography of the subject.

Grapes decayed (*G. C.*).—The mouldy and decayed appearance of the berries is the result, we think, of an attack of *Erysiphe communis* (Berkeley) rather than *Oidium Balsamii*, and brought about by a too moist condition of the atmosphere and a too low temperature at night. When Grapes are dead ripe, as these are, cold and damp are fatal enemies and should be guarded against by the provision of slight heat in the pipes, with air at night. With this precaution Grapes will hang until they shrivel. Sulphur is the foundation for all effective fungicides. You cannot apply anything better for the destruction of mildew.

Names of plants.—*L. Barker*.—*Browallia speciosa* and *Nerine undulata*.—*Rev. A. B. Strevenson*.—*Semele androgyna*.—*E. Edge*.—The red Aster is *Novae-Angliae ruber*; the other *A. Novi-Belgii grandiflorus*.—*S. H. B.*.—*Senecio taugitonus*.—*G. Ross*.—1, *Lady Mary Fitzwilliam*; 2, *Amazone*; 3, *Mrs. Sandford*; 4, *Bouquet d'Or*.—*M. S. W.*.—*Jacobinia magnifica*.—*T. C.*.—The flowering plant is *Clivia miniata* and the Fern is *Adiantum formosum*.

Names of fruit.—*Delamere*.—1, Norfolk Beauain; 2, Hawthornden. —*J. D. Winter*.—1, Apple Lamb Abbey Pearmain; 2, *Marchal de la Cour*; 3, *Brown Beurré*; 4, *Josephine de Malines*; 5, *Passe Crassane*.—*No Signature*.—1, *Apple Beauty of Hants*; 2, *Northern Greening*.—*G. C.*.—*Pear Beurré Diel*.—*A. P.*.—*Pear Beurré Superfin*. Apples: 1, *Mank's Codlin*; 2, *Blenheim Orange*; 3, *Peasgood's Nonsuch*.—*J. Ramsden*.—1, *Cox's Pomona*; 2, *Wealthy*; 3, *Nelson's Codlin*; 4, *King of the Pippins*; 5, *Wellington*; 6, *Annie Elizabeth*; 7, *Cellini Pippin*; 8, *Pickering's Seedling*.—*J. W. Gaunt, Leeds*.—1 and 4, *King of the Pippins*; 3, *Pickering's Seedling*; 5, *Kentish Filbasket*; 6, *Keswick Codlin Improved*; 7, *Northern Greening*; 8, *Keswick Codlin*; 9, *Wellington*.—*R. Mott*.—The Pear is *Glou Morceau*. With regard to Apples, 1 might be a small *Mank's Codlin*, but too small to name definitely; 2, *Duchess of Oldenburg*.—*J. England*.—1, *Yorkshire Beauty*; 2, *Christmas Pearmain*; 3, *Allington Pippin*; 4, *Rosemary Russet*; 5, *Beurré Superfin*; 6, *Belle Julie*; 7, *Thompson's*; 8, *Swan's Egg*.—*W. G. D.*.—1, *Emperor Alexander*; 2, *Golden Noble*; 3, *Gold Medal*; 4,

Rosemary Russet; 5, Mank's Codlin; 6, Worcester Pearmain; 7, Braddick's Nonpareil; 8, Yorkshire Beauty; 9, Pear Swan's Egg.—*J. Seaman*.—1, Blenheim Orange; 2, Flanders Pippin; 3, Malster; 4, Duke of Devonshire; 5, Annie Elizabeth; 6, Waltham Abbey Seedling; 7, Sandringham; 8, Ecklinville Seedling; 9, Cellini Pippin; 10, Allen's Everlasting; 11, Wyken Pippin; 12, Adam's Pearmain; 14, American Mother; 15, Wellington; 16, Norfolk Beauty; 17, Winter Peach.

BOOKS.

French Gardening: Gold Producing Soil.*—In his preface the author remarks that his object in writing this little book is to try to stimulate interest in the now much-talked-of French gardens and to put before the public in a cheap and popular form an outline of what the so-called new methods of cultivation are and to give sufficient details in regard to the apparatus used and its cost, that anyone reading it will be enabled to start the system on a small or large scale. We congratulate the author on the excellent way in which he has carried out the difficult task he set himself to do. This little book tells you all about a French garden and how to form the same in England, and the best time to begin, and gives approximate cost. It tells you also how to make the glass frames and how to use them, and the same of bell-glasses or cloches so largely employed in France. It tells you of manures and manuring and how to cultivate the soil under this system and also of the things to grow and how to grow them. It cannot be claimed for the system that it is anything new in this country, as vegetables in winter and early spring have been grown under glass in England in private gardens for decades past, and we should not be surprised to hear that the method was copied from us in the first instance. Be that as it may, it behoves British gardeners to wake up and see to it that, if land in the environs of Paris is made to yield £700 per acre per annum in English gold (more or less) that English soil by British skill, enterprise and labour is made to yield as much or a little bit more. We are told that the rent of these Parisian gardens runs to from £40 to £60 per annum per acre. The best land within a radius of twenty miles of London can be had at from £2 to £5 an acre. The carriage of produce from Paris to London amounts to 95s. per ton. The carriage from the radius mentioned to London cannot amount to more than 20s., and as regards manure, the most important item in connexion with the successful working of this system, it is probably cheaper and more plentiful in London than in Paris. Considering the matter from all points, we think there is no reason whatever why English gardeners, if they set themselves to work on the lines suggested in this book, should not be equally, if not more successful than their French neighbours in supplying the English market with an unlimited supply of what is now supplied almost exclusively by French gardeners to their immense gain and to our loss. Whether or not those who embark on the business make it a success depends almost entirely on the practical knowledge of the work by the gardener and on the enthusiasm and industry he puts into his work, associated, of course, with efficient and economical management. Let no one start lightly on the business before having previously had a few years' training under a competent man, and then only start in a small way to begin with, remembering that it takes at least £1,600 to equip and start a garden of only one acre in extent, and in the hands of an inexperienced or incapable person this sum would soon be sacrificed.

School, Cottage and Allotment Gardening.†—In the preparation of a book

* "French Gardening: Gold Producing Soil." By T. Newsome, A.R.C.Sc., London.

† "School, Cottage and Allotment Gardening." By J. Weathers. Longmans. Price 2s. 6d. net.

devoted to these prosaic and simple aspects of horticulture any author finds about his theme little that is heroic, but much that calls for practical knowledge. It is, perhaps, because to a prolific writer like Mr. Weathers the range of matter thus offered was limited, that the book devoted to the above and wider subjects now before us has expanded into one dealing with gardening in a wider sense, and also has materially added to its size and cost. For such special objects as seem to have been in view, cheap manuals, more condensed and very elementary in description, find the readier sale. All the same, Mr. Weathers, who, as a County Council horticultural instructor enjoys exceptional opportunities, has done his work well, and if amid the many who are interested in school gardens, and in cottage and allotment gardens, a wide circle of readers can be found, then most certainly great good should result from careful perusal of the book. Briefly put, the divisions range over the "Formation of a Garden"; of elementary school gardens, including plans and methods of cropping; of cottage gardens, and general information as to their culture and cropping; also as to allotment gardens in similar sense. Just so much would have made a very useful small manual. But beyond those things come descriptions of soils, hot-beds, fruit gardens, hardy flower borders, trees and shrubs, the vegetable garden generally, garden calendars, and, by no means least, some 147 questions on subjects relating to gardening, which any candidate for examination in horticulture may well study and find replies to. These are questions that are well suited to school teachers or garden instructors, but such as ordinary workers would certainly find much beyond their powers. Illustrations form a strong feature of the book, and generally are very helpful. That is specially so with several garden plans, on some of which methods of cropping for rotation are shown. Very useful also are those which show methods of layering, grafting and pruning, also the general training of fruit trees. But we take grave exception to the fan-shaped tree on page 78, which shows a stout centre vertical stem, a young growth never found in true fan-shaped trees, the centre being invariably kept open for gradual filling with small inner shoots. The illustration of a garden brick edging on page 6 is not only upside down, but describes a method of making a garden edging that is costly and objectionable. A brick on edge laid in mortar with the joints closed with cement is far cheaper and better. In dealing with manures and plant foods the author seems to have gone much beyond the capacities of workers or generally illiterate readers, but the matter is of great value to school teachers and budding instructors. Clearly the book, excellent as it is, cannot well be used as a school reader, nor is it elementary enough in its later pages for the average cottager; indeed, it might be more fitly in the hands of the young professional gardener who wishes to become an intelligent expert in his profession. Our author is not in love with what is known as Nature study. In that belief we cordially join. It is so far mere playing with Nature, and teaches nothing practical. Whatever is done in the school should always have in view the fitting of the child to become in later life a useful worker and citizen. Whatever may be the deficiencies of Nature study, and no doubt it is a pretty study, at least school gardening does teach the child something that is to him very practical and unquestionably useful. It is in the portion of the book thus devoted to so important a subject we find most interest, and regret Mr. Weathers has not compiled a small manual devoted to that subject solely, and such an one as would be used as a class book in the schools in hours devoted to horticulture on wet or wintry days. In dealing with cottage gardens and allotments we note with pleasure that the strongest emphasis is laid on deep working of the soil. There is no feature in gardening that is more important or does so much to make it

successful as deep preparation of the soil. Then comes good feeding of it with well-prepared manures, and last comes cropping and cultivation. Cropping here includes proper thin sowing of seeds and equally proper thinning of seedlings. All this is most valuable instruction, which it seems will be needful to continue to give for all time. We cordially hope the book may have a wide sale and thus help to render to gardening very valuable service.—D.

The Book of Nature Study.—The Caxton Publishing Company announce an important work to be entitled "The Book of Nature Study." The aim of the volume is to give detailed and systematic guidance to parents and teachers in introducing children to the study and love of Nature. The common animals and flowers are dealt with by acknowledged experts, who are at the same time experienced teachers. Technical language will be, as far as possible, avoided. Such subjects as the soil, rocks, weather conditions and children's gardens are also among the subjects treated. The editor is Professor Farmer of the Royal College of Science, whose technical familiarity with, and deep interest in, the whole movement in favour of the scientific study of Nature is well known. Contributors include such names as Professor J. Arthur Thomson, Professor W. W. Watts, Mr. W. P. Pycraft, F.Z.S., Dr. W. H. Lang, D.Sc., and others. The work will be elaborately illustrated and will also contain a series of folding models, showing internal structures, &c.

SOCIETIES.

READING GARDENERS' ASSOCIATION.

LECTURE ON "VEGETABLES FOR EXHIBITION."

THERE was a very large attendance at the Abbey Hall, Reading, on Monday, the 19th ult., on the occasion of the second fortnightly meeting this session of a most useful organisation. The subject of the evening was "Vegetables for Exhibition," with lantern-slide illustrations, by Mr. Pritchard of Aldenham House Gardens, and, as may be well imagined, proved a powerful attraction. The president, Mr. Alderman Parfitt, J.P., occupied the chair, and in calling on Mr. Pritchard to begin his lecture, happily referred to the summer excursion of the association to Aldenham House on July 15, dwelling on the courteous reception of the party by the Hon. Vicary Gibbs, Mr. Edwin Beckett, the head-gardener, and his staff. After some introductory remarks dealing with the necessity of the exhibitor having a thorough plan of campaign, which must be carefully thought out months before the showing season arrives, the further necessity of method in all things, combined with care and thoroughness in cultivation, the lecturer enumerated the particular vegetables which are considered the "sheet anchor" of the successful exhibitor. The first picture to be thrown upon the screen was a view of Aldenham House, which was received with loud cheers. The lecturer then proceeded to show slides of perfectly-grown Cauliflowers, Runner and Dwarf Beans, Peas, Onions, Leeks, Beets, Carrots, Parsnips, Celery, Potatoes, &c., giving cultural instructions for each subject as it appeared, with advice as to dealing with insect pests, proper manuring, lifting and other details connected with the successful growing of vegetables for exhibition.

During his remarks Mr. Pritchard placed upon the screen many fine pictures of splendid collections of vegetables that had taken highest honours in England, Scotland and Ireland, including the Temple and Holland House shows, Edinburgh, Belfast, Shrewsbury, Northampton and other great horticultural exhibitions. It being close upon nine o'clock when Mr. Pritchard, who was loudly applauded, sat down, only a short time remained for discussion; but in the brief period at liberty many questions were put and satisfactorily answered, Mr. Pritchard being also greatly complimented on the instructive and exhaustive character of his lecture. Among those taking part in the short debate were the President, Messrs. Foster, Powell, Durward, Wynn, E. J. Dore, &c.

Mr. Charles Foster, Assistant-Director in Horticulture at the Reading University College, kindly exhibited a very beautiful collection of Apples, the fruit being displayed in boxes with a view to illustrating the best method of marketing. Mr. Foster also exhibited some well-grown Carrots (Sutton's Favourite and Champion Horn) and a large specimen of Cardoon.

Mr. E. J. Powell brought a most interesting tray of new Potatoes from retarded tubers of the 197 crop, the old tubers having been placed in a cold frame on September 7 last.

Mr. J. Wynn showed a fine basket of Sutton's Ailsa Craig Onions, and Mr. Durward again staged a lot of exceedingly beautiful Dahlias.

Six new members were elected, and votes of thanks to the lecturer and the president concluded the meeting.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

THE WINTER PRUNING OF HARDY FRUIT TREES AND BUSHES.

(First Prize Essay.)

PASSING over the well-nigh untenable dictums of hard pruning on one hand and that of non-pruning on the other, it may be confidently assumed that a middle course between the two extremes is justifiable. Taking in review order any one of the larger species of fruit, more particularly the Apple, on making a study of its varying modes of growth and bud production it becomes evident that wide differences exist, and that, while some varieties require considerable pruning to induce a shapely form and ultimate fruitfulness, others reach the same point with little or no assistance in this way. This arises principally from the fact that the majority of varieties produce fruit upon spur or lateral growths emitted from the main branches, while some others, such as Worcester Pearmain, Lady Sudeley and Gladstone do this more freely at the points of the branches, the mere thinning out of which at intervals is all that is necessary in the way of pruning.

THE OBJECT OF PRUNING.

This at first is done to aid in carrying out the proper formation of the tree, whether this be bush, pyramid, standard or any of the various styles of training favoured for walls and fences. In this way a young plant requires superabundant shoots to be removed, to allow ample space for the full development of those retained and to afford opportunities for sun, light and air to gain access with the least possible restriction to all parts, so that wood, buds and fruit, each and all, arrive at thorough maturity after the season's growth. The main object, therefore, in pruning is to so regulate the branches in the first place, and afterwards the side or lateral growths, that this is accomplished.

Apples and Pears grafted upon the Crab and free stocks respectively are prone to excess of growth in their early stages or until fruit is produced. To yearly prune off this exuberance only augments the evil, as still stronger growths follow. The proper remedy for this is a judicious system of root-pruning, taking care, however, that in the case of a very vigorous plant the work is not carried to extremes at first. It is better spread over several seasons, doing a portion, according to the hold the roots have of the soil, in each. A standard tree having unlimited head room requires but little pruning either at the roots or the top; thinning the shoots in its earlier stages to the requisite number, and afterwards removing any entirely that take an unseemly direction and thus tend to unduly crowd the central part of the tree, are usually sufficient.

BUSHES AND PYRAMIDS.

Where space is ample these may also be allowed to grow freely, consequent upon the

trees being kept in form and well furnished with fruiting wood in all parts. Any shoots having a propensity to outgrow others should be proportionately reduced in length, and in the case of the pyramidal form of tree, repression of the topmost growths must, in the early stages especially, be carried out to assist the flow and equalisation of sap to all parts. Trees growing against walls or other erections, whether trained in fan shape, cordon or horizontal forms, always grow most freely at their extremities, or, in the case of horizontals, along the highest branches. Summer pruning is the proper corrective with these, which, if properly carried out, leaves but little to be done in winter excepting the shortening of any shoots previously stopped and the thinning out of fruit-spurs where too thick, and occasionally the entire removal of those rendered effete and rough with age, to make room for others more promising.

Plums.—The Plum as an orchard tree, whether grown as a bush or standard, is very easily managed, and as most varieties bear fruit early, not much pruning is required; thinning out cross branches or those misshapen, and the timely stopping of any shoots showing an excess of vigour, is usually sufficient. As trained trees against walls or espalier rails the case is different; here with age the spurs are apt to get long and unsightly, more especially so if summer stopping of the young growths is not well attended to. Hard pruning of these should, if possible, be avoided: first, because if cut back to the hard wood they often fail to again break at the point of severance, and blank spaces are thereby made; while, secondly, the most common ailment of the Plum—gumming of the branches—often follows severe use of the knife. In other respects, repression of topmost growths and careful thinning of the branches and bud clusters will maintain the trees in health, vigour and fruitfulness. As an aid to the latter, a systematic course of root-pruning should be carried out, particularly so for a few years after planting, or until the fruit-bearing stage is reached.

Cherries and Apricots.—Dessert varieties of the former and Apricots are managed most successfully upon the spur principle, and very similar in all respects to that detailed for Plums. Summer management of both is of the greatest importance; timely pinching of the shoots from June onwards leaves but little by way of pruning to be done in winter. Fruit-buds are produced very freely on both, and an effort should be made to keep these near the wall by summer treatment if possible. Morellos fruit principally upon the previous year's shoots, for which room must be made by pruning out those that have fruited; foreright shoots, except the very shortest, are best cut clean away.

Peaches and Nectarines.—These also bear fruit upon the previous year's wood, but, owing to precocity of flowering, pruning is best deferred until February, when most of the older growth may be removed and the young used to replace it. In pruning, the unripened points of the shoots should be cut away, leaving, in every instance, a triple bud at the extremity to ensure a shoot again springing therefrom, which would not ensue were the terminal a flower-bud only.

Figs are best pruned in spring when all danger of severe frost is past. As many of the short, naturally-formed spurs as possible should be retained, while all damaged points or branches too thickly placed may be removed and others used to replace them.

BUSH FRUITS.

The *Gooseberry* is the principal and most highly valued of these. In pruning, the centre of the bush should be cleared of all intercrossing shoots, cutting these back close, after which all others may be thinned according to necessity, but without shortening, unless they are malformed or project much beyond reasonable limits and thus destroy the symmetry of the plant. Some of the shoots may be pruned to within 2 inches of their bases to form spurs, should bareness be prominent; but with young, well-furnished plants the extension principle is best and the evil of thickets of growth which usually result from spur-pruning is avoided.

Red and White Currants are both worked upon the spur system, and the plants are kept in order and well furnished with fruiting wood throughout without much trouble. Aged, broken, or worn-out branches must occasionally be replaced by others left the previous year to succeed them.

Black Currants.—With these it is important that sufficient shoots start from the ground level to eventually form a large spreading head of growth; afterwards an annual thinning out of any branches too thickly placed, thus giving light and air free access, is all that is required, as the naturally-formed spurs along the branches will be ample for crops without the necessity of pruning side shoots.

Raspberries of the summer-fruiting section require the fruiting canes of the current year to be cut away close to the soil as soon as the crop is gathered, and the young growths, which by this time have nearly completed their season's growth, be thinned in accordance with the style of training carried out; but whether the canes are secured to trellises in rows or drawn together around a central stake, the space between each should not be less than 8 inches. The points of the canes are best left intact until the winter is past, to obviate water obtaining a lodgment in the hollow end, and so causing mischief. The height at which pruning should then be done depends very much upon the method of training followed; but if the canes have been kept upright during growth, and are therefore nearly straight, 6 feet from the soil is a very convenient height, the fruit being easily gathered and protection from birds by means of netting made possible. Autumn-fruiting varieties are best cut over close to the ground in March and the resultant growths thinned in due course, as these produce fruit upon wood of the current year.

The *Blackberry Family*, including the Loganberry and hybrid varieties, should have the old bearing shoots cut away yearly, doing this for preference in the late autumn and those of the previous summer be secured in place thereof. Regulation of these depends upon the space available; where this is ample, a loose, almost unrestricted growth favours fruitfulness.

Damsons may be allowed to grow somewhat more thickly than most fruit trees, and a clearing away of small, almost useless branches from about the centre of the trees and upon the larger limbs is better than hard pruning.

Filberts and Cob Nuts are best grown in bush form, and require careful attention at the start to keep the shoots spread evenly in a circle upon a short stem. After-management consists in maintaining this form so that the centre of the bush or tree is always clear. Pruning is best done in February when in bloom, and as growth is apt to become too concentrated, much that is barren is then distinguishable and may be pruned away.

JAMES DAY.

Galloway House Gardens, Garlieston,
Wigtownshire.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

November 14.—Mansfield and District Chrysanthemum Society's Show.

November 24.—Royal Horticultural Society. Exhibition of Flowers, Plants, &c., 1 p.m. to 5 p.m. Lecture at 3 p.m., by Mr. Joseph Cheal, on "Italian Gardens." Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

Photographic Competition for our Readers.—Owing to the large number of photographs received for this competition, we are unable to announce the prize-winners this week, but the work of selecting the winning photographs is being pushed on as rapidly as possible, and we hope to be able to announce the results very shortly.

Belgian honour for Mr. Harry J. Veitch.—It is with the greatest pleasure that we learn that the King of the Belgians has conferred upon Mr. Harry J. Veitch, V.M.H., the insignia of a Chevalier of the Order of Leopold, and His Majesty King Edward VII. has been graciously pleased to issue a licence permitting Mr. Veitch to accept and wear the same. We offer our heartiest congratulations to Mr. Veitch on his being selected for such an honour, which he thoroughly deserves.

Lecture at Redhill.—On the 16th inst., at Penrhyn Hall, Redhill, at 7.30 p.m., Mr. W. S. Murray, of the firm of Messrs. James Murray and Sons, Deptford, London, S.E., will give an illustrated lecture on "Seed Inoculation with Nitrogen-fixing Bacteria."

British Gardeners' Association. The next meeting of the London branch will be held on Thursday, November 12, at 7.30 p.m., when Mr. J. Harrison Dick will give an illustrated lecture on "Famous Gardeners." All *bonâ-fide* gardeners are privileged to attend. The Secretary desires all those intending to become members to hand in their forms before the lecture. A public meeting of professional gardeners will be held at the New Hall of the Co-operative Society, Clay Hill, Haslemere, Surrey, on Saturday, the 14th inst., at 7.30 p.m. An address upon the "Aims and Objects of the British Gardeners' Association" will be given by Mr. J. Weathers, F.R.H.S. (secretary of the British Gardeners' Association), supported by Mr. E. F. Hawes. All professional gardeners in the district are invited to attend. Full discussion will be allowed.

Scottish Horticultural Association.—The usual monthly meeting of the Scottish Horticultural Association was held in the Goad Hall, St. Andrew Square, Edinburgh, on the evening of November 3. There was a large attendance and several exhibits were on the table. Among these were Chrysanthemums from Mr. W. Williamson, Logie Green; Roses from Messrs. Todd and Co.; *Salvia splendens* from Mr. Staward, Belford House Gardens; and various plants from the open garden from Mrs. Algie, Tegher House, County Mayo, Ireland. The paper of the evening was the appropriate one of "Chrysanthemums: The Growing and Showing of Large Blooms for Beginners." As was to be expected from a grower of the experience and skill of Mr. D. Nicoll, Rossie, Forgardenny, who was the essayist, the paper was one of the most practical and useful as yet given before the association on the Chrysanthemum, and it was treated in a way which rendered it most valuable. Mr. Nicoll began with the preparation and striking of the cuttings, and gave a thorough *résumé* of the operations and treatment needed to secure the finest blooms. The selection of varieties for the various purposes was also ably dealt with. Mr. Nicoll received a hearty vote of thanks for his lecture.

PRIZES FOR READERS.

OCTOBER COMPETITION.—AWARDS.

In this competition the prizes were offered for the best essays on "The Winter Pruning of Hardy Fruit Trees and Bushes." This proved a very popular competition, and a large number of good essays were sent in. The prizes are awarded as follows:

First prize of four guineas to Mr. James Day, Galloway House Gardens, Garlieston, Wigtownshire.

Second prize of two guineas to Mr. W. G. Wadge, Viceregal Gardens, Dublin.

Third prize of one guinea to Mr. Gilbert Walshaw, Cheswardine, Griffith's Road, Wimbeldon.

Fourth prize of half-a-guinea to Mr. G. Cope, 100, Bournbrook Road, Selby Park, Birmingham.

The essays from the following are highly commended: Arthur Smith, Ontario, Canada; G. E. Greenhow, D. Lewis, Miss G. E. Pollard, T. W. Herbert, L. Johns, D. E. Elder, M. Dearden, W. H. Scott, A. E. Groombridge, G. H. Webster, "Hortus," E. Stenlake, F. G. Tutcher, J. W. Watkins, A. Payne, W. Hookey, S. J. Briscoe, F. Landsdell, A. R. Gould and Miss M. L. Smith.

Many essays appeared to have been derived principally from books, but in the majority the operation appeared to be fairly understood. Many ignored the fact that in well-cultivated trees summer pruning would have previously been done.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Apple Clarke's Seedling.—It is really wonderful how experiences differ. Your correspondent "D. K." finds this a good cropper; we have grown it for twenty years at Chilwell and Lowdham, and during that time I have only seen one crop. Your correspondent describes the Apple and its habit perfectly, but I would add that although a profuse bloomer the flowers are so tender that it seldom carries fruit, and it is about the last variety which I would recommend for a low-lying damp garden. The above remarks will explain to amateurs why Messrs. Merryweather (who, I believe, sent this Apple out) have, in company with other nurserymen, dropped this variety from their catalogues. Old fads are hard to kill, but I thought the idea of putting slates, stones, or what not under fruit-trees had expired. It seems from the issue of THE GARDEN for October 31 that such is not the case. It would be interesting to know what benefit the slate is supposed to give to the tree? Fruit trees on proper dwarfing stocks, which have been raised from cuttings or layers, not seed, bedded, lifted, transplanted and worked, are not prone to make tap roots, but when fine stocks are used I fancy it would need a good-sized slate to prevent their making tap roots if they were so disposed. It is true that the roots cannot grow through the slate, but they would not find much difficulty in growing round it; on the other hand, these slates or stones prevent capillary attraction, and a tree planted over a good-sized one would in a hot season be about as happy as live eels in a frying-pan over a brisk fire. Many people induce tap roots by placing manure under the roots of trees when planting; if they would apply it to the surface of the soil as a mulch the roots would be tempted upwards instead of downwards, and the slates may be relegated to that limbo in which we have placed the old practices of burying dead dogs or even horses in Vine borders, or plastering these same borders with a couch of wet manure every winter to the exclusion of the air and the consequent death of the Vine roots.—A. H. PEARSON, Lowdham, Notts.

Garden Peas.—Referring to the letters concerning Peas, I sowed Thomas Laxton on July 20, after early Potatoes, and gathered an excellent lot of well-filled pods on the 16th ult., and an equally good supply again on the 24th ult. Last year I sowed the same sort of Pea too early, on June 24; they came in about the end of August. The row now standing is entirely free from mildew. I use posts, nails and string; they are preferable to sticks.—S. JACKSON, *Clinton House, Kingsland, Shrewsbury.*

Sweet Peas in flower.—I noticed in THE GARDEN (page 530) a paragraph mentioning the gathering at Kingston Hill on October 16 of Sweet Peas with stalks 10 inches long. This morning (October 30) there were some in my garden that were picked with stalks equally long, and a bright pink. There are still plenty of buds and the plants are quite fresh and green, this being a fortnight later. Of course, I am much further north than your correspondent. I thought this information would interest you.—B. TINNE, *Delfield, Aigburth, Liverpool.*

A well-grown Cypripedium.—I am venturing to send you a photograph of a pot of Cypripedium insigne now in bloom with us. There are no less than thirty-five blooms in full beauty and two of the stems each bear two blooms, which I believe is somewhat unusual. The plant is growing in a 12-inch pot, and, being such a fine specimen, it occurred to me you might be interested to see the photograph.—WILFRID TILLET, *Old Catton, Norwich.*

Autumn tints.—The present display of colour in the trees, which we all look forward to with so much interest, is most disappointing; indeed, I cannot remember so poor a display in this part of the county of Gloucester. I first noticed that the Norway Maples were not giving us their usual blaze of bronze and gold. Instead of the leaves remaining on the midsummer growth till the last, they fell off about the last week in September, after turning crimson, which is rather unusual. I believe this can be explained by remembering that just as this growth had finished a spell of exceptionally hot weather set in, which caused most trees to flag. This dry weather lasted nearly a month, and the drought penetrated to a considerable depth, causing Beech trees to cast many of their leaves. Referring to my diary, I find that the hot spell of weather began on July 18 and ended on August 25, but for several days after this there was only an occasional storm. I think this rather long spell of exceptionally hot weather is wholly responsible for the poor colour in our deciduous trees and shrubs. The Beech is one of our finest trees at this season of the year; it does so well on the limestone which abounds on the Cotswolds. All the leaves were scorched by the long drought, and are now falling before turning the usual brilliant golden and bronze colours. None of the Maples are giving us a really good display for the same reason; in fact, many of the Japanese kinds lost their leaves while they were still green. They usually make the most gorgeous display. *Acer colchicum rubrum* lost its leaves (except a few which are still clinging to the bottom branches of the trees) three weeks ago. *Rhus cotinoides*, a beautiful shrub which brightens up the grounds at this season, has now lost nearly all its leaves without colouring very much. However, the abundance of fruit which many of our wild trees are carrying atones to a great extent for the loss of foliage. The Spindle Wood (*Euonymus europæus*) is very fine indeed, so are all the wild Thorns and Viburnums. I never saw the wild Ro-es bearing such an abundance of large, brightly-coloured fruit as at the present time. Some of the garden Roses are also giving a bright display, particularly the Penzance Sweet Briars, *Rosa rugosa* (Japanese Rose) and other single Roses. Many of our summer Roses are well worth growing, apart from their summer display.—T. ARNOLD, *The Gardens, Cirencester House, Cirencester.*

THE KITCHEN GARDEN.

MESSRS. SUTTON & SONS', TRIALS OF TOMATOES, RUNNER BEANS AND POTATOES.

TO the ordinary gardener, whether amateur or professional, few visits have wider interest than is found in one paid to a large trial ground, such as Messrs. Sutton and Sons have at Reading. It is in such places that one sees not only so many things which are not common in gardens, but also so many that are represented in numbers far beyond the capacity of any ordinary garden. Thus at Reading we saw this autumn a truly wonderful trial in the open ground of Tomatoes. It was not a trial on walls or fences, but right in the open farm land, and where every plant, although having plenty of light and air, had not the least shelter or special treatment. The plants were arranged in rows of ten; there were 250 such rows, each one staked and every plant treated alike, making in all 2,500, and thus forming, with some seventy or more varieties with several rows of each, an unrivalled trial. Generally, the fruit crop was an enormous one, and there



A WELL-GROWN PLANT OF CYPRIPEDIUM INSIGNE IN THE GARDENS OF MR. W. TILLET, OLD CATTON, NORWICH.

was no disease of any form. Winter Beauty, Prince of Wales, Magnum Bonum, Sutton's Satisfaction, Peachblow, Early Market, Red Dessert, Golden Nugget, Golden Queen, Sunbeam and many others were carrying truly marvellous crops. As a trial of Tomatoes in the open ground we have never seen one more extensive or better.

Runner Beans again presented a huge trial, scores of rows, well staked, growing side by side, showing the relative and always high-class merits of Prizewinner, Best of All, A1, Sutton's Scarlet (a great improvement on the old scarlet), Mammoth White (a greatly-improved Czar) and others.

Then we went to a trial of spring-sown early Cabbages, the best probably being Sutton's Earliest, dwarf, solid, small-hearted and a very perfect stock; Little Gem, a delightful little Cabbage for summer and autumn use; All Heart, very fine conical hearts and few outer leaves; Tender and True, Early Oxheart and Improved Nonpareil, all of the very best for spring sowing, though not for autumn sowing. There was, too, a large breadth of Earliest of All Savoy, having very solid hearts, such as should be equally valuable for private use and for market sale.

At the Southgate Gardens there was a large trial of seedling Potatoes, and in another somewhat distant garden we saw lifted a breadth of 100 plants of a seedling, 195, which evidences at once a superb late Potato, a heavy cropper, having no over-large or coarse tubers, and, for a wonder, no Up-to-Date blood, but absolutely distinct. This variety, not yet named, is from Abundance crossed with Langworthy. In this case every one of the 100 roots was lifted, not a tuber being disturbed, and as they were thus exposed they presented one of the most interesting Potato shows we have ever seen. A well-known Hampshire gardener who grew this fine seedling writes of it in terms of high admiration, especially for its crop, quality and distinctness. The firm have many other seedlings coming on of which more will be heard in due course. Among others, a special line is being produced for those who seek for high flavour in Potatoes, and it is hoped these will come into commerce during the coming winter.

In the deep cellars that are below the old massive Southgate mansion a trial of Mushroom spawn was seen. Here were beds made up on entirely the same lines and spawned at the same time, yet showing marked difference in production. The new Twentieth Century spawn, by which name it is known, produced under entirely diverse conditions from the old form, is seen to be fully a month earlier in production of Mushroom, and also to give a much finer and more solid sample. Thus are things progressing.

A VALUABLE EARLY RHUBARB. (DAW'S CHAMPION.)

AT this period of the year growers have to think of the winter and spring supply, and both for forcing and for first crops in the open the above is a really fine Rhubarb, and so distinct in every way that the fruit and vegetable committee of the Royal Horticultural Society gave it an award of merit on February 13 as a new forcing variety, and a first-class certificate on March 27 for its earliness in the open and for general excellence. Certainly it is only on very special occasions that a new fruit or vegetable is honoured in this way. By this it will be seen that the new Daw's Champion has exceptionally good points and is well worth a trial, and I would certainly recommend it for both forcing and open ground. It is less acid than older sorts, has a splendid colour, is very free and the long, thick stalks are of bright colour. B. M.

PEA SUTTON'S PEERLESS.

As a midseason and late variety I consider Sutton's Marrowfat without an equal, and certainly it is the finest culinary Pea for a light soil that I have yet tried. It is strong and vigorous in growth, not quite 3 feet in height and grown on the above-mentioned class of soil the variety has proved a grand Pea in every way, and especially valuable to the amateur. As seen growing the handsome pods are a great attraction, and on the exhibition table would carry great weight. The yield, both of pods and corn, is in every way excellent, the climax being reached by its superb flavour and colour when cooked. The plant is practically proof against mildew, a high tribute perhaps in a very trying year. The first-class certificate gained by it in 1903 has obviously been well merited. E. JENKINS.

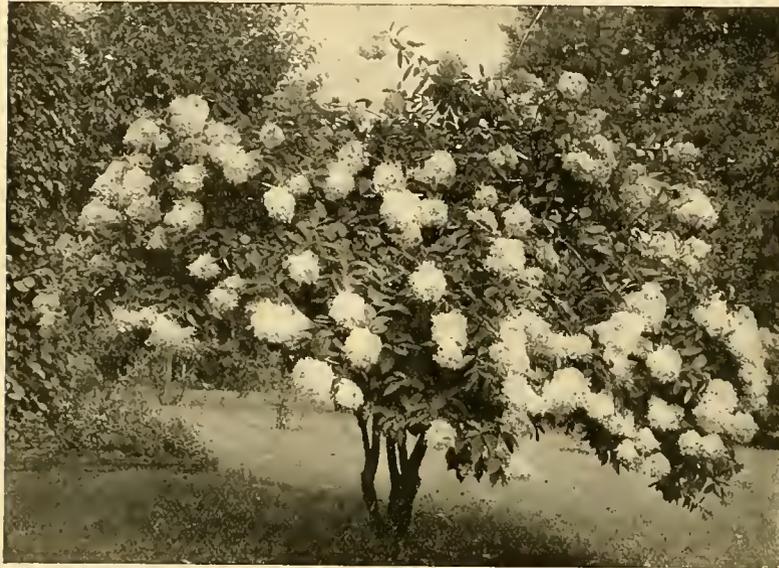
CAULIFLOWER PLANTS.

WHERE these are in pots they should have all the air it is possible to give them. The lights may be removed in fine weather and replaced again on the approach of rain, and tilted up in such a way as to give the greatest possible quantity of air without subjecting the plants to excessive moisture. This will have the effect of causing succulent growth, rendering the plants unfit to stand a week or more of darkness when covered up in severe weather.

TREES AND SHRUBS.

THE FORSYTHIAS.

DURING the dull, foggy days from November to January it is pleasant to think of all the garden glories that are to come and conjure into the murky gloom a remembrance of past scenes. Of all the lovely promises I look forward to in the near future, one of the mental pictures I carry about with me on a thick, dark winter's day is almost the earliest, certainly the best of all—that glorious and wonderful sight of the Forsythias, those shrubs whose luxuriant showers of bright golden



A STANDARD HYDRANGAEA PANICULATA GRANDIFLORA.

bells make such a welcome sunshine in the midst of frost.

I know a spot in the heart of a smoky city where the Forsythias have been planted with a loving hand, lavish but not unrestrained, so that a perfect wealth of yellow sunny bloom is to be seen in the cold, sharp days at the end of February, when the sun is up and days are bright, but still cold, bitterly cold. Yet in spite of it the Forsythias put out their lovely golden drops untouched by the icy chill, which proves too much as yet even for most of the early little bulbs. No sight more glad some than this in all the year. Even the Daffodils, Snowdrops and Scillas which later come to form so lovely a picture fail to give us the same keen pleasure as these lovely sunny shrubs at a time when almost all else in the garden is but green and brown.

Do not be afraid to overplant—have them in profusion; once you know their worth your cry will be for more and yet more. Give them room to grow and expand and shake out their long stems with the yellow blooms. Plant them generously, not just here and there, but many together in a clump in the shrubbery, by a border, or a few together on the green grass, or, again, by a wall, up a fence or over a bank or rockery, and you will never regret the space allotted to them. The display they make at the first greeting of the sun and spring will repay you well enough, and then later, when all the blossoms are done, the leafage, too, will give you pleasure, and the form and growth of the whole plant is graceful and attractive.

How grateful we must be to such hardy, precious things on which we rest our eyes and which usher in the spring. Not many plants can brave the cold as they do, and, although there may be some few which by reason of low

growth or by dint of close clinging to a sheltered wall may withstand the inclemencies of the season, they cannot compare with the Forsythias, which are large, full-grown shrubs some 10 feet to 12 feet high and as much as 6 feet or 8 feet through, literally covered with the pendulous flowers nearly the whole length of stem.

I would not forego the sight of these for any other early garden picture, beautiful as they all are, and for however small a garden my first choice of a shrub would be these. They are quick growers, will thrive in any position and almost any soil, from one so poor as to be almost all gravel to a rich loam. They can be allowed their natural grace, in which case only slight pruning is necessary after the flowering is over,

or they can be kept to a required size and trimmer form for planting in beds, and to this end must at the height of 3 feet or 4 feet be cut down when the flowering period is over. The shoots will then grow to 5 feet or 6 feet, and the process must be repeated early each year if the same result be desired.

Propagation may easily be effected either by cuttings put in sandy soil and kept in the greenhouse or taken in October and put in a sheltered border. These will soon root, and

may be expected to flower the second or third year after. Another way is to allow the long stems on the trees to bend over till they touch the ground, when, often even unaided, they will strike and take root.

There are practically four sorts, notably *F. suspensa*, which is the finest of all, with which we may include the synonyms *F. Sieboldii* and *F. Fortunei*. This is the most graceful, and is suited to almost any purpose we may wish to put it. Then come *F. intermedia*, smaller and rather more upright in growth, and *F. viridissima*, still less free in its habit, but which has the bark on its stems a good bright green, and in autumn the foliage colours to a warm purple. The fourth variety, *F. europaea*, is as yet somewhat of a stranger, and not so happy in its surroundings as are the three former. This is of slower growth, has thicker leaves and shorter branches without the grace of *F. suspensa*, grows to the height of only about 3 feet to 5 feet, and is, in fact, distinct from the others in general habit. It is of recent introduction into this country, having been brought in 1899 from Albania, its native home, where it habitually bears fruit, in this respect differing from the other Forsythias, which have all been imported into Europe from Japan and China and have never yet been known to fruit in our Continent. E. CURGVEN.

HYDRANGAEA PANICULATA GRANDIFLORA.

WHEN well grown this is one of the best of autumn-flowering shrubs, as it keeps in flower for a considerable time and is very showy. The type, *H. paniculata*, is a Japanese shrub that grows 6 feet or so high and several feet through, and it has been cultivated in British gardens for about

thirty years. The leaves are ovate, 4 inches to 6 inches long and serrated. The flowers are white or cream-coloured and borne in large terminal panicles, most of the blooms being small and fertile, the others large, showy and sterile. They appear in August and last through September. The variety *grandiflora* is very much like the type in habit, but the inflorescences are composed mainly of sterile flowers, and are much larger than those of the type. When they first open they are white or cream-coloured, but with age they become suffused with red. When young, healthy plants are grown in very rich soil, it is possible to obtain exceptionally fine heads of flowers often as much as 18 inches long and 1 foot through at the base. To obtain inflorescences of these dimensions it is necessary to restrict the plants to a few growths, cutting hard back each year. Grown to a full-sized bush, as the one shown in the illustration, which is from America, the flower-heads are more abundant, but are much smaller. Grown in pots and subjected to very slow forcing, *H. paniculata grandiflora* makes a very useful market plant; it is, however, a difficult shrub to force really well. W. DALIMORE.

SWEET PEA NOTES.

CROSS-FERTILISATION OF SWEET PEAS.

YOUR correspondent Mr. P. Clapham (page 532) asks: "What are the insects which bring it about?" and says that "he has not discovered insects near the blooms which are strong enough to force open the keel and come in contact with the stigma." I do not propose to answer the main question directly or suggest the cause; but as to the insects, may I be permitted to state my observations and, incidentally, draw attention to a useful adjunct to the Sweet Pea grower. Some of my flowers are visited by what I take to be a small black beetle about one-tenth of an inch long. Several of them may be seen inside and through the semi-transparency of the keel of the flower. I have not observed how they get there, but there they are, and, as far as one can see, without any apparent damage to the flower. I have usually considered them harmless. Their object, however, must surely be to feed on the pollen. It is the same little beetle one finds so frequently buried in a Carnation bloom along with the much smaller thrips. Then, again, what about the earwig? This pest and marauder goes more directly to work, often taking a generous slice off the end or side of the keel or flower. They have a partiality for blooms half open, having the good sense, no doubt, to get the pollen at its best. Oh yes! Mr. Earwig undoubtedly likes the pollen. May I support this statement by the following lucky experience. These last two seasons I kept a hive of bees, not successfully—they dwindled. They gathered a moderate amount of pollen, which is mixed by them with a small quantity of honey and stored in the lower portion of the cells in the frames, and used eventually to feed the young grubs. It is mainly pollen with just sufficient medium to bind and keep it stored in position. Well, the bees swarmed, and I lost the small colony there was, being eventually left with the empty hive and a few frames of food as above stated. It was situate some 4 yards or 5 yards away from and opposite the centre of a row of Sweet Peas some 16 yards long. It remained there for a week or two neglected. Judge of my agreeable surprise, on opening the hive with the intention of clearing it away, to find the cells tenanted with numbers of earwigs, all buried head downwards in the cells on the frames feeding on the pollen food, and noticeably neglecting the smaller number of honey cells. In two operations, at about a week's interval, I slaughtered nearly 505 of these pests, and have at various intervals

killed quantities since in decreasing numbers. Now, Mr. Editor, forgive my lengthy digression; but what a trap and ideal board and lodging, the natural shelter of a weather-proof wood hive, with the daintiest of food and a well-stocked larder! Truly a real "Come into my parlour"; wholesale only! As to the bees, although I have occasionally observed them making a close inspection of the flowers, they practically, I think, neglect them. The small beetle, however, I take it, creeps inside the keel and wanders about; but the earwig boldly hacks a way through and gets to business head first, I suppose (like the bee cell), and the rest is easily imagined. I think, therefore, Mr. Clapham's statement that insects do not come in contact with the stigma needs explaining, notwithstanding the rather confident tone he adopts. A. A. G.

I HAVE read with great interest the various letters and articles in your recent issues on the subject of "Cross-fertilisation of Sweet Peas." I am a small grower of these lovely flowers, and have had them under close supervision for the last few years; but I do scarcely any seeding. I have found many instances of the prolonged anthers extending beyond the keel (which seems to split so often in the Spencer type), and this must render these special flowers subject to cross-fertilisation by insects.

I find about the end of July that my Sweet Peas are infested with small beetles, which are inside the keel, and that they can make their exit at pleasure is proved by the fact that if a vase of Peas is put on a white cloth there are numbers of these little beetles to be seen on it very shortly. As they can fly, they doubtless pass from plant to plant. If other growers have visits from these same beetles, may they not be responsible for the cross-fertilisation to a certain extent? I do not remember being troubled with these beetles when I only grew the old type of flower, and cannot say if they make their exit from them as they do from the Spencer type; but they are often quite a nuisance on our dinner-table, as they drop from the flowers in large numbers. Next season I will take special notice if this is the case when using flowers of the old type only, or I will gladly send some specimens of the infested varieties (of both types) to any expert who cares to send me his address. MRS. G. LEIGH SPENCER.

The Priory, Cliford, Herefordshire.

TWO BEAUTIFUL COLOURED-LEAVED PLANTS.

PLANTS that are evergreen and have coloured foliage are always welcome in the garden to cut from. *Shortia galacifolia* has this merit. Early in the spring, when at Coombe Wood Nursery, I was much impressed with this growing in pots. The plants were about 1 foot high, the foliage a reddish bronze or deep claret red. In one of the houses I noticed some of these had just begun to throw up their flowers, which are of a Snowdrop-like nature and thrown well out of the leafage, contrasting beautifully with the red foliage. At a Royal Horticultural Society's meeting last spring I observed this plant was shown well in flower in one of the hardy plant exhibits. It is a North American plant, and is said to require a cool, moist, shady position. *Galax aphylla* deserves to be more known. This has neat, rounded, toothed foliage, beautifully tinted, and is evergreen. It produces dense spikes of white flowers. Of late years this has been much sold in Covent Garden for its bright foliage, and is seen largely in bunches during the autumn. When these high-coloured foliage plants are well placed they brighten up the garden during the winter months and are most valuable to cut from, and when arranged with suitable flowers they are most attractive. These plants are within the reach of all who have gardens. J. C. F.

THE FRUIT GARDEN.

RENOVATING OLD VINES.

FEW gardening operations are so full of possibilities as the renovation of old or unfruitful Vines, and such are frequently to be met with where it is not always convenient or advisable to root them out and replace. If Vines are old and renovating measures are to be taken, while the leaves are still green and as soon as the fruit can be cleared is a good time to commence operations. Let me point out for the benefit of any amateur readers who are anxious to grow good Grapes, that no amount of attention to temperatures or shoot or bunch manipulation will produce fruit of superior excellence, or even keep Vines in a fruitful condition for any length of time, unless the necessary elements for building up good vigorous wood are applied to the roots. Let me also impress upon the cultivator the absolute necessity of guarding against stagnant moisture at the roots. If the border lies high, or has a subsoil or underlying bed of gravel or sand, no danger need be feared on that score. Where, however, the conditions are the reverse of this steps must be taken to afford ample drainage and raise the surface of the border to a higher level than its immediate surroundings. To this end take out a trench along the front of the border, afterwards a fork must be used to gradually work back the soil from the roots, which, when laid bare, should be kept well moistened by wrapping them in mats or sacking, which must be repeatedly damped. Meanwhile the house should be kept close and moist, the foliage well syringed, and during bright sunshine shading must be resorted to.

every cartload of loam about two barrow-loads of old mortar or lime rubbish and rather more than half a hundredweight of coarse crushed bones be added. The whole should be well incorporated, the turfy loam having previously been roughly chopped up with a sharp spade. This should be wheeled in to form the border, the roots being carefully spread out and covered with the hand as the work proceeds, pruning back with a sharp knife any long, straying roots which seem destitute of feeding fibres.

Some of the Vines of which I have charge are of great age, and previous to my taking them had been considered worn-out and useless. We, however, decided to give them another chance, with the result that for the past few seasons they have given us the best fruit of the varieties on the place. As our fruit range is at the highest part of the garden, and we have a subsoil of sand and gravel, the operation of border renovation was somewhat simplified. We cleared away the old soil till we came to roots, many of which were pruned hard back, as they were almost destitute of feeders, the border being afterwards filled in with soil like that already described.

To sustain fertility, every spring we fork in a fair dressing of the finest bone-meal procurable, and wood ashes (these are kept dry till required for use), afterwards putting on a light mulch of cow manure.

Naturally, after having taken so much trouble with his Vine border, the operator will soon be looking for improved results, and these are best brought about by allowing a considerable extension of growth. This will, of course, add vigour to the rooting system, so that the fullest advantage can be taken of the new soil by the Vines. With our Vines we decided to run up new rods from the old roots, cutting out the old rods as



THE TWO BUNCHES OF BLACK HAMBURGH, CUT FROM OLD VINES, WHICH WON FIRST PRIZE AT SHREWSBURY SHOW THIS YEAR.

This practice must be followed up until the roots appear to have taken hold of the new soil.

Prior to making up the border care must be taken to provide ample drainage, which should consist of half bricks and any material of a similar character through which water can readily pass. Over this squares of turf should be placed grass side downward. This will, of course, keep the finer soil from working down among the drainage.

Whenever possible, good turfy loam should form the basis of a Vine border. I prefer it inclining to heaviness rather than otherwise, only a greater proportion of mortar rubble is necessary to keep it somewhat porous. I am not very much in favour of too many ingredients being included in the composition of the border, and would suggest as a guide that to

soon as the new ones were fruiting two-thirds the length of the rafter (20 feet). To furnish these young rods a bud or break was selected, as near the bottom of the old rod as possible, stopping the shoot when it had reached a length of from 5 feet to 6 feet, and cutting back at pruning-time to 3 feet or 4 feet, according to the strength of the cane, repeating the process till the top of the house was reached.

From the renovated Vines referred to in my notes we have cut bunches of Black Hamburg weighing over 6lb., and in August of last year the two Hamburg bunches which won first prize among fifteen competitors at Shrewsbury great show in the open class, and also in the same class this year, were cut from the same vineery. W. H. WILSON.

THE ROSE GARDEN.

GOOD ROSES FOR FORCING.

THESE are certain varieties of Roses which are never seen more beautiful than they are when grown under glass. Such a one is Sunrise, the charming sport from Sunset. We are now obtaining a marvellous colour from pot-grown plants in a greenhouse with the least amount of artificial heat. It is a variety all should grow where slight forcing can be done. I do not recommend it for a cool greenhouse. There are numbers of lovely Roses that may be grown in cool houses, including some of the best of the Hybrid Teas, but this one needs artificial heat to develop its growth and bloom. The beautiful buds are quite the richest ochre red one could imagine on the outside of the flower, with a centre of orange gold. The lovely rich ruby red foliage is also a great attraction.

This is a good time to make a commencement in pot Rose culture, and plants should be secured before the best are all sold. Those in 8½-inch pots are the best value. If handled rightly they will give a number of blooms this coming winter and spring. The plants are usually prepared for forcing, and no repotting would be needed until next summer. It is sometimes advisable to give a top-dressing of compost, consisting of two parts fibrous loam, one part well-rotted manure, and a good sprinkling of bone-meal. Plants are often procurable that would go on flowering at once without any pruning. Just keep them in a temperature at night of about 55° with a little top air on, and they will give numbers of charming buds. These same plants could then be used for forcing after Christmas if rested for a time prior to pruning them.

A Rose house must sooner or later form a feature of every establishment. The blooms produced under good management are of exquisite beauty, so clean and refined and free from the blemishes that often mar the outside flowers. Where it is possible to provide a house with borders to plant the Roses into, this is the very best method of culture. Inexpensive structures are now obtainable, or they can be constructed by any handy man. In some places pit-lights 6 feet by 4 feet are used for the roof, and most useful they are, for being removed in summer the plants receive the rains and natural culture during that time. A house of a simple description erected upon a new piece of meadow land, the house running north to south, would be a capital start. Have the land well trenched, taking care to bury the top turf and work in manure and half-inch bones liberally; then plant

out some of the extra-sized plants alluded to, or plant bushes and standards from the open ground and grow them for one season with the lights off.

It is surprising what make-shift structures can be used for obtaining Roses earlier than those outdoors. Some of the grand cut flowers seen at the May exhibitions are grown in skeleton houses with a roof of glazed pit-lights and boarded or canvas sides to confine the air. Even artificial heating is sometimes dispensed with, although a row of 4-inch pipes would materially help the development of the blooms.

It may be asked what sorts should be grown. Here are a few I can recommend: Frau Karl Druschki, Richmond, Captain Hayward, Liberty, Mme. Abel Chatenay, Rhea Reid, Caroline Testout, Mme. Ravary, Mrs. John Laing, Mrs.

THE FLOWER GARDEN.

NOTES ON IRISES.

(Continued from page 492.)

IRIS PARADOXA is a singularly beautiful plant from Persia. The leaves are tapering and sickle-shaped. Flowers 6 inches to 8 inches high, with massive clasping standards coloured pale reddish purple, veined with thin lines of blue and suffused with a silvery pink shade. The falls are short, horizontally poised, coloured dark purplish brown and entirely covered with close velvety "pile," resembling the back of a humble bee; the tips alone have arrow-head-like processes free from hairs.

I. paradoxa choschab is the best form and, according to good authority, the original *I. paradoxa*. The standards are silvery white and delicately veined blue. The falls resemble the type plant. These *I. paradoxa* require very careful treatment, and they are best grown in raised beds of poor soil, covering the plants with a light to ripen them for at least three months, commencing in July. Numerous hybrid seedlings retain in some degree the beautiful characters of this parent with the freedom of growth of the Bearded Irises.

I. sofarana is a vigorous-growing plant with tapering, inflated leaves and stout stems bearing one flower each, the standards of which are rounded, white or grey, thickly veined deep purple and spotted with a multitude of dark chocolate dots. The falls are similar to the standards, but dark purple, a few thin lines of white or grey showing here and there, and a large patch of velvety black adorns the centre, sparsely covered with black hairs.

I. sofarana magnifica is a finer plant and exceptionally vigorous for an Iris of its type. The petals are deep grey, dotted with silver grey; the signal patch is very hairy and coal black. A beautiful Iris of free growth, whose vigour should prove sufficient to overcome any cultural disabilities it may have to undergo. Natives of Palestine and countries northward.

I. susiana is a vigorous plant from Asia Minor, 1 foot to 2 feet high, the leaves of which are tapering and inflated, the sheaths very large and the flowers exceptionally massive. They span 8 inches across and their petals are nearly 6 inches wide, coloured grey, with minute lines of dark chocolate on every surface. The general appearance is that of a dark greyish brown colouring and the signal is heavy patch of glistening black clothed below with a thicket of yellow-tinted black hairs. In some specimens the falls are "shot" with a yellowish tint and



THE NEW SINGLE CHRYSANTHEMUM HILDA LAWRENCE, SHOWN BY MRS. R. GREGORY, SHOREHAM.

(Much reduced.)

Aaron Ward, Joseph Lowe, Lady Battersea, Antoine Rivoire, Farbenkönigin, Joseph Hill, Mme. Segond-Weber, Lady Roberts, Lyon Rose, Prince de Bulgarie and Paul Ledé. P.

ROSE A PARFUM DE L'HAY.

THIS is one of the rugosas that is seldom seen, yet it is one of the best of its class. In growth it resembles Mercedes, and like the rest of its class does not suffer from mildew or red rust. Perhaps its most valuable point is its late flowering. It is a brilliant and quite distinct red, never better than during late autumn, and is very sweet-scented. A. P.

the standards are often minutely dotted as well as veined. The plants can be grown well at the foot of a south wall, and their roots delight to run down the surfaces of the bricks to the wall's foundation. It is quite an easy plant to grow in such a position.

I. urmiensis is a dwarf species with sickle-shaped leaves 6 inches long and primrose yellow flowers, the standards of which are holdly erect and massive, shot with various shades of yellow. The falls are slightly darker but not so large. A charming little plant, but difficult to manage. Treatment of *paradoxa*, which the plant resembles in habit. Persia. M.

NEW CHRYSANTHEMUM HILDA LAWRENCE.

THIS, as will be seen by the illustration, is a single-flowered variety, the colour being a pleasing lilac pink, the well-formed flowers being freely borne on good stout stems, thus rendering it a splendid variety for cutting and decoration in general. It has been shown this season by Mrs. R. Gregory, Shoreham (gardener, Mr. Lawrence), and has received an award of merit from the Royal Horticultural Society and a first-class certificate from the National Chrysanthemum Society.

NEPETA MUSSINII.

THIS pretty little Cat-mint is a native of the Caucasus, and grows about 15 inches high, soon forming a good tuft. The numerous spreading stems are thickly covered with sage green leaves, hoary on the under-side; later they are almost hidden by a wealth of lavender blue flowers. It can be planted in the front of the herbaceous border, in dry positions on mounds in the rockery, or even between the stones on the face of the rock wall. Light, sandy soil suits it best, and it is easily propagated by division in early spring. J. COMBER.

Handcross, Sussex.

EARLY-FLOWERING CHRYSANTHEMUMS.

SOME GOOD SINGLE-FLOWERED VARIETIES.

SINGLE-FLOWERED early Chrysanthemums suitable for border culture have improved in a remarkable manner in recent years, and both last year and during the present season there is good reason to be pleased with what raisers of these useful flowers have achieved. Varieties that were distributed three years ago completely altered the character of the garden during the autumn months, and now with recent acquisitions the future success of these flowers seems to be assured. The following are excellent sorts:

Hilda's Favourite.—A beautiful free-flowering plant that comes into flower in late August and continues to bloom throughout September and early October; colour, crimson terra-cotta; height, 2½ feet.

Dr. Ingram.—This is an ideal single variety for the border. The plants possess a good habit, bearing clusters of warm-coloured blooms in lovely sprays and of good form; colour, terra-cotta; September; height, 2 feet.

Florence Gillham.—A profuse-flowering plant with a beautiful bushy habit. The chaste white blooms with yellow disc are borne in graceful sprays; September; height, 2½ feet.

June.—Another free-flowering plant with a capital bushy habit of growth, and one of the best of this colour, which is yellow, slightly tinted

bronze; flowers in late August and September; height, 2 feet.

Eric.—This is a sturdy little plant bearing a free display of blooms of good form; the colour in this instance may be described as a pleasing shade of rosy bronze; September; height, 2 feet.

Merstham Glory.—In this instance the plants are large and bushy, and the display is very beautiful and striking in consequence; colour, bright purple-crimson; September; height, 2½ feet.

Cecil.—This is a distinct variety and rather less bushy than most others. The flowers are very pretty and of good form; colour, rose pink, with white zone round yellow disc; September and early October; height, 3½ feet.

Jeanette.—A charming blush pink flower of pleasing form. The plant is bushy, free-flowering, and the effect in the border is good. A white zone round the disc adds to the effectiveness of the bloom; September; height, 2 feet.

Resolution.—Free-flowering and bushy, bearing dainty blooms on a good length of footstalk;

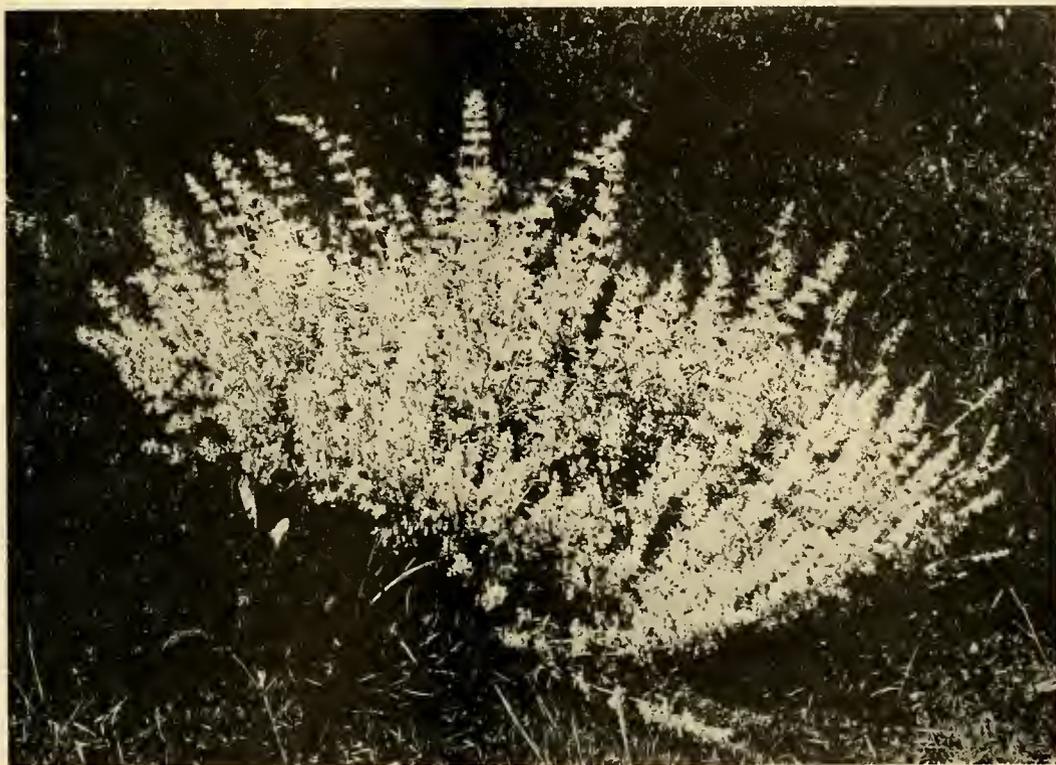
growth; free-flowering; September; height, 2 feet.

Spitfire.—A most effective border plant. The flowers are not of very good form, but they last well in a cut state; free-flowering, bushy and robust; colour, fiery crimson base, paling to fiery red at the tips of the florets, which are gold with a gold reverse; erect habit; September and October; height, 3 feet.

Clarice.—This is a new sort, bearing lovely ruby crimson blooms with a greenish yellow centre. The plants are a mass of rather small blooms that retain their colour well; September; height, 2½ feet.

Snowstorm.—A free-flowering novelty, with rather broad florets, of even form and good size; September and early October; height, 2½ feet.

Jessie Wallace.—For its bushy, branching habit and its free-flowering propensity this new variety will be valued. The plant evolves large flowers of good form, the colour of which is old rose salmon on a lemon yellow ground; September and early October; height, 2½ feet.



THE CAUCASIAN CAT-MINT (NEPETA MUSSINII).

colour, rose pink with white zone round yellow disc; September; height, 2½ feet; sweet-scented.

Pathfinder.—This is a charming starry flower, beautiful for decoration. The flowers are rather small but of beautiful form; colour, lovely bronzy buff; September and early October; height, 2½ feet.

Surrey.—Quite distinct from all others in colour, which may be described as salmon cerise. The flowers are of even form and are beautiful under artificial light; September; height, 2 feet.

Philadelphia.—Another plant with a very good habit of growth; colour, rose pink with a white zone round yellow disc; September; height, 3 feet.

Venerable.—For border culture this is an excellent sort. The flowers are of medium size and of a deep reddish terra-cotta colour; September; height, 2 feet.

Terpsichore.—In this instance the dainty blooms are of a bright yellow colour, and they are borne in useful sprays on a bushy habit of

Lady Mollie.—This plant is [remarkable] for the warm, rich colour of the flowers in the autumn sun. The colour may be described as rich reddish bronze, paling with age; lovely sprays; capital bushy habit; September; height, 2 feet.

Marie Corelli.—A beautiful addition to the yellow varieties; charming as a plant and valuable for cut-flower use; September; height, about 18 inches.

Kathleen.—A charming free-flowering single of rather small size; the colour is most effective, being bronzy buff; dwarf habit; September.

Formidable.—For its lovely rose pink blooms this variety is much thought of; September is its period of flowering; nice bushy habit of growth; height, 3 feet.

Canada.—Another free-flowering plant with a desirable bushy habit of growth. The flowers are of good form and are borne in cluster sprays; colour, pretty rosy bronze; September; height, 2 feet. D. B. CRANE.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE VEGETABLE GARDEN.—On every possible occasion when the weather is fine and the soil not too wet I make it a rule to dig vacant pieces of ground. This should be done in no slipshod fashion, but be trenched or hastard trenched and a heavy dressing of good manure incorporated at the time. Asparagus tops, in most gardens, should now be sufficiently well ripened to justify their being cut down. Let this be done carefully, cutting them back to within about 6 inches of the ground. The surface of the beds must be kept free from weeds, and although the process is tedious, I find it is safer and better to pull them up individually.

Trees and Shrubs.—Planting should be proceeded with apace, so that the work may be completed before the hard weather sets in. Ground to be planted should be trenched or dug to a depth of at least 2 feet, as this will give both trees and shrubs a free root-run. As the trees, &c., are received from the nursery they should be carefully inspected, so that when the planting is done they should be planted at the same depth as they have been in the ground previously. Hollies and Evergreen Oaks do well when planted at this season; the soil is still fairly warm and the roots still active. Make it a rule to stake all trees as they are planted; this is often neglected, to their detriment.

The Hardy Fruit Garden.—This should be a busy season where hardy fruit trees are considered. Almost every kind of hardy fruit tree may be planted during the present month. It is well to draw attention to the importance of keeping the roots as near the surface as possible, as the roots of deeply-set trees cannot possibly come within the sun's influence. Beginners so frequently fail with fruit trees because they plant them in soil of too porous a nature. They must have hard ground below and a surface dressing of 2 inches of friable soil to prevent evaporation. Shoots of Black Currants affected by the gall-mite should be cut off and burnt. The presence of this pest is generally indicated by a swelling of the buds, so this should be an easy matter to determine. A judicious system of root-pruning is an immense advantage in the case of trees of vigorous growth bearing small and unsatisfactory crops.

The Hardy Flower Garden.—Complete the planting of spring and early summer-flowering hardy plants as soon as possible. In this connexion Daisies, Primroses, Forget-me-nots and Wallflowers play an important part. I am busy with the hardy border just now, lifting and dividing old and unduly large plants and replanting these in specially-prepared quarters, grouping the divided pieces in three, six or a dozen in each group or colony. In this way I have a charming picture in the flowering season. Beds of Lily of the Valley are also being dealt with at the present time. Impoverished and overcrowded plants are being lifted and planted in mellow soil.

Chrysanthemums.—The large blooms have damped off badly

this season, more particularly those resulting from buds retained early in August last. Late crown as well as terminal buds are giving better results. Plants of the December-



1.—YOUNG, STRAIGHT ROOTS OF HORSE RADISH SUITABLE FOR FORMING A NEW BED.

flowering varieties must be kept fairly cool, although less air should be given now than formerly. When the buds show colour, only just warm the hot-water pipes; this will give the necessary stimulus to the opening of the blossoms.

D. B. C.



2.—CROWNS ABOUT 3 INCHES LONG FROM WHICH GOOD RESULTS CAN ALSO BE OBTAINED.

INCREASING AND CULTIVATING THE HORSE RADISH.

This is a subject that is very rarely discussed in the pages of horticultural journals, yet it is a root that is welcome on the dinner-table on many occasions in the course of the year. It has come to be regarded as an indispensable article in the kitchen garden, and there is always considerable pleasure in being able to draw upon one's own supply rather than purchasing in the ordinary way from the greengrocer. It is a native plant, and in a wild state is usually found growing in moist situations; but under good culture it will thrive in almost any soil and in almost any situation. Because it so readily adapts itself to any position there is a tendency to allocate to it a position in any out-of-the-way corner of the garden, where it is customary to give it but little attention.

Straight sticks that are quickly grown should be the aim of the cultivator. I have seen remarkably fine crops grown on ground that has been dug two spits deep and the subsoil turned over with the fork. This should give from 2 feet to 3 feet of good soil in which the roots can penetrate.

As it is essential that the soil should be of a rich character, I would be disposed to plant in quarters that have previously been allocated to Celery, Onions or similar crops, where the soil is invariably of a rich nature and has also been well tilled.

At any time during November or December the trenching of the soil should be taken in hand. Work in a liberal dressing of well-rotted horse manure if the land be of a somewhat heavy character. If it is of a light and sandy nature, incorporate an equally heavy dressing of well-rotted cow manure. This should be buried somewhat deeply, so that the roots do not reach it too soon; otherwise it may have the effect of distorting them, which is a serious detriment.

Previous to the planting, the surface soil should be broken up and raked over and the bed made even. I find it better to plant in rows about 1 foot or rather more apart, observing a similar distance between each set or crown as it is planted. This gives ample space for each one to do itself justice, and subsequently, when lifting them, this may be accomplished without damage to the roots.

Suitable material with which to increase our supplies are clear, straight roots, each one having a crown, the roots varying in length from 6 inches to 1 foot and of the thickness of one's finger. Fig. 1 is a good illustration of the kind of material to use for this purpose. The two outer ones represent growths about 6 inches long, and the one in the centre a clean, straight growth about 1 foot in length.

It is the rule to bury the crowns 6 inches below the surface of the soil, and for this purpose deep holes should be made in which they may be dropped. These crowns will quickly develop into ideal sticks, and if inserted at the present time should make excellent roots by next autumn.

There are growers who prefer to plant crowns, 3 inches in length, of the kind represented in Fig. 2. The method of planting is aptly described in the illustration Fig. 3. Here it will be noticed that the promising



3.—THE METHOD OF PLANTING CROWNS IN PREPARED HOLES ABOUT 6 INCHES DEEP.

crown is inserted some 6 inches deep in the hole prepared for its reception, and if the holes are filled up both below and above the sets with fine ash or the surface soil raked over them, growth will be made very quickly.

In Fig. 4 is given an illustration of a stick of Horseradish of an undesirable kind. This is in consequence of want of proper preparation of the soil before the crown was planted. It will be observed that the growth began well, but when about 6 inches in length the root was caused to divert, this being due either to the want of proper preparation of the soil or to the addition of new manure too near the surface. Fig. 5 represents three excellent sticks of Horseradish, the result of soil being deeply dug and well broken up, and from crowns inserted as represented in Fig. 1 and Fig. 2. D. B. CRANE.

CLIMBERS FOR A GREENHOUSE.

CLIMBING plants trained under the roof, or to any pillars in the greenhouse, if kept in neat order, always give to the interior of the structure a more furnished appearance, even when there is a good collection of pot plants in it.

Of course, climbing plants may be very successfully grown in flower-pots, but it is advisable to plant them in borders where these are available. Climbers should be regarded as permanent occupants, hence care must be taken in the making of the border. The best compost should be used; the old or original soil must be removed and some good fibrous loam, leaf-soil, peat and sand put in for the plants to root in.

The strongest climbers, such as the Plumbago and Bougainvillea, should be planted in positions where there will be ample room for the branches, and those of more moderate growth, such as the Swainsonia, in places where the area to be covered is more restricted.

How to Make the Borders.—When we grow plants in pots we see that the drainage is perfect and the pot of suitable size. The same care must be exercised when growing plants in confined borders. There must be efficient

drainage and rooting space for each kind of plant. Example: For a Plumbago the prepared border should be 2 feet wide, 3 feet long, and at least 1 foot deep, exclusive of drainage material, which should be about 6 inches deep.

Broken bricks, clinkers or cinders may be put in as drainage material. On this place newly-cut turves grass side downwards, and then fill up the space with the prepared compost, making it moderately firm. Put in the plants carefully and neatly, covering the roots about 1 inch deep with some of the finer portion of the compost. Give water at once to settle the soil around the roots; afterwards be careful not to give too much water. When new growth commences in the spring, water will be needed in greater bulk. At first tie up the branches loosely so as to allow the plants to settle down in the new bed. Planting may be done now.

Suitable Climbers.—The following are good kinds to plant: Plumbago capensis (light blue), P. c. alba (white), Clematis indivisa, C. lobata, Acacia riceana, Bignonia jasminoides, Clianthus



4.—THE RESULT OF PLANTING IN SOIL THAT HAS NOT BEEN DEEPLY CULTIVATED OR THE MANURE DEEPLY BURIED.

puniceus, Habrothamnus elegans, H. scaber, Kennedyya rubicunda superba, Lapageria alba, L. rosea, Passiflora alata, P. caerulea, Rhyncospermum jasminoides, Swainsonia Osbornii, Tacsonia exoniensis, T. smytheana, T. van Volxemii, Bougainvillea glabra and climbing Roses. AVON.

THE TOWN GARDEN.

CLIMBERS ON WALLS.—These add immensely to the interest and beauty of the garden, and, whether they are grown for the sake of their flowers or foliage, should have proper attention if they are to produce the most satisfactory effect. Unfortunately, there are many people who appear to think that when once the plants have been placed in position they may be left to look after themselves, with the natural result that they become tangled masses of growths, many of which are

bare at the base, while practically the whole of them are more than half-starved. This must not be. If the plants have annual cultural attention it is certain that they will give a most generous response. At the present time the grower may cut out all portions for which there is not an abundance of space, and he should, further, see carefully to the requirements of the roots. The surface soil for 3 feet or more from the wall should be lightly pricked over with a fork, and if the soil is dry, as it commonly is at this season of the year, thorough soakings of water must be applied. When this has worked its way down, a mulching of short, sweet manure 1 inch or 2 inches in thickness ought to be spread on, and the food virtues contained in it will steadily find their way down into the soil, to be appropriated by the roots in the future. Or, and in many instances it is preferable, the cultivator should remove the top 2 inches or 3 inches of soil and put in its place some rich compost, such as old potting soil with its equal in bulk of sweet manure, or rather less of that and some leaf-mould; as soon as this is in place it should be covered with a thin layer of fine soil.

BULB PLANTING.—This work should be carried to completion as rapidly as possible, for practically all kinds of bulbs are showing clear signs of top growth, and when this time arrives they are far better in the soil, as they lose decidedly the longer they are left out. It is unnecessary to enter into full details of the cultural methods which bring about the most gratifying results, as these have already been given in this column. It may, however, be permissible to remind readers that if manure is used it should not be in such a position that it can come in actual contact with the roots; that the planting should be done at least twice the depth of the bulbs; and that if they are still deeper the probabilities are that the grower will be the gainer in the end, although the blooms may be a little later.

THE GREENHOUSE.—It is more than likely that this structure will now be given over almost entirely to the Chrysanthemums, which are just at their best, and for the benefit of these plants,



5.—HORSERADISH LIFTED FROM BEDS THAT WERE PROPERLY PREPARED.

as well as any other occupants, it is imperative that all parts of the house shall be kept scrupulously clean. At this season of the year the light in town gardens is none too abundant, and the gardener who keeps the glass clean, so that the rays of light shall not be obstructed in the smallest degree, is the one who has the best chances of success. At the same time the floors, shelves, stages, pots and walls should also be clean, but in effecting this it is essential that no water shall be spilled about the place, or, if it is, that it shall be at once mopped up, because it is desirable that the atmosphere shall be kept moderately dry for the sake of the Chrysanthemums, which are prone to damp off when the atmospheric moisture is excessive. Watering of all plants must be done with great care, a supply only being given in advance of dryness.

ROOM PLANTS.—The principal detail in connexion with the management of plants in rooms during the winter is that they shall be watered with the utmost intelligence, and that they shall be kept perfectly clean by frequent sponging with tepid water. At least once a week the leaves should be washed with warm, soft-soapy water, as the accumulations of dirt during the fogs of winter quickly stop up the pores and prevent the plants breathing properly. HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

YOUNG seedling Cyclamen should be kept near the glass, and see that they do not get an attack of thrips. These pests cripple the tiny leaves and they refuse to grow. If the soil and surroundings are kept moist thrips will not attack the plants.

Gladioli.—Pot up corms of these for gentle forcing in the spring. G. Colvillei albus (The Bride), Fairy Queen—rosy white to pale rose—Rosy Gem and Salmon Queen are very fine for cutting and most useful. Spanish Irises also are most useful, and can be grown and forced gently. These should be potted up at once; Canarybird, Chrysolora, La Nuit, Mont Blanc and Lady Blanche are all good for the purpose.

Coleus thyrsoideus should have a light position in a warm house. This is very effective with Poinsettias in the conservatory or in the house. Gesneras should be kept at a temperature of 60°, and if the plants are strong and require stakes place these under the leaves so that they are not visible. No plants should have supports unless really necessary. Begonias of the Gloire de Sceaux and Lorraine section should be kept in a warm temperature; the two together make a fine and effective display.

Carnations.—Give these a nice growing temperature; pick off all the small buds. Do not keep the plants too wet, or rust may put in an appearance, and do not leave the flowers on the plants longer than is necessary. Enchantress, Lady Bountiful, white; and Britannia, scarlet, are now extra good. Yuletide is good at Christmas, and very often this old favourite has flowers when some of the newer varieties fail at that season.

FRUIT HOUSES.

Pot Vines.—When these are used for the first crop no time should be lost in procuring them, and a gentle hot-bed made of tree leaves and stable manure must be got ready. This should be extremely mild. When the Vines are plunged, the temperature must on no account exceed 70°; therefore, if these are to be started in December, the bed ought to be prepared at once. If ripe Grapes are desired at the end of April

or beginning of May, the house ought to be closed by December 1. Black Hamburg and Foster's Seedling are about the two best to grow for such work.

Peaches and Nectarines.—These must be pruned and tied as fast as opportunity permits, as when this is done it gives more opportunity to get on with other work.

Orchard Houses.—Where permanent trees are planted, such as Plums, Pears, Cherries and the like, root-pruning or lifting should be carried out as quickly as possible and the pruning done. In lifting these trees see that the soil is well rammed; this helps the trees to make short, firm wood.

KITCHEN GARDEN.

Onions.—Look over these in the store-room, taking out all unsound specimens; these soon injure sound bulbs. Winter Spinach should be kept free from weeds, and on a dry day move the ground with a hoe; this stimulates growth and prevents the soil from getting sour.

Broccoli and Cauliflower.—Take up all heads that are large enough and place them under cover away from frost.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

ORCHIDS.—Growers of these in the neighbourhood of large towns will find that for the next few months they have a difficult task before them, the heavy atmosphere bringing with it all kinds of impurities. The first thing needful is, of course, to clean the glass outside, and this is best done by washing with clean water, which will be necessary as often as twice or even three times a week during foggy weather. The inside of the glass does not get coated over so quickly; but as often as time can be found to do so, this ought also to be cleaned.

Early Roman Hyacinths.—One of the chief mistakes that are made in connexion with the early forcing of these is that of putting the bulbs too early into strong heat before the plants have rooted sufficiently. The time of introduction into heat should be proportionate to the time the bulbs have been potted. If from any cause the bulbs are not received or even potted as early as usual, allowance must be made for this by keeping them longer in the open, so that the fullest possible amount of roots may be produced.

KITCHEN GARDEN.

Forcing Seakale.—A commencement may be made as soon as the crowns are ripe enough, and if they are taken up and allowed to remain in the open shed for a few days they will force all the better. Where only a limited quantity is required, the Mushroom house is a good place to grow it, either in pots or boxes; but pots are the most convenient, for protection can readily be given to the young shoots by turning a pot of the same size over the one in which the plants are placed. Complete darkness is necessary; there must be a covering thrown over the whole batch heavy enough to exclude light. A temperature of 60° will be quite sufficient to bring the crop along in three weeks from the time the roots are introduced to the house.

FLOWER GARDEN.

Wall Climbers.—Many of these will have been allowed to grow a little beyond their bounds during the autumn. They should now be overhauled and all superfluous growth cut away, to relieve the plants of a little of their weight and to prevent them from becoming blown away from their fastenings. In many cases it will be advisable to retain a considerable portion of the young wood which has been made, and to make room

for this some of the weak and useless sprays should be cut out.

FRUIT GARDEN.

Strawberries for Forcing.—The most suitable quarters to winter these in are cold pits or frames, where they can be plunged in ashes or leaves up to the rims of the pots and the lights only used over them in time of extreme weather. The next best place is outdoors in a position sheltered from cutting winds, standing them on a hard bottom, well plunged in leaves or ashes.

ROSES.

Autumn Pruning.—There can be no doubt that Roses in most instances are much over-pruned, more especially when they are required for garden decoration as distinct from exhibition flowers. I know that far better results will follow autumn pruning of all such as the Teas and most others that are not cut back hard in spring. Such varieties as Aimée Vibert or William Allen Richardson are often cut back in spring, to their detriment, the shoots being cut either too hard back or left in a thick, tangled mass. If such trees had a little of the small spray cut out from the centre now and the weak, unripened points taken from the shoots, they would not start any the earlier in spring.

T. B. FIELD.

(Gardener to Baroness Berners.)

Ashwellthorpe, Norwich.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Violet Princess of Wales (A. M. F.). The runners should certainly be removed if you desire to centralise the energies of the plants into a few crowns to provide the best blooms for winter. If, on the other hand, you wish to form a group in a sheltered spot in the open, it is less important that the whole of the runners be removed. You may, in the latter case, allow a percentage of the stronger ones to remain to provide a succession of bloom. If you have not removed the runners prior to the date of your enquiry, we fear it is late to start, as the central crowns will have been robbed, to some extent, by the existence of the runners. What exactly should be done depends not a little on the present condition of the plants.

How to propagate early Chrysanthemums (Ajax).—We do not advocate the division of the old roots (stools) in the autumn, as they are not then in a condition for this treatment. This division should take place in the spring when new growth has been made, and when the old plants may be lifted and each broken up into numerous pieces. We prefer to propagate by cuttings as the days begin to lengthen in January, and good shoots are then available; they invariably root quickly. January, February and March are excellent months to insert cuttings of the early-flowering sorts. To propagate cuttings in the cold frame it is imperative that frost be excluded. This may be achieved by placing plenty of leaves or litter round about the frame and covering the frame-light with mats in frosty weather.

Anemone japonica alba (M. H. M.).—The Anemone roots have been attacked by a fungus, which in the case of these plants is of a very destructive character, and frequently extends to the whole of the plants in the

same group or bed. Had you taken action a year ago the loss of so many plants might have been avoided. The wisest thing to do now is to lift and burn the whole of the plants—putting them on the rubbish-heap is a very dangerous practice—and, finally, dig out and discard the whole of the soil. The lime dressing you refer to was applied too late. On no account plant any other Anemone in the soil or the bed for a couple of years, as by that time the fungus may have exhausted itself. If you decide again to plant the Anemone, get your plants from a distance, and when replanting avoid the close proximity of the present fungus-stricken site.

Gladioli and Chrysanthemums (W. G. R.). The Gladioli appear to be suffering from some fungoid attack, and the spores of the fungus may have been present at the time of planting in the old skins. We can only advise you to divest the corns of all the old skins when lifting is done and burn the latter. Another year, in addition to a fresh site given at planting time, try powdered lime and sulphur placed about the base of the plant and against the stem. By applying this during the early stages of growth the disease may be held in check. The reddish brown colour of the leaves of the Chrysanthemums is due to root dryness and an impoverished soil, which frequent applications of liquid manure should rectify. "Rust" is really a species of fungus vegetating in the cuticle of the leaves. If your plants are attacked by the latter, cut the affected leaves off and burn them.

TREES AND SHRUBS.

Pruning Magnolias (A. M. E.).—The best time to prune Magnolias is April. As a rule, the less pruning done to them the better, unless you prune the young branches only. Large branches should be removed with great care. Cut them well into the remaining wood and tar each wound over at once. In pruning young branches of *M. grandiflora*, cut them back into one, two or three year old wood, but not into older wood if you can avoid it. By doing the work in April, young shoots are soon formed and the wounds quickly begin to heal. When removing large branches be careful not to injure the bark on the remaining wood, or disease will probably result.

Moving *Buddleia globosa* (*Emilei Boutein*).—It is doubtful whether you will be able to transplant your specimen of *Buddleia globosa* successfully now that it has attained such a large size. If you do attempt the work you had better cut it back as you propose. A great deal will depend on the weather for a few weeks after transplanting. Its age is in its favour, for it has plenty of vigour. When digging round the plant start 5 feet from the stem and carefully fork out all roots without injuring them; then, in planting, lay each root out straight, and if any have been damaged, cut the broken portion away with a sharp knife.

MISCELLANEOUS.

Names of fruit.—*H. S. T., Rye*—The Apple is Golden Noble.—*Miss Symons*,—1, Striped Pippin; 2, Fern's Pippin.—*W. P.*—The Apple is a local seedling of handsome appearance, but of only second-rate quality.—*M. A. T.*—Pears: 1, Pitmaston Duchess; 2, Winter Nelis. Apples: 2, Reinette du Canada; 3, Bess Pool; 4, Round Winter Nonsuch; 6, James Grieve.—*F. A. A.*—Apple Reinette du Canada.—*R. Plomer*.—Apple Emperor Alexander.—*E. J. Padbury*.—The red Apple is New Bess Pool; the russet one, Rosemary Russet.—*Colonel B., Willey*—Apples: 1, Tower of Glamis; 2, Hawthornden.—*F. Dunn*.—1, Mere du Ménage; 2, Hall Door; 3, Hambling's Seedling.—*W. J. W.*,—1, Golden Noble; 2, Old Hawthornden.—*G. R.*—1, Beauty of Kent; 2, Duchess Favourite.

Names of plants.—*H. Quick*.—*Salvia azurea*.—*S. W.*—Cannot name without flowers. The name of the Fern is *Adiantum Capillus-venereis* variety *imbricata*; the other plant is *Crotalaria capensis*.—*W. D.*—Your Orchid is an unnamed seedling.—*A. Lect.*—*Asperula azurea*.—*A. Y. Z.*—1, *Stephanotis floribunda*; 2, *Nerium Oleander*; 3, send when in flower; 4, *Humulus japonicus* variegatus; 5, *Senecio Cineraria*; 6, *Agasthea celestis*; 7, *Acacia* species, send when in flower.—*A. R.*—1, *Azara microphylla*; 2, *Berberis Darwinii*; 3, *Veronica Traversii*; 4, no specimen; 5, *Daphne oleoides*; 6, *Vibea major* var. *elegantissima*; 7, *Thymus Serpyllum* variegatus; 8, *Coronilla Emerus*; 9, *Veronica cupressoides*; 10, *Spartium junceum*; 11, *Berberis vulgaris*; 12, *Sedum reflexum* var. *cristatum*.—*W. Judd*.—1, *Aspidium falcatum* var. *caryotideum*; 2, *Gymnogramme japonica* var. *variegata*; 3, *Aspidium obtusatum*; 4, *Pteris cretica* var. *albo-lineata*; 5, *P. cretica*; 6, *P. serrulata*; 7, *Adiantum Capillus-veneria* var.; 8, *Pteris serrulata cristata*; 9, *Pellaea rotundifolia*; 10, *Davallia canariensis*; 11, *Adiantum cuneatum*; 12, *Arundinaria Fortunei*.—*A. F. C.*—1, *Fuchsia cordifolia*; 2, *Cestrum elegans*; 3, *Eugenia myrtifolia*; 4, *Cestrum aurantiacum*; 5, *Acalypha Macafeana*; 6, *A. species* or garden variety.—*G. Lees*.—The Maple is *Acer rubrum* and the other plant the Spindle Tree (*Euonymus europaeus*).—*F. L., Dorchester*.—*Eleagnus pungens*.—*E. W. C.*—1, *Alonsoa Warscewiczii*; 2, *Cerastostigma*

plumbaginoides; 3, *Astrantia major*.—*W. Mathews*.—*Russellia juncea*.—*Miss R.*—Seeds of the Birch (*Betula alba*).

SOCIETIES.

BRIGHTON AND SUSSEX CHRYSANTHEMUM SHOW.

THE annual exhibition took place on the 3rd and 4th inst. in the Dome and Corn Exchange. The entries, though numbering over 300, were not all forthcoming, probably accounted for by the late unfavourable weather.

OPEN CLASSES.]

In Classes 1 and 2, for a group of Chrysanthemums only, with Ferns or other foliage plants respectively, Mr. Edward Jones, gardener to Harry Young, Esq., Withdean, received the premier award in both instances, he being the only exhibitor.

For a group in a space 11 feet 6 inches by 6 feet 6 inches, for quality and effect, Mr. George Bennett, gardener to P. H. Bayer, Esq., Hatch Beauchamp, Withdean, was first.

Twelve bush plants, decorative varieties: Out of five competitors Mr. G. Lambert, 17, Bognor Road, Chichester, was an easy first, thus winning the handsome silver cup and society's silver medal offered for this class. Mr. George Bennett was second and Mr. C. Norman Marshall, Withdean Nurseries, Patcham, third.

For a collection of Orchids, arranged with Ferns or other foliage plants, Mr. W. Hill, gardener to G. W. Ryder, Esq., Broadhill, Keymer, was the champion, followed by Mr. E. Jones.

CUT BLOOMS.

For thirty-six Japanese, not less than twenty-four varieties (handsome silver bowl and society's silver medal), Mr. C. J. Dicker, Frant Court, Frant, was first, staging very good blooms of Mrs. F. S. Vallis, Walter Jinks, Mrs. W. Knox, Beatrice Gay, Bessie Godfrey, Mary Inglis, Lady H. Conyers, &c. Mr. G. Hunt, gardener to Pantia Ralli, Esq., Ashstead Park, Epsom, was second and Mr. J. Harris, gardener to Colonel C. P. Henty, Avisford, Arundel, third.

Twenty-five Japanese, as cut from the plant, not less than eighteen varieties: Messrs. James Stredwick and Son, Silverhill Park, St. Leonards-on-Sea, secured the premier place here; Mr. C. J. Dicker was placed second, with Mr. J. E. Hickson, gardener to the Rev. F. S. Sclater, Newick Park, Lewes, and Mr. Charles Earl, gardener to O. E. d'Avigdor Goldsmid, Somerhill, Tonbridge, third and fourth respectively.

For twelve incurved, large-flowered varieties, distinct, Mr. G. Hunt was first with good blooms of Buttercup, Duchess of Fife, Pantia Ralli, C. H. Curtis, William Biddle and Mrs. G. Denyer, followed by Mr. M. Tourle, gardener to Captain J. R. Smiley, Horsted Place, Uckfield.

Twelve Japanese, large-flowered, distinct: Here Mr. E. Jones was first with good blooms of E. J. Brooks, Swanley Giant, Algernon Davis, Mr. W. Knox, Jessie, M. Godfrey, &c. Six incurved, any one variety: Mr. G. Hunt was placed first with Buttercup; Mr. J. Harris second with Embleme Poitevene; and Mr. M. Tourle third for Mrs. F. Judson.

FRUIT.

Grapes, white, three bunches: First, Mr. Charles Earl, with Muscat of Alexandria; second, Mr. A. H. Geall; third, Mr. A. Kemp, gardener to C. R. Scrase Dickens, Esq., Coolhurst, Horsham.

In a similar class for black Grapes, Mr. Charles Earl was again first, followed by Mr. S. Woolgar and Mr. A. H. Geall in the order named.

Dessert Pears, four dishes, distinct: Mr. W. J. Finch, gardener to F. A. White, Esq., Oakleigh, East Grinstead, was a good first, his exhibit including a very fine dish of Pitmaston Duchess; Mr. J. E. Hickson was second and Mr. A. Morris Field third.

AMATEURS' DIVISION.

For twelve Japanese (amateur members' challenge trophy and society's silver medal) Mr. C. Fox, Tunbridge Wells, was first, Mr. E. Farrell and Mr. H. West being second and third respectively.

TRADE EXHIBITS.

Messrs. Balchin and Son were present with an artistically-erected framework, the inside of which consisted of bowls of Chrysanthemums and cut flowers of Orchids, surrounded by very fine examples of Crotons, the whole being embedded in Ferns, &c., while from the roof were hanging bowls and baskets of cut Chrysanthemums, the outside being adorned on two sides with Begonias Gloire de Lorraine, edged with Maidenhair Fern and ornamental Grass. The entire erection was draped with trails of Smilax, from which peeped out numerous electric lights. Gold medal.

Messrs. George Miles and Son had an artistically-arranged collection of miscellaneous flowering and foliage plants around a centre of fruit, surmounted by various floral designs on brass rods. Silver-gilt medal.

Messrs. Cheal and Son and J. E. Hickson made magnificent displays of fruit. Silver-gilt medal. Barnham Nurseries, Limited, also showed fruit. Silver medal. Miss Alice Smith for hardy perennials and rock plants was awarded a bronze medal.

Messrs. Sutton and Sons exhibited an excellent table of miscellaneous vegetables, including Ornamental Gourds, Melons, &c. Silver-gilt medal.

NATIONAL CHRYSANTHEMUM SOCIETY.

THE good autumn exhibition arranged by the above society was held at the Crystal Palace on the 4th, 5th and

6th inst., when a good display of flowers was to be seen. Signs are not wanting that the single-flowered and decorative varieties generally are ousting the large, mop-like blooms from their hitherto supreme position. Although many of the classes arranged for these large blooms were well contested, we do not think the flowers, especially the incurved, taken on the whole were quite up to the usual standard.

DIVISION I.—OPEN CLASS.

For a floral display of cut Chrysanthemums, with the addition of any appropriate foliage, as plants in pots or otherwise, to be arranged on the floor in a space not exceeding 300 superficial feet, Mr. F. Brazier of Caterham won first prize with a beautifully-arranged lot of flowers in a circular group. Single and large-flowered varieties formed the centre, these being placed in Bamboostands of various heights, large-flowered Japanese sorts forming an edging.

Trade excluded.—A floral display of Chrysanthemums and suitable foliage plants in pots, with the addition of cut blooms and any appropriate cut foliage, to be arranged on the floor in a circular space of 200 superficial feet. Here Mr. W. Howl, gardener to Lady Tate, Park Hill, Streatham Common, was awarded first honours for a charming group. Plants of large-flowered sorts surmounted by a large Palm formed a sort of pyramid in the centre, decorative varieties of all sections, with a few large blooms, being tastefully placed with Maidenhair Ferns, Crotons and other foliage plants to form an edging.

OPEN CLASS.

For twelve vases of specimen blooms of Japanese Chrysanthemums, distinct, each containing three blooms or one variety, with not less than 6 inches of stem above the vase (Chrysanthemum foliage must be added, but upon separate stems), four competitors tried conclusions, Mr. G. Hall, Melchett Court Gardens, Romsey, Hants, winning first prize with a very good lot of flowers, notable sorts being W. E. Etherington, Edith Smith, Marquis of Northampton and Mme. P. Gadaelli. Second honours went to Mr. J. Dymock, The Gardens, Rush Court, Wallingford, for blooms but little inferior to those which won first prize; Maud Jefferies, F. S. Vallis and Mrs. Norman Davis were especially fine. The third prize was awarded to Mr. W. Iggulden, Frome, Somerset.

SPECIAL CLASS.—CUT BLOOMS.

In the national competition of affiliated Chrysanthemum and horticultural societies the Dulwich Chrysanthemum and Horticultural Society were placed first, the blooms staged being a very good lot, especially the large Japanese and incurved sorts. The Reigate and District Chrysanthemum Society were the only other exhibitors, these being awarded the second prize.

DIVISION II.—OPEN CLASSES.—CUT BLOOMS.

The society's Holmes Memorial challenge cups were offered, in addition to substantial cash awards, as first prizes in Classes 5 and 6 for thirty-six incurved blooms, distinct, and forty-eight Japanese blooms, distinct, respectively. In the first-named class there were three entries, Mr. W. Higgs, gardener to J. E. Hankey, Esq., Fetcham Park, Leatherhead, being placed first for a grand lot of flowers. Mrs. G. Denyer, Charles H. Curtis, G. F. Evans, Edwin Thorp and Mrs. F. Judson were almost perfect. The second prize was well won by Mr. G. J. Hunt, gardener to Pantia Ralli, Esq., Epsom, for a well-formed collection of rather small flowers. Amber Beauty, Buttercup, Romance and Mrs. F. Judson were sorts that called for special mention. Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, was third. In the Japanese class six exhibits were staged, the cup and first prize going to Mr. G. Hall, Melchett Court Gardens, Romsey, Hants. His blooms were a remarkably fine and even lot, and well deserved the award. F. S. Vallis, W. Gee, W. A. Etherington, Magnificent, A. Davis, Mrs. A. T. Miller and Mme. Rivoli were a few that specially appealed to us. Mr. W. Mease was a good second, Mr. W. Higgs and Mr. W. Iggulden being placed third and fourth respectively.

The special first prize of 5 guineas in Class 7, for twelve vases of incurved blooms in twelve distinct varieties, three blooms of each, is given by the vice-president, C. E. Shea, Esq. Three competitors entered here, the premier award being secured by Mr. W. Higgs of Leatherhead, whose flowers were rather small but of splendid shape. Frank Trestian, Mrs. Barnard Hankey and Buttercup were particularly noteworthy. Mr. G. J. Hunt of Epsom was second with good blooms of Clara Wells, Lady Isabel and Embleme Poitevene among others. Mr. H. Parr, gardener to F. A. Bevan, Esq., New Barnet, was third.

For twenty-four plants in pots, not less than six varieties, there were only two entries, Mr. F. Brazier, Addison Road, Caterham, securing first prize for a collection of large-flowered Japanese varieties. Mr. T. W. Stevens, gardener to W. H. Stone, Esq., Laurie Park, Sydenham, was second with some beautiful specimens of single varieties.

For twenty-four Japanese blooms, distinct varieties, which have been distributed by the donors of the prizes during 1906-7-8, but six at least to be of the last two season's introduction, blooms to be shown on boards, trade growers excluded, the competition was good, Mr. G. Hall, Melchett Court Gardens, Hants, being the champion. His flowers were really superb and called for the highest praise. Mrs. N. Davis, William J. Neil, Mary Donnellan and Thomas Stevenson being extra good. The second prize went to Mr. A. Jefferies, Moor Hall Gardens, Harlow, Essex, who also staged a splendid collection, Annie Hamilton, George Milcham and W. Howe being especially noteworthy.

The first prize offered by Sir Albert Rollit, LL. D., D.C.L., for twenty-four blooms of Japanese, distinct, was won in very strong competition by Mr. J. Dymock, Rush Court Gardens, Wallingford, with a remarkable fine lot of flowers, among which we specially noticed Mrs. N. Davis, F. S. Vallis, Mme. Nagelmackers, Mrs. A. T. Miller and Walter Jinks. Mr. William Holden, Ewell House Gardens, Ewell, was second with an even lot of flowers. Mr. A. Chandler, Rugby; Mr. G. Hall, Romsey, Hants; and Mr. A. Jefferies, Harlow, followed in the order named.

The first prize offered by the Ichthemio Guano Company for twelve Japanese blooms, distinct, was well won by Mr. G. Hall, Romsey, Hants, in very good competition. Among his blooms we noticed particularly good one of F. S. Vallis, Magnificent and Lady Talbot. Mr. A. Chandler, The Gardens, Coton House, Rugby, was a good second, F. S. Vallis being extra large in his dozen. Third and fourth prizes were won respectively by Mr. W. Holden, Ewell, and Mr. G. Mileham, Leatherhead.

There were six entries in the class for one vase of five white Japanese blooms, one variety only, the first prize being allocated to Mr. J. Vert, gardener to Lord Howard de Walden, Andley End, Saffron Walden, for splendid examples of Mrs. A. T. Miller. Mr. G. Mileham, Leatherhead, was second with the same variety, third and fourth prizes going to Mr. F. Brazier, Caterham, and Mr. H. Ellis, Farningham, respectively.

In a similar class for yellow flowers there were seven competitors, Mr. W. Igginden, Frome, Somerset, being the champion with superb blooms of F. S. Vallis. Mr. A. Jefferies, The Gardens, Moor Hall, Harlow, was second with the same variety. Mr. W. Higgs, Leatherhead, and Mr. G. Mileham following in the order named.

In a similar class for any colour, white and yellow excluded, the competition was not so good. Mr. A. Jefferies was first with good flowers of Walter Jinks. Mr. G. Halsey being second with the same variety. The third and fourth prizes were won respectively by Mr. H. J. Hedges, Sydenham, and Mr. H. Parr, New Barnet.

For twelve incurved blooms, distinct, seven competitors entered, Mr. J. Preece, Warley Place Gardens, Essex, coming out on top. Among his excellent blooms Embleme Poitevene, Daisy Sontham, W. Biddle and Clara Wells called for special mention. Second prize went to Mr. W. Higgs, Fetcham Park Gardens, Leatherhead. G. F. Evans and Lady Isabel were shown well here. Third and fourth prizes went respectively to Mr. W. Mease and Mr. G. J. Hunt.

For six incurved, one variety only, Mr. G. Mileham, gardener to A. W. Miller, Esq., Emlay House, Leatherhead, was the champion with excellent examples of Buttercup. Mr. A. Osmond, South Norwood, was second with C. H. Curtis, and the third prize went to Mr. H. Parr, New Barnet, for Buttercup.

There were only two entries in the class for six varieties of disbudded Chrysanthemums as grown for market. The first prize was well won by Mr. A. Robertson, gardener to F. J. Yarrow, Esq., St. John's Wood. His examples of Lady Hanham, Charles Davis and Vivian Morel were excellent. Mr. J. H. Humphries, Maisey Hampton, near Fairford, was second.

Three competitors entered in the class for twenty-four large Anemone blooms, Japanese included (eight varieties), the first prize being awarded to Mr. A. C. Horton, North Frith, Tonbridge. Mr. A. Henderson, Bromley, Kent, and Mr. J. H. Humphries, Maisey Hampton, near Fairford, followed in the order named.

In a similar class for twelve varieties, Japanese excluded, the competition was poor, Mr. A. C. Horton again winning the first prize with good specimens. Mr. A. Henderson was second and Mr. J. H. Humphries third.

For twelve large-flowered Japanese Anemone blooms Mr. A. C. Horton, Mr. A. Henderson and Mr. J. H. Humphries again won in the order named.

The class for six vases of Pompons, distinct, was a pretty one, but should have been better contested. Mr. F. Fitzwater, gardene, to T. Braby, Esq., Bushey Lodge, Teddington, was first with beautiful flowers, Elsie Jordan and William Sabey being particularly attractive. Mr. J. H. Humphries was second and Mr. J. W. Harrison, Sydenham, third. In a similar class for Anemone Pompons Mr. F. Fitzwater and Mr. J. H. Humphries were the winners.

Five competitors entered the class for twelve vases of singles, distinct, the first prize going to Mr. H. Redden, gardener to G. W. Bird, Esq., Manor House, West Wickham. Edwin Nottell, Miss Tackey Bird, Frank Redden and Wickham Giant were superb here. The second prize was well won by Mr. C. J. Simpson, St. John's Nursery, Chelmsford. Among his flowers we particularly noticed Edith Pagram, Crown Jewel and Metta.

FLORAL DECORATIONS.—OPEN CLASSES.

In Class 25, for a floral decoration of Chrysanthemums for a dinner table, yellow and bronze blooms only, with any suitable foliage, out of the seven competitors Mrs. A. Robinson, Park Hill, Carshalton, was first with a very delightful design, Asparagus plumosus, Croton leaves and Ampelopsis trails being used for garnishing. Second honours went to Mr. T. W. Stevens, Laurie Park Gardens, Sydenham; and Mr. A. W. Frossell, Beckenham, was third.

In a similar class for any colour other than yellow or bronze, Mr. R. F. Felton of Hanover Square, W., was first with a remarkably fine and beautiful design. In addition to the first prize, Mr. Felton also took the Dean Memorial gold medal for the best decorative exhibit in the show and the Felton Cup offered in connexion with the above two classes. As this was offered by Mr. Felton, he generously presented it to the winner in Class 25.

For a basket of natural autumn foliage or herries the competition was very good, the first prize going to Miss C. B. Cole, Feltham, for a beautiful design. Mrs. F.

Brewster, Canterbury; Mrs. G. Knights, Sydenham; Miss E. H. Elkins, St. Albans; and Mrs. R. Edwards, Sevenoaks, followed in the order named.

AMATEURS' CLASSES.—SECTION A.—CUT BLOOMS.

For twelve Japanese, distinct, there were four entries, the first prize going to Mr. W. Rigby, 60, Wickham Road, Beckenham, for an excellent lot of flowers. F. S. Vallis and Henry Perkins were worthy of special notice. Mr. T. W. Stevens, The Gardens, Laurie Park, Sydenham, was second; and the third prize went to Mr. C. B. Gabriel, Horsell, Surrey.

For twelve incurved, distinct, Mr. A. Osmond was the only exhibitor, but his dozen were awarded first prize.

SECTION B.—CUT BLOOMS.

For nine vases of singles, not less than six varieties, Mr. C. M. Collingwood, St. David's Hill, Exeter, was the only exhibitor, but the judges awarded him first prize.

For twelve Japanese blooms, distinct, there were four entries, Mr. C. M. Collingwood being placed first. His flowers were an excellent lot, F. S. Vallis and A. Davis standing out well above the others. Mr. C. Fox, Tuobridge Wells, and Mr. A. Williamson, Haslemere, were second and third respectively.

For twelve incurved, not less than six varieties, there were only two competitors, Mr. J. King, Hendon, and Mr. C. M. Collingwood winning in the order named.

The smaller amateurs' classes were generally not well contested, although some good flowers were to be seen. Lack of space forbids detailed mention of these.

FRUIT.—OPEN CLASSES.

For three bunches of white Grapes there were two entries, the first prize going to Mr. W. Lintott, gardener to Sir Walpole Greenwell, Bart., Marden Park, Caterham, for good bunches of Muscat of Alexandria. Mr. H. Parr, Trent Park Gardens, New Barnet, was second.

For three bunches of black Grapes (not Gros Colmar) the competition was good, first prize going to Mr. T. W. Hill, gardener to S. L. Wigg, Esq., Roekshaw, Merstham, for three excellent and well-finished bunches of Alicante. Mr. W. Lintott was second with the same variety, and Mr. Howe, gardener to Lady Tate, Streatham Common, was third, he also showing Black Alicante.

For three bunches of Gros Colmar Grapes the first prize went to Mr. A. C. Horton, gardener to J. L. Boyd, Esq., North Frith, Tonbridge, for very good and well-finished bunches. Mr. W. Howe and Mr. J. Clement, Commonwood House Gardens, near Chippertield, followed in the order named.

For six dishes of dessert Apples, distinct, the competition was good. Mr. W. Stowers, 50, Harold Road, Sittingbourne; Mr. E. Montague, Grey Court Gardens, Ham, Richmond; and Mr. R. Edwards, Sevenoaks, winning the first, second and third prizes respectively.

In a similar class for culinary varieties Mr. W. Stowers was again first, Mr. H. Ellis, Farningham, and Mr. H. Parr, New Barnet, following in the order named.

For six dishes of dessert Pears, the first and second prizes were won respectively by Mr. A. C. Horton, Tonbridge, and Mr. R. Edwards, Sevenoaks.

VEGETABLES.

For a collection of eight kinds of vegetables, to be grown from their seeds, Messrs. E. Webb and Sons of Stourbridge offered valuable prizes. The first prize was won by Mr. E. Beckett of Aldenham House with a superb collection of produce, in which Tomato Viceroy, Leek Champion Prize, Onion Masterpiece and Cauliflower Late Guardian were seen in extra fine condition. Mr. W. Waterton, gardener to R. H. Comyns, Esq., Farm House, Watford, was a good second.

A number of prizes were, as usual, offered by R. Sydenham, Limited, Birmingham, the principal one being for a collection of eight stated kinds. Seven competitors entered for this, the premier award going to Mr. Silas Cole, gardener to Earl Spencer, Althorp Park, Northampton, for a very fine group. Parsnip Hollow Crown, Onion Ailsa Craig and Cauliflower Autumn Giant called for special mention. Second honours fell to Mr. W. Folkes, Amptill, Beds, and third to Mr. J. Kerr, Loudwater, Rickmansworth (gardener, Mr. T. Avery). Mr. Folkes, Mr. Basile and Mr. Cole were prominent first prize winners in the other vegetable classes.

MISCELLANEOUS EXHIBITS.

As usual, the trade exhibits were largely responsible for the success of this great show. They embraced many subjects, each of which provided a great amount of interest to visitors.

Messrs. H. J. Jones, Limited, Ryecroft Nursery, Lewisham, S.E., had a bold and handsome oblong group in front of the great orchestra. Large vases and Bamboo stands were filled with typical varieties and novelties, including Master David, Sir Frank Crisp, Lady Crisp and other certificated Japanese varieties. Large gold medal. This exhibit also won the gold medal for the best miscellaneous exhibit in the show.

Mr. Norman Davis, Framfield, Sussex, was also awarded a large gold medal for a table group of superb exhibition flowers and singles, &c. Mrs. N. Davis, white; Mrs. C. Penford, bronzy yellow; Algernon Davis, orange yellow; and Mlle. J. de la Crouce, pale salmon pink, were beautiful Japanese blooms, and there were many grand single-flowered sorts.

Messrs. W. Wells and Co., Limited, Merstham, Surrey, had a charming group of Chrysanthemums, mostly of a decorative character. The singles were very pretty, notably, Sylvia Slade (lake), Metta, Grace and Nellie Kiding. Good market Japanese sorts were R. F. Felton, rich golden yellow; Freda Bedford, rich bronze; and Clara Verum, reddish crimson. Gold medal.

Market Chrysanthemums were displayed in excellent fashion by Mr. Phillips Ladds, Swanley Junction, Kent. Here were to be seen grand masses of such Japanese sorts as Heston White, W. Duckham, Winter Cheer, Framfield Pink, Esme Reed (the new white for pot culture), Market Red and others. Gold medal.

Messrs. H. Cannell and Sons, Swanley, also showed decorative Chrysanthemums finely. Singles were in the ascendant, although there were other good Japanese decorative sorts. Zonal Pelargoniums were very bright and pleasing, and the display of 125 varieties of Apples, &c., was very attractive. Gold medal.

Mr. W. J. Godfrey, Exmouth, Devon, had a splendid table group of large-flowered Japanese as well as single and other decorative Chrysanthemums. We noted lovely large-flowered singles Reginald, lemon yellow, and C. J. Ellis, richest terra-cotta, as good things, also exhibition Japanese J. W. Molyneux, Frank Molyneux and Helena Williams, the latter a lovely yellow sport from Mme. R. Oberthur Silver-gilt medal.

Messrs. J. Peed and Son, West Norwood, S.E., had a large circular group of Chrysanthemums pleasingly finished with foliage plants, a lovely table of winter-flowering Carnations and an attractive collection of Apples, for which they were awarded a gold medal.

The comprehensive collection of over 200 dishes of Apples and Pears from Messrs. G. Bunnard and Co., Limited, Maidstone, were a fine feature of the show. The fruit was of a high order of merit and a source of great interest to many. Gold medal.

Decorative designs in Chrysanthemums and other flowers were shown by Messrs. Felton and Sons, Hanover Square, W. A harp in golden Chrysanthemums, chaplet, baskets and other subjects were all well done in different colours, Orchids, &c., being used here and there for a finish. Silver-gilt medal.

Messrs. Hobbies, Limited, Dereham, had a group of Roses, cut flowers and plants that was much admired, and, together with a group of single Chrysanthemums set up in vases, well merited the large silver medal awarded to them.

A beautiful lot of single-flowered Chrysanthemums were shown by Mr. C. J. Simpson, St. John's Nursery, Chelmsford. There were numerous vases of well-grown flowers, all the better sorts being exhibited. Large silver medal.

The Government of British Columbia displayed a fine lot of Apples, carefully graded and packed in original boxes. The flavour of the fruit was good and the colour excellent. Silver-gilt medal.

Rustic arches and other rustic work, including pergolas and an array of horticultural sundries, secured a large silver medal for Messrs. H. Scott and Son, Woodside, S.E. A similar award was made to Mr. G. W. Riley, Herne Hill, S.E., for greenhouses, frames, a pergola and other rustic work.

Small silver medals were awarded to the following firms: Mr. H. W. Thorp, Durrington, Worthing, for a table group of Chrysanthemums, including the new white incurved Mr. H. W. Thorp; Mr. F. Brazier, for Roses, herbaceous plants and Chrysanthemums; Messrs. J. Cheal and Sons, Crawley, for Apples in good form and condition; Messrs. J. Laing and Co., Limited, Forest Hill, S.E., for a table group of stove and greenhouse plants; Miss R. Davies, Upper Norwood, S.E., for decorative designs in variety; Mr. J. Williams, Ealing, W., for rustic table decorations and other designs; and to Messrs. W. Duncan Tucker and Sons, Tottenham, E., for greenhouses and garden frames. Other miscellaneous exhibits were: Ichthemio Guano, from Messrs. W. Colchester and Co. Ipswich; Cheap Greenhouse Company, Sydenham, S.E.; and Messrs. D. Dowel and Son, Hammersmith, horticultural sundries.

CHELMSFORD AND DISTRICT GARDENERS' ASSOCIATION.

On Friday, the 30th ult. (the president, E. H. Christy, Esq., F.R.H.S., taking the chair), Mr. Charles T. Drury, V.M.H., F.L.S., gave a lecture to a very full audience of the members of this association on "The Wonderland of Ferns," illustrated by a large number of most interesting lantern slides. The lecturer dealt first of all with the immense debt owed by mankind to the Ferns and their allies of the long-distant Coal Age, when they built up those wonderful stores of future fuel which practically formed the foundation of all our industries and comfort of the present day. He pointed out, too, that it was from the same source that all the flowering plants were evolved by slow gradation and modification of some of the members of the family, though, strange to say, the Ferns of that period which did not so diverge from the beaten track are only differentiated in a minor degree from those of the present day, so that an inconceivably long period of evolution must have antedated coal formation to permit of the evolution of such highly-developed types. The peculiarities of Fern reproduction, as distinct from that of flowering plants, were then described and illustrated, and their wonderful capacity for "sporting"—the lecturer's special study—was exemplified by a number of slides showing some of his own discoveries and a series of the finest forms extant. Selective culture as applied to these wild "finds" was then treated of, and examples of sudden and wonderfully-marked advances in type so obtained were thrown on the screen, the pedigree slides on which the several steps of advance were shown side by side being particularly interesting. In conclusion, the lecturer strongly advocated the cultivation of these far more beautiful and yet equally hardy varieties in gardens and conservatories in preference to the common or "weed" forms usually grown, and, as evidence of their value as decorative plants, a view of his former British fernery at Forest Gate was shown and acknowledged by a burst of applause as abundantly proviog his case. A very hearty vote of thanks concluded the meeting.

THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

THE ROYAL BOTANIC GARDENS, KEW.

FEW books relating to gardens or gardening published during the last four or five decades can claim to be of such general interest as the magnificent volume by Mr. W. J. Bean* and published by Cassell and Co. We all know and love the beautiful gardens with their wealth of floral and sylvan treasures; hence their history from the earliest times right down to the present day is most welcome, and when it is set forth in such a pleasant literary style as that adopted by the author, even the most fastidious cannot, we think, fail to be completely fascinated by the book, which must be the result of many months' patient research and hard work.

The reader is introduced to the volume and his or her appetite whetted by a masterly introduction from the pen of the late director, Sir W. T. Thiselton-Dyer, and then follows the first part dealing with the history of the famous gardens. We learn that the first mention of the village occurs in a Court roll of the manor of Richmond in the reign of Henry VII., and early in the eighteenth century it became a Royal place of residence. We are next informed that the gardens, as they exist to-day, are composed of several properties, the two chief being the grounds of Kew House, a Royal residence demolished in 1803, and the grounds of the Royal residence at Richmond known as Richmond or Ormonde Lodge, both of which are described in the happiest way by the author. Passing over much interesting information, we come to the time of the first Aiton, who was recommended by Miller to superintend the Botanic Garden at Kew, a post held by him and subsequently his son until 1840. The year 1772 saw the appointment of Sir William Banks as scientific director, and in the same year it was decided to send out from Kew the first of the many plant collectors. In 1789 William Aiton's "Hortus Kewensis" was published.

In 1803 a collector named Ker was sent to China, and the well-known plant double Jews' Mallow (Kerria japonica flore-pleno) was then introduced by him, along with many other plants. One can readily imagine with what interest the flowering of plants received from abroad at this period was looked forward to, because, it must be remembered, vast tracts of land then existed about the flora of which very little was known. At this period Kew was at its zenith, but dark days were in store. Thus we learn that in 1820 the

younger Aiton had several places under his direction, and the gardens were, undoubtedly, at this time in a very bad way; and probably it was owing to the love of plants and the untiring energy of John Smith, who entered Kew in 1822 and was made curator in 1840, that they survived. In 1838 matters had become so bad that a committee was appointed to enquire into the management of the gardens, Dr. John Lindley, the famous botanist, being at the head. Their report, we learn, was far from favourable, but some valuable suggestions were made by Dr. Lindley, many of which were subsequently adopted.

In 1841 a happier period dawned for Kew, as it was in this year that Sir William Hooker was appointed director, and the same year witnessed the admission of the public to the gardens every week-day. In 1844 the erection of the Palm-house was commenced, and the following year the pleasure grounds were added to the botanic gardens. From this time matters were pushed on rapidly, and in 1848 the first museum, now known as No. 2, was opened to the public. A feature of the work at Kew at this period was the raising of trees and shrubs for planting in the various Crown and public lands, and we learn that Battersea Park owes most of its arboreal features to Kew. In 1860 the large Temperate House was commenced, and, although the large central block and the two octagons were finished two years later, the structure as it now exists was not completed till 1899.

The year 1865 saw the death of Sir William Hooker, a man who by his enthusiasm and energy had converted the gardens from chaos to the first and foremost botanical station in the world in a little over twenty years. He was succeeded by his son, Dr. Joseph Dalton Hooker, who did splendid service during his official career, and who, although long since retired, is still, we are pleased to say, in the land of the living.

In Part II. English landscape gardening at Kew is dealt with, and this is, we think, one of the finest features of the gardens. Go where we will, some pleasant bit of scenery is sure to comfort us, and very seldom is there a jarring note. Architectural features, of which there are some classic and curious examples in the gardens—the formal garden, avenues, vistas and lawns, wild gardens, water and woodland (a very beautiful feature at Kew), Rose gardens and pergola, Rhododendrons, Azaleas and Bamboos—are all included in this part. In Part III. the scientific aspect of Kew is pleasantly dealt with, and those who are not well acquainted with the work carried on at Kew will learn a great deal from this portion of the volume. Part IV. is devoted to the rare and extensive

* "The Royal Botanic Gardens, Kew: Historical and Descriptive," by W. J. Bean, assistant-curator, with an introduction by Sir William Thiselton-Dyer; 20s. Cassell and Co., Limited, Ludgate Hill, London, E.C.

tropical and warm-temperate plant collections, and the final portion is devoted to the hardy plant collections, including, of course, the splendid arboretum and rock garden.

The preparation of such a volume could not have been entrusted to better hands than those of Mr. Bean, whose close connexion with the gardens, extending over a long period, enables him to deal with the subject with authority and affection. The numerous half-tone illustrations from photographs by Mr. E. J. Wallis and most of the reproductions in colours from Mr. H. A. Olivier's paintings are well executed. Such a book deserves to, and will, we think, live so long as the love of gardening exists among us, and we congratulate the author on its appearance.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

November 24.—Royal Horticultural Society. Exhibition of Flowers, Fruit, &c., 1 p.m. to 5 p.m. Lecture at 3 p.m., by Mr. Joseph Cheal, on "Italian Gardens." Admission, 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

Sir Daniel Morris, K.C.M.G., V.M.H.—The president and council of the Royal Horticultural Society have unanimously appointed Sir Daniel Morris to be an honorary life Fellow of the society, in recognition of his valuable services to horticulture in various parts of the Empire.

United Horticultural Benefit and Provident Society.—The monthly meeting of the above society was held on Monday evening, November 9, at the Royal Horticultural Hall, Vincent Square, Westminster, Mr. Thomas Winter in the chair. Eight new members were elected, making a total of seventy-one this year to date. The deaths of two members were reported, and the amounts standing to the credit of the late members were paid to the widows, being £25 7s. 4d. and £16 5s. 5d. respectively. Sick pay for the month was £36 4s. The trustees were asked to invest £300 in Corporation Stock. The dinner on October 15 last, at the Waldorf Hotel, was very successful.

The National Chrysanthemum Society's Show.—At the Judges' Luncheon held at the Crystal Palace, November 4, on the first day of the show, Sir Albert Rollit, D.C.L., LL.D., president of the society, occupied the chair, and there was a large muster of judges, exhibitors, officers and other members of the society. Considerable enthusiasm was aroused by the receipt of a telegram from the president of the French Chrysanthemum Society at Tours sending cordial greetings to their English brethren, and a reply was sent later reciprocating the good wishes of the French Chrysanthemumists. The president proposed the joint toast "The Judges and Exhibitors," and in doing so called attention to the educational work which the society was undertaking by encouraging the culture of the Chrysanthemum. The work that was being done was really a "national" work. He knew the judges had had an arduous task, but he was quite certain they had acted throughout with the strictest impartiality. To the exhibitors they were indebted for one of the finest shows that had ever been staged in the Crystal Palace or elsewhere. The toast was coupled with the names of Messrs. W. Wells and J. W. Moorman (for the judges), and Messrs. H. J. Jones and R. Cannell (for the exhibitors). The toast of the Crystal Palace Company was proposed by Mr. E. F. Hawes and replied to, on behalf of the company, by Mr. G. O. Starr, the general manager. The chairman of the executive committee, Mr. T. Bevan, proposed the toast of "The President," which was enthusiastically received with musical honours.

Hedges of Michaelmas Daisies.

This seems a somewhat novel description to apply to Michaelmas Daisies, yet it is a fact. In Lord Aldenham's garden at Elstree this year Mr. Beckett has a real hedge or screen of one variety—the Hon. Edith Gibbs—pale blue. The mass is about 14 yards long, 7 feet wide and about 6 feet high. As I saw this novel arrangement in the middle of October it was, indeed, a glorious mass of its delicately tinted blooms, so profuse and so elegantly formed were the plants; the semi-drooping side branches swept the ground. —E. MOLYNEUX.

The war on rats.—In connexion with the deputation which waited upon Lord Carrington, President of the Board of Agriculture and Fisheries, on October 29, it may be of interest to mention that the French Government voted the sum of £12,000 for the extermination of rats and mice in agricultural districts in France. Danysz Virus, prepared at the Pasteur Institute, Paris, was the means officially employed, and, thanks to the timely measures taken, the farmers obtained complete and speedy relief from the troublesome pests, by which their crops had been previously devastated. Danysz Virus, it may be added, was awarded a silver medal at the Franco-British Exhibition.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The National Rose Society.—I have read with very great interest the remarks and suggestions made by "Amateur" in THE GARDEN of November 7, page 544, under the above heading. I quite agree with him that there should not be too large a gap between the classes in the amateur section; but as the classes in the schedule are so very well set out and defined to suit all growers, the competition cannot be called unfair. The greatest and most grievous point in my mind is, how is the committee going to satisfy itself that the exhibitors do exhibit in their proper classes in accordance with the number of exhibition Roses they grow? I should hail with great delight some system by which every exhibitor would be compelled to make out a correct return of all the exhibition Roses he grows, duly checked and signed by two members of the National Rose Society who live in the exhibitor's immediate neighbourhood, and then sent in to the secretary every year in the month of May. He would then know how the members exhibited and in what classes, and, if necessary, submit it to a meeting of the committee prior to the show, to satisfy himself that the rules and regulations had been faithfully adhered to by the exhibitors. —PERPLEXED.

Late autumn flowers.—Having seen several lists in various papers of flowers still blooming this month, I think the enclosed list of flowers, which were all in bloom on November 7 in the garden, may be of interest to your readers: Begonias, Asters (various), Primroses, Polyanthus, Schizostylis coccinea, Montbretias, Cornflowers, Erigeron, Rudbeckias, Poppies, Lavender, Chrysanthemums, Campanulas, Veronicas, Potentilla, Lobelia cardinalis, Rock Roses, Cyananthus lobatus, Tunica Saxifraga, Linaria alpina, L. dalmatica, Omphalodes linifolia, Tradescantias, Aubrietias, Oxalis, Anchusa italica, A. capensis, Geum, Hypericum, Nigella Miss Jekyll, Arcototis grandis, Plumbago Larpenæ, Verbenas, Phlomis armeniaca, Linums, Arenaria montana, Hellebores, Cheiranthus, Jasmines, Pentstemons, Silene alpina, Mignonette, Antirrhinum, Gypsophila flore-pleno, Sisyrinchium, Dicentra eximia, Alyssum, Bergamot, Paris Daisy, Sedums, Heaths, Gladiolus, Violets, Wallflowers, Periwinkles, Houstonia cœrulea, Physostegia, Anagallis, Borago laxifolia, Helianthemum pumilum, Anthemis tinctoria, Diascia Barberæ, Carnations, Trollius, Nepeta, Myosotis, Anemone japonica, Gaultheria procumbens, Mertensia, Salvia patens, Cranesbill, Nicoti-

ana Sanderæ, Spiræa, Ceanothus, Solanum jasminoides, Escallonia, Roses, Perowskia and Stocks. This garden is situated rather high, and up to the time of writing nothing has been touched by frost, although the grass has been quite white several mornings. —THOMAS CRADOCK, *Fairy Hill, Shinrone, King's County.*

Suckers on Gooseberries.—In pruning Gooseberry bushes there is one class of shoots which must not be spared, but which are to be eradicated entirely, unless under exceptional circumstances for filling up a vacant space; these are the rank growths known as suckers. Most people have had experience of a tooth drawn by a dentist; this is the method to be used with suckers. They should be twisted out of the socket with the fingers and wrist so that no future growths will result. —WALTER SMYTH, *Holywood, County Down.*

Apple Scarlet Pearmain.—While in making up a list of a selection of dessert Apples it seems impossible to omit Worcester Pearmain, a very superior Apple for the table, the old Scarlet Pearmain is likely to be omitted; indeed, it is one of the old varieties now too little heard of. Yet the fruits are much of the form of those of Worcester Pearmain, are handsome and beautifully coloured, flesh firmer, more juicy, having greatly superior flavour, and have the merit of keeping longer, being quite good from the beginning of October till Christmas. Dr. Hogg terms it a first-rate dessert Apple, yet it is elbowed out of cultivation by newer varieties that quite lack its flavour, beauty and general excellence. The tree is a good medium grower and does well on the Paradise stock. The fruits are oval, very slightly ribbed, have close eyes, long stems and are easily recognised. Were it a new variety it would be well boomed. —A. D.

Olearias.—Flowering shrubs were dealt with in THE GARDEN of the 31st ult., page 534, and it is stated there that the beautiful Olearias are not hardy enough for general planting. That would seem vague to all southern and western counties and both in and around London. Your correspondent also omits the most beautiful of all, namely, *O. gunniana*. This is the best of the family, and grows more vigorously and flowers more freely than either of the others. *O. stellulata* is loose in growth altogether, and does not flower so freely as *O. gunniana*, which develops into a round bush-like plant. We have several plants fully 6 feet high, and more perhaps through them. These are remarkable when in flower. I enclose a shoot of *O. stellulata* and *O. gunniana*, and one can feel the difference without seeing them. *O. myrsinoides* is of a straggling habit, but is none the less beautiful. It has larger leaves of a darker green than either of those mentioned, and flowers with great freedom. We have plants of this 6 feet high. *O. macrodonta* has flowered exceptionally well, and as it shows very much later than either of the others it is very valuable. We grow this in several places in the open. *O. Haastii* is of course hardy, but the flowers are not nearly so good; they are of a dirty white. The finest batch of these I have seen are at Warnham Lodge, the seat of Sir Henry Harbin. *O. nummularifolia* is a curious species, and resembles a miniature *Araucaria* by the small, compact, leathery foliage. *O. oleagnifolia* is a fine foliage plant, and somewhat resembles *Senecio Greyii*; it has leaves 3 inches to 5 inches long and the under-side is covered with white "felt." This beautiful kind should have the protection of a wall. *O. nitida* has large, ovate leaves, and flowers very freely in August and September. With regard to hardiness, we registered 18° of frost on two successive nights last winter, and the Olearias were quite uninjured. Many are deterred from planting them because they are considered very tender. I should suggest that good strong plants be obtained before planting in final positions, and, if the soil is clay, mix up a suitable compost and plant them in it. —W. A. COOK, *Leonardlee Gardens, Horsham.*

The Crimson Damask Rose.—I do not wonder you were impressed with this Rose when seeing it in Mr. Turner's nursery at Slough. It is a glorious Rose, giving such a patch of colour that no other variety can. The flowers are so gorgeous, too, in their lustre and so large when fully developed that the time cannot be other than short when we shall hope to see it in nearly every garden where single Roses are not prohibited. Mr. Turner very kindly sent me a plant some three years since, which has pleased many with its glowing colour.—E. MOLYNEUX.

The Tupelo Tree.—I was very interested in the note written by "A. D.," page 534, respecting the Tupelo Tree. There is a beautiful specimen of *Nyssa sylvatica* growing in the grounds at Munden. This tree has been planted nearly seventy years and the pendent branches have a spread of about 50 feet, height of the tree about 25 feet, girth 3 feet 6 inches. During the last few years the tree has grown very freely, and it has been necessary to erect substantial supports for the almost horizontal branches. In its younger state growth was not so rapid. It is growing in a rather low position, the soil being of a moist, loamy nature. A younger specimen planted a few years ago, and which I understood was procured through Messrs. Veitch and Sons, is growing very satisfactorily in the same grounds. It is about 9 feet in height, and so far the growth is perfectly erect and the branches show no signs of becoming pendent, as they are in the older specimen. The foliage on both trees is very beautiful during the autumn. The tree flowers in the spring, the blossoms being very small and produced in dense heads. The *Nyssa* is certainly a tree which should be more frequently planted in this country.—C. RUSE.

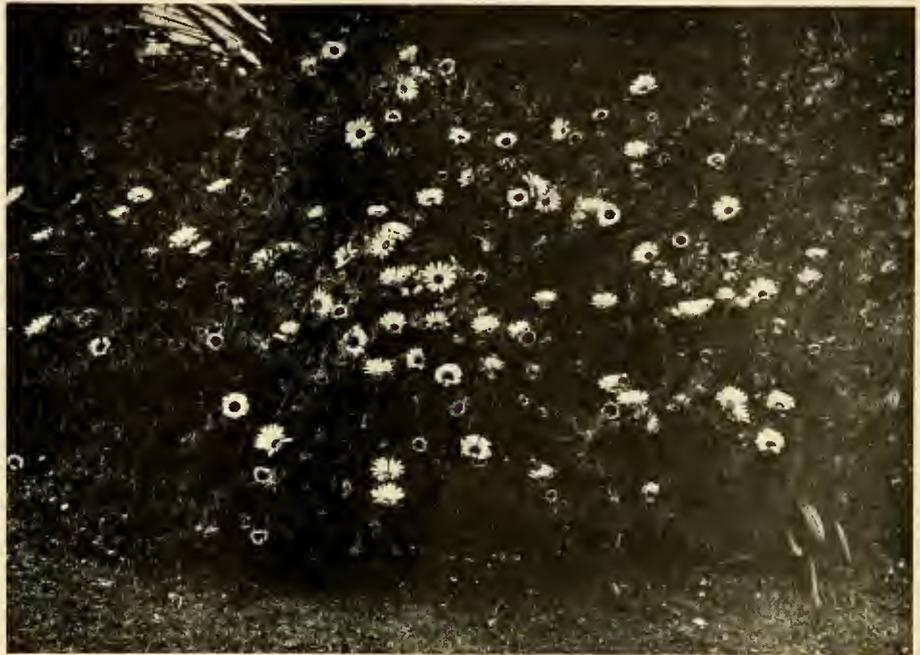
The beauty of Nemesias.—I can endorse all that Mr. Blair says of this subject, for to my mind it is one of the most beautiful and most useful of the annuals. Grown in small beds round my lawn between standard Roses, it has delighted everyone who has seen it, and I have been surprised to find how few enthusiasts realised its value until brought face to face with it. Here in this favoured spot my *Nemesias* were in bloom this year by the middle of June, and the beds were still presentable in mid-September. I refer to Sutton's strains of the large-flowered type. As Mr. Blair says, it does well in any season, but it is essentially a sun-loving subject, and its brilliant shades are seen at their best when fully opened by the sun. I cultivate my garden without professional assistance, and rely largely upon annuals for beds and mixed borders. There are so many beautiful things among the hardy and half-hardy sorts that one can produce the most delightful effects; but I have discovered nothing more striking and more easily grown than the *Nemesia*.—W. M. ELKINGTON, *Lady's Hill, Kenilworth.*

BOOKS.

The Florist's Bibliography.—The publication of "The Florist's Bibliography," by Mr. C. Harman Payne, is of more than ordinary importance to all who take an interest in the history of flowers. For very nearly a quarter of a century the author has been a worker in this field himself and a diligent collector of books. Beginning with the *Chrysanthemum*, of which flower he is indeed "a master in Israel," and before whose shrine in Paris on the 6th inst. he laid unique rarities in the way of books, pamphlets and pictures, he has gradually extended his sphere of interest, and to-day his own library contains about 2,000 different works on florist's flowers and the flower garden generally. As will be gleaned from the preface, "The Florist's Bibliography" had its origin in a wish to help some personal friends, who were "students of horticultural literature," by

publishing a little list of his own books. Fortunately for the literary worker in floriculture he did not stop here, but resolved to make it as complete as possible by including other works which he did not happen to possess himself. To this end various sources of information have been drawn upon, notably Pritzel, Johnson and the library catalogues of the Massachusetts Horticultural Society and of the National Horticultural Society of France, and the result is the wonderful *pioneer* effort in the volume under review. It is a splendid bit of work in a new field of bibliography, but, like every first attempt, it is not absolutely perfect. Some dates will want revision, other rare or very little-known books will have to be added, asterisk marks denoting several editions will want inserting, possibly a little rearrangement will be deemed beneficial, and, certainly, to keep it up to date, as the author, I am happy to say, intends to do, new volumes will have to be noted and classified. It is a book that is badly wanted. Gardeners and dealers (even specialists) are, as a whole, woefully ignorant of the literature of garden flowers. A small work, dealing with a

Société Nationale d'Horticulture de France, with its well-arranged catalogue and its 15,000 volumes on horticultural and allied subjects, all under the supervision of probably the greatest living authority on such books, M. Georges Gibault. Or take what is said to be the finest horticultural library in the world, that of the Massachusetts Horticultural Society, which began to be formed in 1830 and to-day contains 17,000 volumes, a number which is being added to very largely every year. The Lindley Library, which is the library of the Royal Horticultural Society of England, has 6,000. I must pass on and say one or two parting words about the principles which have guided the author in his selection of what he has included. Firstly, it is essentially a *Florist's Bibliography*. Florist to-day has two meanings. I asked a foreman the other day what he called a florist's flower; his reply was, anything that is sold at a florist's shop—a reply which reminded me of Bishop Wilberforce's definition of an archdeacon as a man who performs archidiaconal functions. The next day I asked that well-known authority, Mr. Alexander Dean, the same question, and his reply was some-



ARCTOTIS ASPERA ARBORESCENS IN A DEVONSHIRE GARDEN. (See page 572.)

certain florist's flower, and published in 1908, begins by stating "information available for its history is not as plentiful as we could wish"; possibly the author, if he consults "The Florist's Bibliography," will be surprised to find there are no less than fifty volumes that he might have gone to for what he wanted. Quite recently, too, one of our very best practical men told me he had been asked if there was a special book on the Fuchsia, and that he had replied there was none. Mr. Harman Payne mentions seven.

Taking another point of view: supposing anyone wanted to get a list of what has been published on some particular flower. If the aforesaid person were a member of the Royal Horticultural Society he would very likely have read in his Book of Arrangements (page 130) of the "magnificent horticultural library" at Vincent Square, and, in his innocence, he would think he would be sure to find what he wanted there. He would have a rude awakening. Quite recently I have asked for "Le Père d'Ardène" and Malo on the Tulip and d'Ombrain on the Gladiolus, but they were not there. One cannot help feeling the difference between ourselves and the

thing to this effect: Florist's flowers are flowers which have been improved by cultivation, largely with the idea of competing at shows, and of which the points as to what constitutes excellence, and by which they must be judged, have been laid down by experienced cultivators. Mr. Harman Payne takes a sort of *via media*, and includes not only Tulips and Carnations, but also such things as Cannas and Lilies and "hardy flowers and perennials." Serial publications are entirely omitted, and so, too, are books such as Alfred Smees' "My Garden" and Ellwanger's "The Garden's Story," which certainly are about gardens but do not confine themselves to plant life. There are no books on the Rose included, since a full bibliography of this great flower has been published in Spain by Señor Vagara. Although exigencies of space have to weigh with the keenest of enthusiasts, I do regret that we have not at least a selection of some of the more important works; it would add so much to the completeness of the volume. Books on flower-lore and floral art have a place in the bibliography; so, too, have books on the flower garden and flowers generally, the object aimed at being to

give the student and book-lover a complete *vade mecum* of all that pertains to floriculture and florist's flowers. The book is an octavo volume of eighty pages, the product, as the highly interesting frontispiece suggests, of one who has made this subject his hobby, and it is published by that most obliging firm of gardening-book specialists, Messrs. William Wesley and Son of Essex Street, Strand, at 3s. 6d. I congratulate Mr. Harman Payne on his choice. It is no slight gain to both author and purchaser to have as principals of the publishing firm men who are like-minded with themselves. JOSEPH JACOB.

THE GREENHOUSE.

FUCHSIAS FOR AMATEURS.

THE Fuchsia family, represented by species and varieties innumerable, stands out almost alone in the varied purposes for which it may be employed in gardens, for in the humblest, as well as in the most pretentious, Fuchsias of some kind or other can be depended upon to contribute their share to the floral display.

There is no doubt that Fuchsias have made considerable headway in popular favour within the last few years, more particularly in large establishments, where, either in bush or standard form, they are bedded outside during the summer months. This is not at all surprising, as during the latter part of the summer and in early autumn, when so many bedding plants are past their best, the Fuchsias yield a magnificent display. It is, however, not my intention to treat of Fuchsias in this way, but rather to point out their great value to the amateur with but a single greenhouse or even without one at all. Their accommodating nature during the winter stands them in good stead, as Fuchsias can be safely kept during that period in a window or empty room, or, if the winter is not too severe, in a stable or shed of any kind, provided they are just safe from frost. They can also be wintered in a cellar, and if it is so situated that they can have a little light and air during mild weather so much the better. Throughout the winter very little water will be needed; indeed, old plants may be kept quite dry, though they are better if watered occasionally. Young plants, whose stems are in a more immature state, cannot stand extremes as well as the old ones, hence occasional watering is in their case more necessary. Being naturally of a deciduous character, the beginner need not be at all nervous when all the leaves drop.

With regard to the wintering of Fuchsias, those that have been grown in pots should be allowed to remain therein; but where planted out in the garden, the better way is to lift them carefully and pot them, taking care that the pots chosen are not too large. A fine day should be selected for the purpose, and, after being potted, a thorough watering must be given to settle the soil in its place before the plants are placed under cover. These remarks apply to Fuchsias in general, for there are a few which need no protection, and even if cut to the ground during the winter they push up new shoots from the base which will flower the same season.

Among the many purposes for which Fuchsias may be used are the following. They may be grown in pots and allowed to assume their natural bushy character. In this way they are valuable for windows, balconies or for the greenhouse. Next, when too large for this purpose, they can be either planted or plunged out of doors during the summer months, or, should there be no such convenience, if put in large pots or tubs (old butter-tubs are very suitable for the purpose), they may be stood in proximity to the house, in a courtyard or, in fact, almost anywhere.

A marked feature of most Fuchsias is the more or less drooping character of the shoots and blossoms. Owing to this they are seen to

great advantage when occupying an elevated position, and they are therefore well suited for growing in suspended baskets, for the edges of balconies, or for similar purposes. This drooping character also enables them to display their charms to the full when they are trained to the roof of a greenhouse, for which position the loose rather than the compact-growing varieties are preferable. A greenhouse roof clothed with a selection of Fuchsias and supporting myriads of flowers of different hues suggests a glimpse of fairyland. A feature greatly in favour of Fuchsias as roof plants is the fact that during the winter they are devoid of foliage, and consequently do not obstruct the light at that season of the year when it is so essential for the plants underneath.

A selection of varieties suitable for the several purposes is herewith appended. At the same time, it may be pointed out that so numerous are the varieties that a good deal depends upon individual taste. The following, however, are all distinct and well-proved sorts.

For Placing Out of Doors During the Summer.—Amy Lye, whitish tube and sepals and reddish salmon corolla; Ballet Girl, double white corolla; Brilliant, sepals coral red, semi-double corolla, reddish violet; Earl of Beaconsfield, yellowish salmon; Elegance, red sepals, purple corolla; Flocon de Neige, single white corolla; Mrs. Marshall, white tube and sepals, carmine corolla; Mme. Cornellison, single white corolla; Marinka, nearly a self crimson; Phenomenal, double purple corolla; Rose of Castile, whitish sepals, purple corolla; Scarcity, a fine dark flower; and White Phenomenal, double white corolla. To these must be added Alice Hoffmann; this flowers freely when but a few inches high, and makes a very handsome bed or edging to the larger varieties. The corolla is single and clear white in colour. Varieties remarkable for foliage distinctions, all of which do well out of doors, are gracilis variegata, Cloth of Gold, Meteor and Sunray.

For Pot Culture in the Greenhouse.—Avalanche, double violet; Ballet Girl, double white; Cadmus, single white corolla; Countess of Aberdeen, nearly a self white flower; Frau Emma Topper, double rose-coloured corolla; Guiding Star, white tube and sepals, rosy red corolla; Gertrude Pearson, coral red sepals, dark plum purple corolla; Lady Heytesbury, white sepals, purple corolla; Lord Byron, a very dark rich-coloured single flower; Mrs. Rundle, orange salmon; Phenomenal, double dark; Royal Purple, deep velvety single corolla; and Valiant, bright red self-coloured flower.

For Training to Roof of Greenhouse.—General Roberts, reddish tube and sepals, purple corolla; General Grenfell, coral red sepals, bluish corolla; Lustre Improved, white sepals, red corolla; Mme. Cornellison, single white corolla; Mrs. Rundle, orange salmon; Monarch, large bright red flowers, nearly self coloured; Marvellous, double violet corolla; and The Shah, bright red sepals, single violet corolla.

For Baskets.—Beauty of Exeter, mauve-coloured corolla; Charming, deep red; Delight, single white corolla; Elegance, crimson sepals, purple corolla; Jubilee Queen, white sepals, red corolla; Molesworth, double white corolla; Mrs. Rundle, orange salmon; Rhoderick Dhu, large single bluish corolla; and Scarcity, single plum-coloured corolla.

Beside all these there are some very beautiful hardy sorts, which, in the more favoured parts of these islands, attain the dimensions of large bushes. Even where they are liable to be injured during the winter they throw up strongly from the base. The hardiest of this class are corallina, or exoniensis, as it is often called, gracilis and Riccartonii. In addition, there are several others nearly, if not quite, hardy. Many of them are rather dwarf in growth and exceedingly floriferous. The hardiest variety with a white corolla is, as far as my experience goes, Mme. Cornellison, which is so much used for bedding-out in the parks during the summer months. H. P.

THE FLOWER GARDEN.

ARCTOTIS ASPERA ARBORESCENS.

ACCORDING to the 1900 supplement to Nicholson's "Dictionary of Gardening," *Arctotis aspera* was introduced into this country from South Africa in 1710. In the same work *A. arborescens* is stated to be synonymous with *A. aspera*, but a writer on the genus in THE GARDEN in 1892 held that *A. arborescens* was merely a variety of *A. aspera*, in which he was doubtless correct. There are about fifty species of these South African plants, but few except the annual types are to be met with in English gardens, since they are unsuitable for open-air culture except in the warmest spots in the British Isles.

In the Isles of Scilly *A. aspera arborescens* assumes huge dimensions and flowers through the whole summer. As may be seen from the illustration on page 571, of a specimen 4 feet in height and 6 feet in diameter, growing in a garden on the shore of Start Bay, the plant is very distinct in character, its deeply-cut, grey leaves being striking even when it is not in flower, while the white, Daisy-like blossoms, about 3 inches across, with a yellow rim surrounding the disc, are very attractive. The petals are pink on the reverse, and the buds, which are of the same colour, afford a pleasing contrast to the white expanded blooms.

It can be grown in the open in Devon and Cornwall, but in exceptionally severe winters, such as the two last, it is generally killed unless protected. In the winter of 1906 my plants of this *Arctotis*, and of the handsomer *A. aureola*, were cut to the ground. In the spring the latter broke again from the roots, but *A. aspera arborescens* never reappeared and had to be renewed.

For the culture of the *Arctotis* the warmest and driest spots obtainable should be chosen. A southern exposure at the edge of a retaining wall is one of the best positions possible, and a few inches of light soil overlying a good depth of broken bricks, crocks and sherds will suit them perfectly, since the drier the soil and the more rapid the drainage the better they succeed. Rich soil is totally unnecessary, as it merely tends to produce rank growth at the expense of the flowers. The plant is extremely rapid in growth, a rooted cutting planted out in the spring often attaining a diameter of 4 feet by the autumn, even in the poor rooting medium already described. The flowers, if cut when expanding, remain fresh in water for a long period.

Arctotis aureola is an even more handsome species. This has flowers of a deep orange tint, fully 4 inches across, and is of far more compact growth, spreading but little. It is also hardier than *A. aspera arborescens*, having sprouted from the roots the last two springs though cut to the ground by the severe winter frosts. The annual *A. grandis* was highly lauded at its first introduction, but its flowers are not borne in sufficient quantity to render it a plant of high decorative value, and its rampant growths are so brittle that each requires a separate stake, which detracts from its appearance in the border.

South Devon.

S. W. FITZHERBERT.

SINGLE-FLOWERED CHRYSANTHEMUMS IN AUTUMN.

Now that we have such an array of beautiful early single-flowered Chrysanthemums, that make the borders bright during late August and September and the earliest days of October, we need to look round to see what is to take their place as they go out of flower. We are more than pleased with what has been achieved with these early-flowering outdoor varieties, but we must admit that we recognise in others that come into flower immediately subsequent thereto a value quite distinct from those that preceded them in their

period of flowering. There are growers who think very little of the early-flowering single *Chrysanthemums*; but they are of great value for indoor decorations in a cut state and last long. At the moment, we have in our vases indoors blooms that have been used for decorations for quite a fortnight, and many of the flowers look almost as fresh as when they were first gathered. We, however, welcome an addition to the single-flowered section of a comparatively new type of plant that flowers throughout the whole of October. In open weather they continue the display in the outdoor border, and the fine breadths of colour that these plants produce when grouped in masses of one kind is very striking.

We are more particularly interested at the moment, however, in propounding their claims for decorative uses indoors during their period of flowering. Recently we had sent to us an interesting number of beautiful varieties from Mr. W. J. Godfrey of Exmouth, Devon. This raiser has succeeded in enriching our collection with a series of large, medium-sized and small flowers of the single-flowered varieties. Dowdy colours appear to be absent; there are interesting yellow shades, some of which are particularly bright and pleasing. One of the most striking varieties is named

Lady Coleridge.—This is a very beautiful flower with two or three rows of petals, which are of medium breadth; they are borne in beautiful sturdy sprays, so that the individual flowers may be broken out of the spray and used separately, or the whole spray may be disposed in a vase by itself. The colour is a bright rich tone of yellow, and the richest we have seen in these flowers for a long time. The high, well-formed disc of a deeper shade of colour, tinted green, adds to the attractiveness of the flower.

Lillie Godfrey.—This is another charming large-flowered single sort. The flowers are in cluster sprays that need to be partially disbudded for them to be seen to advantage. The colour is its most pleasing feature, this being a distinct shade of delicate mauve pink. We have admired this flower for its colour, which has a beauty peculiarly its own.

Devonshire Lass.—This is a delightful variety, having beautiful large single flowers that are borne in elegant sprays on long footstalks without disbudding. It would be easy to mistake this variety for a large spray of the well-known yellow *Marguerite*; the flowers being larger, however, are more attractive. They have a single row of florets, which are well disposed, and the colour is primrose yellow with a greenish yellow disc. Individual sprays make a very pretty decoration.

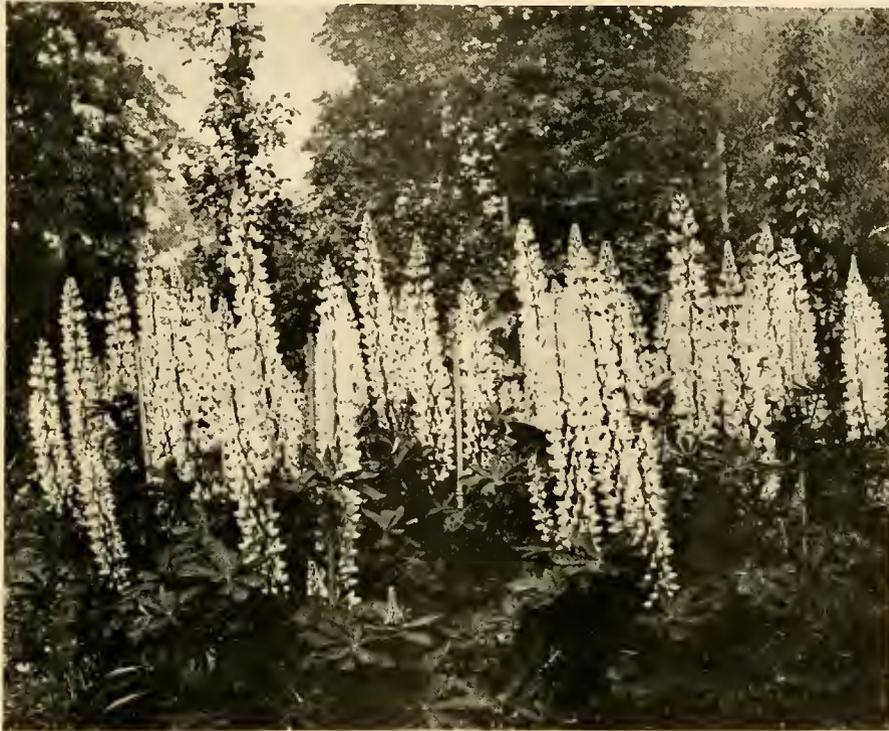
Mrs. Lestock Thornton.—This is another pretty yellow single flower of small to medium size. The flowers are borne in cluster sprays. While they look pretty in an undisbudded form, the effect would be still better were they partially disbudded. The petals droop slightly and are neatly disposed round a large, well-formed disc.

Godfrey's Gem.—Some growers might regard this as too small and uninteresting; but all those who know the value of the small-flowered sorts would appreciate the variety under notice. It is a miniature-flowered single, having rather narrow, flat, blunt-ended petals that are disposed in a single row round the yellow disc. The flowers are borne in sprays on slender panicles, and the colour is a bright chestnut crimson with a yellow disc. This is a very dwarf plant, and on that account may appeal to some readers.

Kathleen Davies.—An interesting medium-sized single of a pleasing shade of pale fawn, tinted rose colour. The blooms are developed in pretty sprays that need not be disbudded.

Countess Fortescue.—This is a pretty rosy bronze flower that must be disbudded to be appreciated at all. In undisbudded form it is not of much use, but when well grown and disbudded it is welcome.

Mrs. Kennaway.—This is a white single flower of medium size and pleasing form, having



A GROUP OF THE MANY-LEAVED LUPINE (*LUPINUS POLYPHYLLUS*) IN MR. WILLIAM HUDSON'S GARDEN AT SURBITON.

a greenish yellow centre. Either in sprays disbudded or undisbudded, this is a useful flower.

Miss Violet Elgar.—This is a free-flowering, medium-sized single variety, evolving dense cluster sprays of bloom with several rows of petals. The colour is a pleasing blush white, which contrasts effectively with the large yellow disc.

Cinderella.—A very distinct and pretty little single-flowered sort. For decorative uses it is ideal. The dainty little blooms are some $1\frac{1}{2}$ inches to 2 inches in width, and of a starry character; they are pleasingly disposed in sprays. It is profuse flowering, and we think this charming little plant will become very popular. It is pure white, with a greenish yellow centre.

I may mention that these single-flowered *Chrysanthemums* are fragrant. D. B. CRANE.

THE MANY-LEAVED LUPINE.

AMONG our hardy perennials few are of greater general value than the many-leaved Lupine

(*Lupinus polyphyllus*). It is a native of Columbia, and was introduced to this country as long ago as 1826. Although the type has blue flowers, there are now a number of varieties and hybrids with blossoms of varying shades from pink to pure white. The plants will thrive in any ordinary garden soil, and if the old flower-spikes are cut down level with the soil as soon as the blossoms are over, a second crop of flowers may often be obtained. The accompanying illustration shows the value of this Lupine for massing, a point that should not be overlooked where planting on an extensive scale is adopted.

THE FRUIT GARDEN.

APPLES AT ALDENHAM HOUSE.

ONE of the most promising orchards on grass that I know is at Aldenham. The trees are from twenty to thirty years old, have abundance of space, have been well attended to and, being standards and half-standards, they are most shapely, and give abundant crops of brightly-coloured fruit when there are Apples in the neighbourhood. The soil is mainly composed of clay, like the bulk of it at Aldenham; but with thorough preparation, *i.e.*, trenching deeply, the trees have been brought to as near perfection as possible. At one time the trees were almost at a standstill until Mr. Beckett had the whole of the soil deeply trenched, thus relieving it of stagnant moisture and admitting air to the roots also. The improvement has been marvellous, thoroughly surprising even the most sanguine.

Blenheim Orange is a great favourite here, and deservedly so, as the variety is of such excellence that no doubt it is a seedling form, and a good one, too. The fruit is large, shapely and so rich in colour as to render the tree quite a conspicuous object. Cox's Orange Pippin

growing as a half-standard is one of the finest trees of that variety I have seen. Annually it bears heavy crops of medium-sized, clean, highly-coloured fruit. Hoary Morning, high colour (though it naturally is anywhere), seems to be exceptionally so at Aldenham House. This is an Apple that should be more grown, especially when it is known how much the American fruit of high colour is preferred to the ordinary English produce. Tower of Glamis gives remarkable crops of large, clean, desirable fruit. Small's Admirable is one of the best of late-keeping Apples; here it is an almost certain cropper, and therefore finds appreciation. Mère du Ménage is represented by a desirable tree that gives immense-sized fruit, especially when we consider the crop it carries. The new Norfolk Beauty is receiving attention, Mr. Beckett having seen this Apple growing and cropping so freely in its home.

A full-sized tree of Scarlet Nonpareil, with its clusters of fruit, is a conspicuous object in the landscape. Wellington is a favourite at

Aldenham. It annually supplies a full crop of desirable fruit. Lord Derby succeeds remarkably well, giving good exhibition fruit in quantity. Potts' Seedling is free from canker, giving full crops of clean, handsome fruit, and when that is the case this is a desirable Apple. The Queen at Aldenham House seems to fill up its fruit better than in many places. As a rule the flat appearance of this Apple militates against its market value. King of the Pippins as an early September Apple is here in request; it crops freely and colours highly.

In the kitchen garden growing as bush trees I saw the finest fruits of Charles Ross I have yet seen, and remarkable in colour they were.



THE PERSIMMON FRUIT GROWN OUT OF DOORS.

Worcester Pearmain, Gascoyne's Scarlet and Peasgood's Nonsuch were carrying excellent fruit of quite exhibition form.

Swanmore.

E. MOLYNEUX.

PERSIMMON FRUITING IN THE OPEN.

The enclosed Persimmon was grown by my neighbour, F. L. Carslake, Esq., Darracombe, Newton Abbot. I thought it might be of service to you for illustration. It is growing on a south wall out of doors, and ripened its fruit this season. This, I think, must be rather unusual for this country.

G. S. PATEY.

COLOURED PLATE. THE KITCHEN GARDEN.

PLATE 1361.

TWO GOOD PEARS.

(EMILE D'HEYST AND BEURRE ALEXANDER LUCAS.)

EMILE D'HEYST is the rich cinnamon russet fruit shown in the plate. Although this has been in commerce for some sixty years, it is only recently that it has become recognised. The tree is not a vigorous grower, but extremely productive and bears regularly; even in bad years it generally bears a fair crop of fruit. It ripens at the end of October and in November, and is of very refreshing flavour, the flesh melting. It is best as a cordon or small bush on Quince stock, but does well as a standard and is one of the best dozen grown. The fruit is large from small trees.

Beurré Alexander Lucas is a handsome fruit of

THE ART OF TRENCHING AND MANURING.

ALTHOUGH some divergence of opinion is, without doubt, justifiable as to the comparative benefits of winter and spring trenching, yet in very many cases we believe the former should manifestly be the rule; while in dealing with those soils which it is really better to treat in spring, practical considerations often arise to make winter trenching a necessity. It usually happens that there are more vacant plots and borders in the garden, and more spare time on the out-of-door gardener's hands at this season than when spring, with all its demands upon time and labour, arrives.

Good Cultivation.—The necessity for deep digging as a condition of successful cropping has long been proved by all gardeners worthy of the name; but beyond a general notion of the benefit of working the soil and exposing it to the effects of "weathering," much uncertainty prevails among us as to the actual principles underlying the process. For principles there are, and these of a nature which makes their bearing a matter of first importance to the practical man. Following out the fundamental idea, with which science has acquainted us, that the soil is alive and must be treated accordingly, it is here proposed to touch briefly on a few of these principles. It will be found that, without exception, they demonstrate the importance of frequent and thorough cultivation.

The Living Soil.—It must be borne in mind that soil is inhabited by multitudes of minute forms of vegetable life, known as bacteria or germs. These organisms act upon nitrogen, gradually

converting the ammonia of nitrogenous matter into nitrate, and thus making it available as a plant food. This gradual change is known as nitrification. Nitrification is a process of oxidation, or burning, and as such can only take place where the oxygen of free air can combine chemically with ammonia in the soil. It is obvious, therefore, that to enable the bacteria to do their work soils must be properly aerated. A certain degree of warmth and of moisture is also absolutely necessary. Lastly, the presence of lime, phosphates and potash is needed to provide suitable nourishment for the soil organisms.

H. C.

(To be continued.)

THE ROSE GARDEN.

DAMASK ROSES.

MAY I add a few more notes on this interesting race in addition to those in a recent number of THE GARDEN? There is much confusion in the mind of the general public regarding "Damask" Roses. In many instances when they are enquired for deep red Roses are meant, while in the dictionary we find the word "damask" interpreted "silk woven with flowers." But what Rose growers regard as Damask Roses are a race by themselves. Professor Crepin, in his "New Classification of Roses," given before the National Rose Conference in 1889, places *R. damascena* under the section of *gallica*, and he says, "Many authors have considered *R. damascena* (Miller, 1768) to be a distinct type, classing it in section *gallica*, but it is probable that this Rose is a hybrid produced from *R. gallica* crossed with a species of the section *canina*." We shall probably never know the origin of some of these older types of Roses; there is much conjecture but no solid basis, and I am afraid we must rest content with the scrappy information which we have. That *R. damascena* has played a great part in giving us our present-day Hybrid Perpetuals seems certain. Mr. W. Paul, in the "Rose Garden," says as much, and he informs us that M. Laffay raised some of the earliest Hybrid Perpetuals by crossing the Perpetual Damask with the Hybrid Chinese and Hybrid Bourbons. These Damask Perpetuals were grown many years ago, but they have now dwindled down to about one sort, *Rose du Roi*, a variety possessing in a marked degree the leathery leaves and rigid growths of *R. damascena*, with a perpetual habit of flowering. So late as the end of September this year flowers were found upon this variety. In France these Roses are known as *Rosiers Portland*, and I see M. Guillot catalogues six different varieties.

Whatever their origin, the group of *R. damascena* is of very ancient introduction. They are largely used in Bulgaria and other places for the production of rose water and attar of roses. Although, strictly speaking, the old Red Damask does not belong to *R. damascena*, its name will always be retained by lovers of garden Roses. I wonder if it was this Rose that Spenser had in mind when he wrote in the "Shepherd's Calendar":

Upon her head a crimson coronet,
With Damask Roses and Daffodillies set.

This variety has semi-double flowers of a very bright crimson colour. It has produced the beautiful striped Rose named *Rosa Mundii*, which very frequently passes for *York and Lancaster*. It is one of the most picturesque of Roses, and should be in every collection.

Mr. Turner of Slough has raised a very beautiful variety of the group under notice, which he calls *Crimson Damask*. It has single flowers of the most brilliant crimson, 4 inches to 5 inches across, produced in great quantities early in June.

Mme. Hardy is one of the best of the group. The flowers are pure white, of cupped form and produced in large clusters. The habit is erect and growth vigorous.

Leda or *Painted Damask* is an extremely beautiful Rose with its quaint, lake-margined petals. The ground colour is blush, tinged with flesh.

La Ville de Bruxelles has flowers of a vivid light rose colour. The expanded flowers are most charming when seen in early summer before other Roses are out, and it has a striking grass green foliage.

York and Lancaster.—The true variety, but a Rose one need not be anxious to obtain. The flowers are a dull pink, white striped and not very pretty. Certainly *Rosa Mundii* is much the better Rose.

Hebe's Lip or *Reine Blanche* is one of the loveliest of the early Roses, its semi-double flowers being prettily tipped with carmine on a white ground.

Mme. Soetmans.—Flowers pale flesh, changing to white, form cupped; a very fine sort. P.

ROSE ELECTRA.

One cannot praise this rambling too much. It seems so decidedly superior to *Aglais*, although there is room for both sorts; the latter appears in bloom about a week earlier than *Electra*. It

Given fine weather we get some very handsome individual blooms, and a few double sorts, such as *Maman Cochet* and *White Maman Cochet*, are often better in autumn than at any time.

What we want, however, in autumn are Roses that will compete in showiness with other denizens of the garden, such as the Dahlias, Starworts, Anemones, Rudbeckias and others. Now, have we such Roses? I say, yes. Can we not claim this distinction for *Caroline Testout* or its beautiful white sport, *Admiral Dewey*? Is not *G. Nabonnand* a perfect gem in the autumn, and its lovely sport, *Peace*, equally so? What a delightful and brilliant effect we may obtain from *Grüss an Teplitz*, especially when grown as a standard, or from a mass of *Corallina* with its lobster red blooms!

Of the newer Roses, really good autumnal sorts are to be found in *Richmond*, *General Macarthur*, *Königin Carola*, *Joseph Hill*, *Gustave Grünerwald*, *Countess Cairns*, *Earl of Warwick*, *Elizabeth Barnes*, *Countess of Gosford*, *Betty*, *Marquise de Sinety*, *Edu Meyer*, *Mrs. David McKee*,



THE RAMBLING ROSE ELECTRA GROWN IN A MASS.

matters not how we grow it—pillar, spreading bush, or standard—its lovely sprays are always attractive. This Rose, when fully out, is almost a pure white, and its flowers lift themselves quite erect, which adds much to its value as a decorative variety. A mingling of this and *Carmine Pillar* would be delightful, or with one of the bright-coloured *Penzance Briars*, such as *Anne of Geierstein* or *Meg Merrilies*.

SOME GOOD DECORATIVE ROSES.

COMPARATIVELY speaking, how few of our Roses can be truthfully described as decorative. By that I mean decorative as garden plants. We know very well there are numbers of varieties that will produce blooms in the autumn months, but there are not many sorts that make a really good display. To obtain this we require varieties whose developed blooms remain in good condition a considerable time. So many sorts commence to decay rapidly and thus give to the cluster a very woe-begone appearance. The very double Roses are the worst to grow for autumnal beauty.

Bertha Klemm, Mrs. Aaron Ward, *Ecarlate*, *Harry Kirk*, *Warrior*, *Lady Ashtown*, Mrs. E. G. Hill, *Lena*, Mme. Paul Varin-Bernier, Mrs. Dudley Cross, Mrs. Isabelle Milner, *Chateau de Clos Vougeot*, *Souvenir of Stella Gray*, Mme. Segond-Weber, Mrs. David Jardine and many others. There are two special groups we must not overlook when making our plans for autumn display. These are the dwarf *Polyanthas* and the *China* or *Monthly* Roses. They are really indispensable, and full of charm with their exquisite clusters and artistic colours. No one can afford to overlook such as *Aschenbrödel*, Mrs. W. H. Cutbush, *Rosel Dach*, *Phyllis*, *Engénie Lamesch*, *Perle d'Or* and *Canarienvogel* among the *Polyanthas*, and *Charlotte Klemm*, *Comtesse du Cayla*, *Arethusa*, *Baronne Piston de St. Cyr* and *Queen Mab* among the *Chinas*.

Just a word in conclusion, and that is, do not be afraid to plant closely if an effective display is desired. From 15 inches to 18 inches is ample space for two or three years. The distance apart can be increased when the plants are transplanted, as they should be periodically. P.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE WINDOW GARDEN.—I am planting small shrubs in the window-boxes just now; there are several subjects that answer well for this purpose, notably the golden-leaved *Euonymus*. Bulbs that have not been planted yet should be dealt with without further delay. A few such bulbs yield a welcome



TWO GOOD POTS OF THE PRETTY CROCUS BIFLOROUS.

return in the way of fragrant blossoms in the spring. Foliage plants indoors will, from this time forth, need more care in regard to watering. Tepid water should be applied at all times during the winter season, and the plants must not be watered unless the soil is fairly dry.

Trees and Shrubs.—So few beginners appreciate the real value of the Ivies. Dwellers in and around the neighbourhood of large towns so often desire to cover up unsightly walls and fences, besides other all too apparent bare spaces in the garden. The Ivy in variety is an ideal subject for this purpose and may be planted at the present time. Other climbing plants may also be planted now, as well as evergreen and deciduous trees and shrubs in great variety.

The Hardy Fruit Garden.—Planting, lifting and root-pruning will occupy much time now, and the results amply justify this work being proceeded with before the hard weather sets in. I am now dealing with the Raspberries, cutting out all growths that bore fruit last summer, as well as weakly shoots of the past season's growth, retaining only the strongest shoots, which are securely tied to stakes or to trellis-work.

The Vegetable Garden.—As opportunity offers I am clearing all available ground of exhausted vegetable crops, burning or burying the same and trenching the quarters in drastic fashion. I am incorporating a very heavy dressing of partially-decayed manure. In gardens where the soil is light and sandy, cow manure should be applied in heavy dressings, as soil of this character is quite voracious. On the other hand, where the land is of a heavy and retentive kind, partially-decayed horse manure applied in liberal quantity will assist to lighten the same. A dressing of lime or ashes resulting from burning the rubbish of the garden will further assist in rendering heavy soils more congenial. Cover the tops of the ridges of Celery with boards or littery matter at the first approach of frosty weather.

The Hardy Flower Garden.—While the weather remains open, there are many things to attend to in these quarters. Dutch and other hardy bulbs should be planted as soon as possible, as it is full late for this work already. Group the different subjects in bold masses of one variety in each group, as this is far more effective than planting them in lines. Observe the same rule when lifting and dividing hardy perennials and biennials. When grouping the different subjects, avoid crowding them in the colony; instead, allow ample space for each individual plant to do justice to itself. Those who wish to have a bright display in the garden in the spring should plant at once the Primroses and Polyanthus, the double and single-flowered Arabis, Forget-me-nots, double Daisies, as well as the beautiful Aubrietias.

The Greenhouse and Conservatory.—Observe the greatest care in watering from now until the winter season has passed. Water the plants only when the soil is dry, and be quite certain of the fact. The Primulas are already evolving promising trusses of blossom, and for this reason will derive considerable benefit by an occasional application of weak manure water. The same remarks apply equally to the Cinerarias. I am just potting up a batch of Tuberoses and a few other late bulbs, and the last batch of *Spiraea japonica* is receiving this attention also.

D. B. C.

THREE GOOD BULBS FOR POTS.

ALTHOUGH the work of potting up bulbs for spring flowering should have been finished several weeks ago, it may still be performed where circumstances have prevented it being done earlier. Such good results cannot, of course, be expected from bulbs potted at this late date, but presentable flowers will be produced if reasonable care is taken over the work.

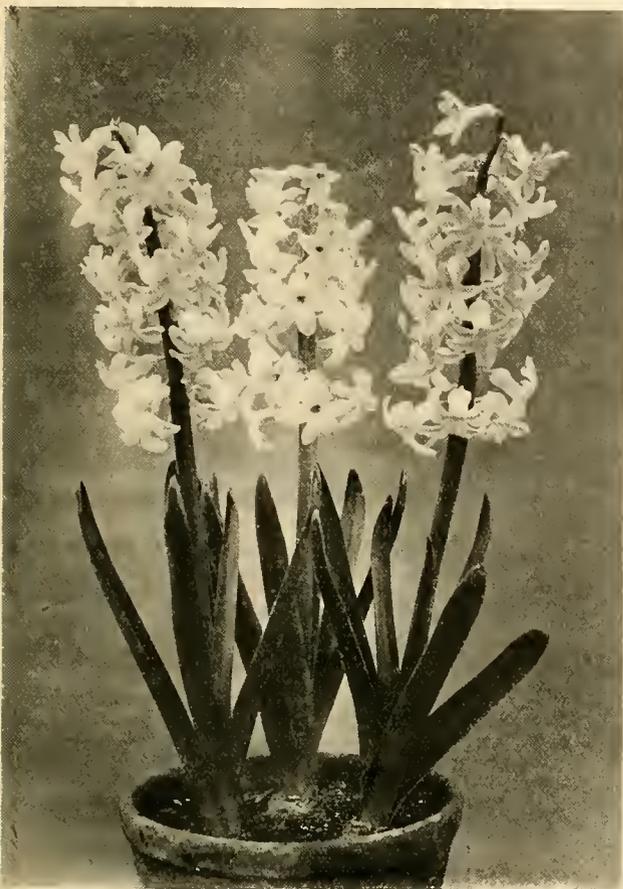
Hyacinths.—The many beautiful bedding varieties impart a brilliant colour to the greenhouse in early spring. The bulbs may be potted from September to November. The soil for Hyacinths should be rich, a suitable mixture being loam, leaf-mould, well-decayed manure and coarse sand. Place one bulb in a 5-inch pot, or three bulbs in 6-inch or 7-inch pots, according to the size. Make the soil firm in the pot, leaving the top of the bulb just protruding above the surface. Water each pot and plunge in a bed of ashes or Cocoanut fibre for six weeks. Here the bulbs will root freely, when the pots can be moved into a cool, airy greenhouse or frame. Very little fire-heat should be used in the house

where the Hyacinths are growing. A dozen good sorts for the greenhouse, all of which can be obtained at a reasonable price, are: White, La Grandesse, Leviathan (tinted blush) and Mme. van der Hoop; rose, Cardinal Wiseman and Moreno; red, General Pelissier and Prince Albert Victor; blue, King of the Blues; light blue, Czar Peter and Queen of the Blues; purple, William the First; mauve, Lord Balfour; and yellow, Yellowhammer. All the above are varieties with single flowers.

Crocus.—In the garden the Crocus is one of the earliest bulbs to open its flowers in spring. By growing a few in pots in the greenhouse or window, the delicate blooms will open several weeks in advance of those outside. Being so easily grown, and coming up year after year without being disturbed, the Crocus has for years been very popular in small gardens; in fact, before the bulbs of Daffodils and Tulips became so cheap the Crocus was the principal bulbous plant grown for flowering in spring. Pots 5 inches in diameter are a useful size to employ. Ordinary potting soil, such as that used for Geraniums and Fuchsias, is suitable for the Crocus. Having placed a few broken crocks and rough soil in the bottom of the pot for drainage, fill it up to within 1½ inches to 1¾ inches of the top with the potting compost, making the whole fairly firm. Next place the bulbs on the soil; ten bulbs is about the average number to place in each pot—seven round the sides and three in the centre. To complete the potting cover the bulbs with soil, leaving a quarter of an inch to half an inch space for watering. Subsequent treatment consists in plunging the pots outside for a time, and eventually removing them to the garden frame or cool greenhouse. Water whenever necessary, especially when the pots are full of roots. The number of varieties is numerous, a few of them being Mont Blanc, pure white; King of the Blues, dark purple; Sir Walter Scott, large white flowers, striped lilac; Cloth of Gold, rich yellow; La Majestueuse, white, striped purple; and Royal Blue, dark blue. In addition to the above sorts, several species of Crocus are admirably adapted for growing in pots, a strong point in their favour being that they flower several weeks in advance of



THREE POTS OF THE PAPER WHITE NARCISSUS, ONE OF THE EASIEST TO GROW AND EARLIEST TO FLOWER.



A GOOD POTFUL OF BEDDING HYACINTHS.

the varieties. Four of the best are *C. biflorus*, white, striped black (the variety illustrated); *C. chrysanthus*, yellow; *C. Imperatii*, violet, fawn and black; and *C. Sieberii*, purple.

Paper White Narcissus.—Both for cutting in midwinter for room decoration and as a pot plant in the greenhouse, the fragrant pure white flowers of the Paper White Narcissus are highly prized. The bulbs are cheap, 9d. to 1s. per dozen being the average price for good bulbs. Many of these will send up two flower-spikes, a few three. Provided there is a little manure in the soil, that used for Fuchsias and Geraniums will do equally well for Narcissi. Place three bulbs in a pot 5 inches in diameter and four or five bulbs in pots 6 inches across. Cover about two-thirds of the bulbs with soil pressed only moderately firm. Those who only grow their bulbs to obtain flowers for cutting will find it much less trouble to cultivate them in boxes 3 inches or 4 inches in depth. Place the pots or boxes outside and cover to a depth of 4 inches with old ashes or Coconut fibre. Examine them in about a month, and, when the pots are nicely filled with roots, remove the bulbs to a frame or cool greenhouse, shading the yellow growths till they become green. They may then be brought into the warm greenhouse and gently forced, or if in a cool house the flowers will be rather longer in making their appearance. Paper White Narcissi require plenty of water throughout the growing season. As soon as the flower-spikes show, weak manure water will be very beneficial to them.

CHICORY OR WITLOOF.

This excellent and wholesome salad is not very extensively grown in this country, but on the Continent it is a great favourite. It is a splendid

subject for supplying salad material in midwinter when little else is available, and for this reason should be included in every good garden. On the Continent, too, the blanched leaves are frequently cooked and served as a vegetable. It is easily raised from seeds, which should be sown in rows 12 inches apart in the open at the end of May. Thin the seedlings early to 6 inches apart in the rows. Cultural requirements during the remainder of the summer will consist in hoeing between the rows to keep down any weeds that appear. The plants will grow in almost any well-worked soil, but prefer that of rather a heavy nature.

At the end of the autumn the roots will rather resemble Parsnips, and will then and onwards through the winter be ready for blanching. A very simple way of doing this is to procure a deep wooden box, such as a Tate sugar chest, place 2 inches of soil in the bottom, then stand the roots, after removing the old leaves, in an upright position and 3 inches apart each way on this soil. As the work proceeds fill in with light soil, Coconut fibre refuse, or leaf-soil to within 1 inch of the crowns of the roots. When the box is full give one watering through a fine-rosed can, cover the box over with mats to exclude all light, and place in a greenhouse where the temperature ranges from 45° to 55°. New leaves will soon be formed, and as they are produced in the dark will be beautifully blanched. Water will not be required during the time the roots are in the warm temperature. When about 4 inches to 6 inches long the leaves are cut and served in any manner desired. A second crop can be obtained from the same crowns, but the leaves will be small. After being thus forced the old roots are useless and may be thrown away.

THE CULTIVATION OF WATERCRESS.

ALTHOUGH this most popular salad can be successfully grown in a moist and shady corner of the garden, the resulting heads are strong and of poor flavour, and its culture thus is not advised. Those who are fortunate enough to possess a running stream of clear spring water may, however, easily secure an abundant supply of first-class material with but little trouble. Boards on edge should be inserted across the stream at distances of about 6 feet, so as to check the current and ensure a depth of 2 inches or 3 inches of water. In the bottom place a 1-inch-thick layer of clean road sand, and in this dibble the pieces of plant. Young shoots easily root, and if any trouble is experienced in procuring plants, bunches of Watercress purchased from the greengrocer will answer very well. Spring is the best time to plant. Weeds must be rooted out as they appear. Cut the heads just under the water, then others will quickly appear. Do not allow the plants to run to seed. It is a good plan each spring to thin out the growths, discarding old and straggling ones and retaining the compact and robust shoots. If the boards advised above are firmly fixed they are useful for placing stout planks upon, so that the Watercress can be gathered with comparative comfort.

THE TOWN GARDEN.

CHRYSANTHEMUMS AFTER FLOWERING.—The utility of Chrysanthemums for culture in town greenhouses has been repeatedly proved to demonstration, and one has only to visit the homes of many amateur gardeners to find to what a remarkable degree of excellence the blooms may be brought in circumstances which are the very reverse of favourable. The plants provide their grower with occupation throughout the whole of the year, for before the blooms are past for one season cuttings must be prepared for insertion to produce plants for the following year. As soon as they have finished flowering the stems should be cut down to within 9 inches or 1 foot of the pot, and the soil must never be permitted to become dry; on the contrary, it must be watered with more than ordinary care, for the object now is to develop fine sucker growths from which cuttings will be made in due course. Small pots, each providing accommodation for one cutting, should be crocked and filled with soil consisting of three parts of sound loam, one part of sweet leaf-mould, and one-tenth part of sharp sand, and the base of the cutting must in all cases rest upon the bottom of the hole bored for it. The soil should be made pleasantly moist, and the pots can be placed in a case in the greenhouse or even in a cold frame; but, in the latter event, more than usual care must be exercised both in ventilating and watering in order to guard against damping.

LILIUM AURATUM.—The Golden-rayed Lily of Japan is the most beautiful of the superb family to which it belongs, and fortunately it is one of the most satisfactory for cultivation in our town homes. At the present time magnificent British-grown bulbs are procurable which, if correctly potted and managed, will produce splendid blooms in the spring. They are rather more expensive than the imported bulbs offered in the spring, but they seldom suffer from disease and invariably give superior flowers, so that they are really the cheaper in the long run. A compost of three parts of fibrous loam, two parts of thoroughly decayed leaf-mould and one part of rotted manure, with sufficient sand to keep the whole mass open, answers admirably. The crocking of the pot must be carefully done, but the depth of drainage material must not be great, as low potting, to afford ample space for subsequent top-dressings, is most desirable. A little moss should be put over the crocks, then a thin layer of soil, and finally a layer of sand for the bulb to rest upon. As soon as this is completed the bulb is set in position, coarse sand is scattered over and round it, and sufficient soil is used to just cover the top. A gentle watering to settle the soil finishes the operation. As growth advances, it is necessary to add top-dressings of rich compost, for if this is kept pleasantly moist it will encourage the formation of stem-roots, by the aid of which the plants will feed freely and bring far greater satisfaction to the grower. If the potting has been done so high that layers of compost cannot be added in the manner suggested, zinc collars should be fitted inside the rims and reach 3 inches or 4 inches above them, and the increased space available can then be filled with the compost for the stem-roots.

PLANTING IVY.—The smaller, ornamental-leaved Ivies are excellent plants for covering the walls and fences of town gardens, and the present is probably the best time in the whole year for planting. If possible, loam should be provided, so that the plants shall have every chance from the start; but if this is unavailable and the ordinary soil is poor, some sweet manure must be added. Firm planting is imperative and the soil should be heavily watered as soon as the work is finished. Subsequently frequent syringings of the stems will keep them plump and fresh, and the plants will make grand progress in the growing period of the following year.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLEASURE GROUNDS.

PROCEED with the planting of shrubs and trees as the weather permits. In planting, it is very often necessary to trench the ground, even if plants are shallow rooted. Rhododendrons and Azaleas should be planted in quantity, and the soil need not be all peat if the ground is prepared by digging it three good spits deep, keeping the top spit on the surface and breaking it up as fine as possible. The material for planting in should consist of a small quantity of peat, a like quantity of leaf-soil (one year old), some sand or road grit and some well-rotted cow manure. When planting, place a good shovelful on the bottom of the shallow hole and fill in around the roots with three parts of the mixture to one of the soil. Plant as shallow as possible and ram the soil quite firm around the plant.

Conifers and Shrubs of all kinds that are being planted or lifted are much benefited by a little good material being used, and when planted it is a good thing to mulch with leaf-soil. This keeps the frost from the roots and gradually yields to the soil some plant food.

ALPINE GARDEN.

Watch for small bulbs making new growth, and set traps for slugs and put black cotton over pet plants that the birds attack. When plants have outgrown the space allotted to them, it is best to break them up and replant, at the same time using some fresh soil, which should be well rammed into the little crevices, as the tiny roots of rock plants always search for moisture.

Cover over to keep from wet *Androsace Chumbyii*, *A. sarmentosa* and *A. villosa*, or they will suddenly damp off. A few of these should always be kept in the alpine house or in dry frames; have some protecting material in readiness for any plants that may require it.

KITCHEN GARDEN.

Seakale that is intended for forcing should now be taken up and the ground trenched so that all the roots are cleared away, and in this process save all the long, straight roots to form cuttings. The roots must be from 6 inches to 8 inches long, and the top of the root be cut square and the bottom obliquely. These will callus over and make heads during the winter. Those crowns that are left for late use should have a shovelful of ashes (coal) placed over them; this will keep slugs away.

Forcing.—Force now Rhubarb, Chicory, Dandelion and Mustard and Cress. Some of each should be put into the forcing-house every week, or as often as may be necessary to maintain a constant supply.

FRUIT GARDEN.

Lose no opportunity in getting on with the lifting and planting of fruit trees, and also start pruning. See that no woolly aphid exists. If its presence be detected, go round with some methylated spirit and with a stiff brush paint the insects; this will kill them. Spray all the trees with Richards's XL All Wash. I have used this for some time and find nothing better, and the bark of the trees is well preserved. Every portion of the tree must be done.

Fruit-room.—If all the fruit be now gathered, look over all early varieties and eject those that are unsound; but the less the fruits are handled the better. Keep plenty of air on to dispose of moisture. Label all the varieties so that each sort can be found at a glance.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CHOISYA TERNATA.—Considering what a beautiful plant this is when it does well, it is surprising that it is not more grown. The flowers and foliage both have a rather pleasant scent and are welcome for cutting. The best place to flower it is in a cool greenhouse. It is one of the plants that so easily strike root that nurserymen can always supply it; but if required to be propagated at home, now is the time to take cuttings of the half-ripened shoots and place them singly in pots in a greenhouse or frame.

ORCHIDS.

Winter Treatment of Calceolines.—Some growers complain of not being able to keep the bulbs of *Calceolines* *cristata* plump from autumn to spring. The chief reason, doubtless, is attempting to keep the plants in an almost root-dry condition, which invariably ends in shrivelling. It is a mistake to attempt anything like dryness at the roots, and a frequent supply of water should be given. Some who keep the roots dry give quite a cool-house treatment during winter, and, of course, in such quarters root moisture would soon work mischief. The best and safest temperature, in order to allow of the moisture recommended, is one of about 60° at night.

HARDY FRUITS.

The weather has been very open and mild, just what is required by those who have a considerable amount of planting to do, and all that is required in that way with home-grown stock is, or should be, now completed, but with bought-in stock the case is different, as one has to wait until the nurseryman is ready to send, and as there have been no frosts sufficiently severe to influence the fall of the leaf, the chances are that orders given will not have been dealt with so early as usual. The most one can do is to be as nearly as possible prepared to deal with the trees when they come to hand.

Figs.—To make certain of a crop of outdoor Figs, protection of the wood is necessary, and to this end the branches should now be unfastened from the wall, tied loosely into bunches and brought down as low as possible into a position where they can be conveniently covered with some dry material, such as Bracken, over which some old Russian mats may be lightly bound. The branches should then be fastened securely either to the wall or to stakes, but the nearer they can be brought to the wall the more shelter they will get from rain, and the protecting materials should always be kept as dry as possible.

KITCHEN GARDEN.

Endive.—It will not be safe to leave Endive out on wet, exposed borders after this date, especially in the case of the curled varieties. With repeated rains and frosts the centres soon get crippled and practically spoiled. Any surplus plants of the latter section still out of doors may be blanched where they stand by simply covering them with flower-pots or by placing broad slates flat on them when in a perfectly dry state. In lifting the ordinary broad-leaved plants, see that they are quite dry; then tie up each plant with a piece of matting in order to prevent any soil finding its way into the centres.

FLOWER GARDEN.

Roses.—Hedge Briars for budding next summer should be planted without delay. Trim and plant as soon as possible after they are taken from the hedgerows. When trimming, leave on every bit of fibrous root; but the old, stumpy root may be reduced. Burnt earth and garden refuse should be freely used in the soil when planting Briars. T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

NEW PLANTS.

CYPRIPEDIUM DANTE MAGNIFICUM.—This is one of the highly-coloured section, and forms a very beautiful addition. The large dorsal sepal is beautifully shaped, being narrow at the base and spreading rapidly towards the apex. The white ground is very heavily striped and blotched dull crimson, with some green at the base. The petals and lip are of the usual shape, the green ground colour being heavily overlaid with glossy brownish crimson. Shown by Lieutenant-Colonel Holford, C.I.E., C.V.O., Westonbirt, Tetbury, Gloucestershire. Award of merit.

Cattleya Fabia Cooksonie.—A very beautiful and refined-looking flower of medium size. The sepals and petals are pure white and of the usual shape, the labellum being large and beautifully coloured. The interior is bright carmine, with a narrow white margin, this extending well into the throat and there suffusing with the richest yellow. Outside, the pale carmine and yellow colours are delicately veined with white. Shown by Mr. N. C. Cookson, Oakwood, Wylam-on-Tyne. Award of merit.

Cattleya Clarkie intensa.—This is a highly-improved form of the well-known *C. Clarkie*, the colours of sepals, petals and labellum being much richer than in the type. Shown by Mr. L. de Rothschild, Acton. Award of merit.

Sophro-Cattleya Doris.—This is at once the largest and brightest member of this bi-generic family, and is fully worthy of the high honour conferred on it. The flowers are of the usual shape, but large and of good substance. The general colour is a vivid orange scarlet, this in the labellum being suffused with very rich golden yellow. The plant shown was carrying four fully-developed flowers and appeared to be of a vigorous character. Shown by Mr. J. Gurney Fowler, Woodford. First-class certificate.

Nephrolepis amabilis.—A very handsome new Fern with gracefully arching fronds some 2 feet in length. The compoundly forked or tasselled side pinnules are of the multiceps form and render the new-comer distinctly pleasing and beautiful. Shown by Messrs. J. Hill and Sons, Lower Edmonton. First-class certificate.

Nephrolepis rufescens Mayii ornata.—A very striking and distinct form of this well-known species, and a welcome addition to the Fern tribe. Shown by Messrs. H. B. May and Sons, Edmonton. Award of merit.

Begonia Clibran's Pink.—A very charming addition to the winter-flowering section of Begonias, and one likely to become immensely popular by reason of its delightful habit of growth and the profusion of large, pure salmon pink blossoms which adorn the plant. Little more than 15 inches high when shown, the plant develops a large head of blossoms above the handsome leafy growth, which constitutes so admirable a setting to the flowers. The variety possesses the merit of great charm, combined with an ever-popular shade of colour and absolute distinctness from all existing varieties. Shown by Messrs. Clibrans, Altrincham, Cheshire. Award of merit.

Chrysanthemum Purity (Japanese).—A pure white variety of large exhibition size and fulness, the drooping florets giving the bloom a very handsome appearance.

Chrysanthemum Hon. Mrs. Lopes (Japanese). A pure yellow variety, good in colour, florets of medium width and drooping, the flower-head almost a counterpart of the last named in form. A handsome variety of good finish. Both came from Mr. Martin Silsbury, Shanklin, and each obtained an award of merit.

Chrysanthemum Sylvia Slade (Single).—The flower is of large size, and the florets, which are coloured a reddish carmine, are encircled with pure white at the base, thus rendering the variety most distinct.

Chrysanthemum R. F. Felton (Decorative).—Colour intense golden, very rich and telling, and the flower-heads are borne on stout and stiff stems.

Chrysanthemum Hetty Wells (Decorative).—A pleasing and distinct variety, in which the predominating colour shades are pink and bronze. These were exhibited by Messrs. William Wells and Co., Limited, Merstham, and each obtained an award of merit.

All the above were shown before the Royal Horticultural Society on the 10th inst., when the awards were made.

PRIZES FOR READERS. NOVEMBER.

FLOWERS FOR A SMALL GREENHOUSE IN WINTER.

A First Prize of FOUR GUINEAS,

A Second Prize of TWO GUINEAS,

A Third Prize of ONE GUINEA,

And a Fourth Prize of HALF-A-GUINEA

are offered for the best essays on the above subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The essays must reach this office not later than Monday, November 30. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

THE GLASTONBURY THORN.

Mr. J. A. Brage of Sadorow, Chard, sends a flowering spray of the Glastonbury Thorn. He writes: "My Glastonbury Thorn has always blossomed hitherto on Old Christmas Day; but this year, by way of a change, it is now (the 7th inst.) in full bloom. I enclose a branch."

FLOWERS FROM NORTH DEVON.

As evidence of the mild weather experienced on the beautiful coast of North Devon, Mr. R. Nethercott sends some flowers cut from the open garden. Among them are some lovely Sweet Peas of many shades of colour. Although lacking somewhat in the brilliancy of the earlier season, they are still very effective. Very pretty were the varieties of that useful annual Delphinium Consolida, with rose-pink and purple-blue flowers. The *Potentilla*, which was raised from seed collected in the Himalayas, is *P. nepalensis*, an old favourite in gardens with its deep crimson flowers. It is also known as *P. formosa*, and while most of the forms of it are of somewhat straggling growth, there is a

compact little variety in cultivation called *P. nepalensis* var. *nana* with somewhat lighter-coloured flowers. The typical plant is closely allied to that other garden favourite, *P. argyrophylla*, from the same region, and seedlings spring up spontaneously round old flowering plants. *Salvia farinacea* is an interesting, if not particularly showy, plant. It is a native of Texas, and has been in cultivation for over half a century. Growing to a height of about 3 feet, it is of branching habit, with smallish ovate leaves and long, interrupted inflorescences of violet-blue flowers. The noticeable feature of the plant is the densely white tomentose calyx, which is sometimes tinged with violet. It may be raised from seed sown indoors in March, and, after planting out, soon comes into flower, lasting till cut down by frost. Except in warmer localities, it seldom sets seed; but plants may be kept through the winter by means of cuttings struck in the autumn.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Protecting Tulp bulbs from mice (*B. D. T.*).—Red-leading the bulbs should certainly prevent the mice from taking them. Moisten the bulbs, then roll them in the lead so as to thoroughly coat them with it. Red lead will not injure the bulbs.

Bulbs in grass (*West Sussex*).—We presume the bulbs are in woodland grass where the soil is deep or of a strong character, and therefore promotes excessive vigour in the coarser types of grasses. There is no reason why you should not mow the grass until the moment the growths of the plants appear, or in certain circumstances you may cut away the roots of the grasses—the more vigorous ones in particular—as late as January, by skimming the surface with a sharp turfing iron. This is, of course, a somewhat drastic measure on the face of it, but you would find plenty of living roots remained to supply a fresh sward in good time. In certain instances, where much coarse herbage obtained, you could fire it during the late autumn months; but we could not advise you to do this without knowing at what depth the bulbs were originally planted. Your difficulty is increased by the length of time over which your bulbs would flower.

Violets with diseased leaves (*M. E. R.*).—You should spray your Violets with a solution of paraffin emulsion or arsenate of lead, 3oz. to 10 gallons of water. Wet the under-sides of the leaves as well as the upper.—G. S. S.

Lychnis chalconica (*C. L.*).—The above species of *Lychnis* is not a difficult plant to grow by any means, but it has a decided preference for rather strong, moisture-holding soils. As yours appears to be of the opposite nature, this is probably the reason of the failure. If you raise seedlings of the plant quite freely, and arrange these about 8 inches asunder in a group of any size required, you may have better success. By deeply digging out the soil and introducing at 9 inches deep a heavy layer of cow manure, you should not have much difficulty in growing this plant, even in light soils. Old plants that have been divided are not usually a success; but seedlings have much vigour. Sow the seeds in the open thinly in

drills, and when the plants are a few inches high transplant them to their permanent places.

THE GREENHOUSE.

Sowing annuals and perennials in cold frame (*Alan*).—Many annual and perennial subjects may be sown now and grown on in a cold frame, particularly such as *Antirrhinums*, *Caotery Bells*, *Carnations*, *Digitalis*, *Eschscholtzias*, ornamental Grasses of sorts, *Linums*, *Lupines*, *Malvas*, *Pentstemons*, *Potentillas*, *Polyanthuses*, *Primroses* and *Stocks*. Sweet Peas sown in a frame may be planted out in the spring when frosts are over, and will flower sooner than those sown out of doors.

Cacti culture (*W. E. B.*).—The only book on Cacti we care to recommend you is "Cactus Culture for Amateurs," by W. Watson, curator of the Royal Botanic Gardens, Kew, price per post, 5s. 4d. The book is of a complete character and is profusely illustrated. As to Cacti growers, there are very few; these plants have a very limited sale. You will get well served by Messrs. H. Cannel and Sons, Swanley, Kent, as they have a very large collection of all varieties. The firm would, on application, no doubt send you a list of their collection. The book is published by Upcott Gill, Strand.

Treatment of *Vallota purpurea* (*M. N. B. D.*). This plant should be encouraged to make its growth now, and for this reason it should be given a good light position in the greenhouse and be watered when necessary. If the pots are full of roots a little weak manure water occasionally will be of service. With this treatment the plants will grow freely and build up good bulbs for next year's display. Though the plants are to be watered when necessary, you will, of course, understand that even if growing freely they will not need the same amount of water as in the summer when moisture dries up so quickly. *Vallotas* are rather apt to lose a few of their leaves immediately after flowering, but their place is quickly taken by others, that is if the roots are in good condition. With regard to the *Hippeastrum*, you may gradually lessen the water supply, but as it was a seedling so recently it must not be dried off altogether. It should in the winter be kept in a structure maintained at a temperature of 50° to 60°, and be given just enough water to keep the soil slightly moist. By the month of February additional water may with advantage be given. Next year, as the bulb will be much larger, it may be safely kept dry during the months of December and January. As your plant is in a 6-inch pot, it is not likely to need repotting, but when required this may be carried out just as the plants are ready to start in the new year.

ROSE GARDEN.

Rose foliage diseased (*Rev. G. R. B.*). Your Roses have a bad attack of the orange rust. Rose growers do not pay much heed to this fungus, as it rarely appears until after the first blooming and is usually confined to the Hybrid Perpetual group. All the same, it is very unsightly and doubtless weakening to the plants for them to prematurely lose their foliage. You can only pick the leaves up and burn them, and next spring, as soon as new growths appear, spray with a solution of sulphide of potassium. If you observe any of the rust on the wood, paint the spots with methylated spirits and water in equal parts.

Perpetual-flowering Crimson Rambler (*Captain C. F. O.*).—The new variety Flower of Fairfield has been highly recommended, but we have not yet flowered it ourselves, therefore cannot pass any opinion upon it. If you desire something new in the way of rambles try *Goldfinch* and *Tausendschon*, or *Delight* and *White Dorothy*, or *Paradise* and *Joseph Billiard*. All of these are very lovely, and each pair would flower about the same time. If you desire Roses of continuous flowering propensities the following would be best: *Alister Stella Gray*, *Longworth Rambler*, *Grüss an Teplitz*, *Rosette de Legion d'Honneur*, *Mme. Alfred Carrière*, *Belle Vischysoise* and *Trier*.

Climbing Roses for a greenhouse (*W. H., Rhyt*).—If you desire strong-growing Roses for your purpose that will give you some

good button-hole blooms, the following would be very suitable: Climbing Kaiserin Augusta Victoria, Climbing Niphotos, Climbing Mrs. W. J. Grant and Climbing Liberty. If you have a rather small greenhouse and desire a continuous production of buds, a selection should be made from the less vigorous sorts, such as Lady Roberts, Bridesmaid, Mme. Abel Chatenay and Richmond. These could be grown in large pots and placed on the front stage and trained up the roof. In a year or two the roof will be partly covered with a rich growth. What are known as extra-sized plants grown in pots would give you the best results.

Rose Gruss an Teplitz with extra dark blooms (*Caer Lindfeld*).—We think this is the effect of very bright sunshine; in fact, some of the petals seemed almost burnt. We should say the colouring arises from either the above-named cause or your soil has a special influence upon the Rose. This frequently happens. Some varieties are scarcely recognisable when grown in different soils.

Rose foliage turning brown (*D. B. Allwork*). The foliage sent has been attacked with the Rose slug-worm. It is the larva of one of the sawflies, and it devours the upper skin of the Rose leaf and makes the latter eventually turn brown and shrivel up. The slug-worm can be killed by spraying the bushes with Hellebore Wash, and in winter you should have the surface soil beneath the plants burnt and fresh soil put in its place.

Potting up standard Roses (*W. H. S.*).—There is no difficulty whatever in the potting and re-potting of standard Roses. Do not on any account put them into pots too large to save trouble in re-potting. A pot Rose, be it standard or dwarf, should never be repotted until it needs it, and that is when its pot is full of roots. We should say you would require 9-inch pots the first season; these are known as 16's. The next year, if the plants need re-potting, give them a size larger, and so on until you have them in 13-inch and 15-inch pots. You will probably not need to exceed this. The varieties you name will do very well in pots. Be careful to use some good compost, consisting of three parts fibrous loam and one part old manure well broken up. A 6-inch pot of bone-meal should be added to a barrow-load of compost. Some growers prefer to give the bone-meal after the trees have been established twelve months; then it is applied to the surface and just pricked into the soil. After the trees are frost in October, they should be kept outdoors until frost threatens. It is a good plan to grow them entirely outdoors the first year, but if you desire to bring them into the greenhouse they must only be given a very moderate temperature at first. When roots are active and new shoots are growing rapidly, more heat may then be given. When potting prune the heads back to about 9 inches to 12 inches from where budded, and they will not require much more pruning the first season.

TREES AND SHRUBS.

Increasing Cratægus Pyracantha (*H. Schone*).—Cratægus Pyracantha may be increased either by means of cuttings or seeds. Seeds may be collected at once. They should be separated from the fruit and sown thinly in well-drained pans of soil, and be stood in a temperature of 50° to 60°. The compost may be made up of two parts of fibrous loam, one part of leaf-soil and one part of sand. The seeds may germinate next spring or they may lie in the soil for a couple of years. Cuttings may be made from young shoots 3 inches to 4 inches long in August or September, and be dibbled into a bed of soil in a cold frame similarly composed to that recommended for seeds. The bed must be made quite firm and the cuttings firm also when inserted. Protect from frost and keep quite close until roots are formed, which is usually about the following March or April.

Scotch Heather from seeds (*E. M. M.*).—The raising of Heaths from seeds is tedious, and in the case of Scotch Heather, which might be procured in quantity cheaply, it would be more advantageous to purchase plants, and either propagate from these by division, each portion with a few rootlets attached making a plant, or by cuttings of the small tips put into peaty soil surfaced with sand, watered down, and placed in a frame to root. If you still prefer raising the Heather from seeds, sow the latter as soon as ripe, if they can be obtained, on the surface of peaty soil with some sand intermixed with it. Give the merest surfacing with soil of the same kind. If the seeds are sown in the open, choose an exposed part of the reserve garden for the purpose. If in boxes, merely keep in a frame

during the winter. When the seedlings appear weed carefully, and when they can be readily handled transplant into similar soil until ready to plant out. You will have some time to wait before you can secure plants of any size from seeds.

Pruning Clematis Jackmanii (*G. May*).—You may cut your plant of Clematis Jackmanii back to within 1 foot of the base of the wood that has been formed this year. The work may be done early in February. The only large-flowered white Clematis that can be grown with little or no pruning is *C. montana*. The flowers are about 2 inches across. You can, however, obtain several white-flowered forms of *C. Jackmanii*, of which Jackmanii alba and Snow Queen are good ones. These, of course, will require pruning.

Destroying tree-stumps without blasting (*J. R.*).—You can destroy tree-stumps by boring holes in them 1 inch in diameter to a point somewhat beyond the centre. The holes should be three parts filled with saltpetre and then filled up with water and tightly corked. After three months have passed remove the corks, fill the holes with paraffin and then set on fire. By this means they will gradually smoulder away. Pine needles are not of any value for manure, or not of so much value as leaves from deciduous trees; in fact, they are poisonous to many forms of vegetation.

Climbers for east wall (*E. T. Cripps*).—You will find the following climbers suitable for your east wall: *Jasminum nudiflorum*, *Prunus triloba*, *Hydrangea petiolaris*, *Cratægus Pyracantha*, *Ceanothus veitchianus* and *Escallonia macrantha*. The latter three are ever-green and all grow rapidly, except the *Hydrangea*, which is a little slow for the first year or two. If you desire a more rapid grower, *Cydonia japonica* or *Rosa bracteata* will be suitable. If you give them good material at planting time, they ought to thrive well in the border.

Shrubs for Bournemouth (*F. M. S.*).—A selection of shrubs for the position you mention about Bournemouth would be as follows: Evergreens—*Lanrutinus*, *Euonymus japonicus*, *Tree Ivies*, *Escallonia macrantha*, *Olearia Haastii*, *Veronica Traversii*, *V. buxifolia*, *V. speciosa* and varieties, *V. Stuartii*, and, in fact, any shrubby *Veronica*, *Rhododendrons* in variety, *Berberis stenophylla*, *B. Darwinii*, *B. japonica* and *B. Aquifolium*. Good deciduous subjects are *Philadelphus coronarius*, *P. Lewisii*, *P. Lemoinei*, *Weigela* in variety, *Flowering Currants*, *Forsythias*, *Spiræa arguta*, *Brooms* in variety—especially *Cytisus scoparius andreanus*, *C. albus* and *C. præcox*—and *Genista virgata* and *G. etnensis*. When planting, dig large holes and give a little good soil to enable the shrubs to make a good start.

Trees and shrubs for North Ireland (*F. M. S.*).—It is not possible to give you accurate information on this subject without knowing something of the local conditions—whether the soil is light or heavy, wet or dry, and so on. For trees you cannot do better than plant similar ones to those which are found to thrive in that particular neighbourhood. For light ground Scotch Pines, Austrian Pines and Birches ought to succeed, whilst for heavy ground common Ash and Austrian Pines might be used. Shrubs similar to those recommended for Bournemouth would succeed, except that if the district is very cold you might leave out the *Veronicas*. *Vitis inconstans*, or *Ampelopsis Veitchii* as it is frequently called, will be suitable for your wall. The common Irish Ivy is the quickest-growing Ivy, while a good companion for it is Clematis Jackmanii.

KITCHEN GARDEN.

Exhibition vegetable points (*J. L. H.*).—In the paragraph in THE GARDEN for August 15 last, to which you refer, while the principal kinds of vegetables exhibited at the Shrewsbury Show were specified, nothing was said as to the points awarded to each dish or kind. There the maximum number of points each dish can obtain, no matter what kind, is seven. In the Royal Horticultural Society's Code of Judging, maximum points range from seven to some kinds, six to others and five to others. But it is not easy to determine how far this latter scale is fair or generally adopted, as it is based more on table value of a vegetable than on difficulty of production. The most difficult kinds to grow well of those named on August 15 are Celery, Leeks, Cucumbers, Carrots, Peas and Onions. Then come Potatoes, Tomatoes, Cauliflowers, Parsnips, Beets and Marrows, as all being the more easily produced. We should

apportion to the first-named six kinds maximums of seven points and to the others six and five maximums. As to what number of points on this scale each dish would get in a competition would depend on quality.

Celery diseased (*Seaside*).—Your Celery is badly infested with a fungus (*Phyllosticta apii*) that is somewhat common this year. If all the plants are like those of the sample sent there is not much hope for the crop. To prevent the fungus spreading all the leaves should be cut off and burned.

Potatoes diseased (*T. E.*).—The Potatoes sent are suffering from two or three troubles. They appear to have "grown out" owing to wet weather following ripening, to have been attacked by one of the forms of Potato scab, but not that called the black scab, and to have served as a feeding-ground for millipedes and slugs. Can you send a few more for further investigation?

FRUIT GARDEN.

Apple diseased (*Mrs. E. J. B.*).—The Apple has been attacked by the Apple scab fungus (*Fusicladium dendriticum*), which caused the formation of scabby spots upon the fruits, and these spots have served as aress through which other fungi have been able to gain an entrance and produce decay. The thing to aim at is to prevent the attack of the Apple scab fungus upon the fruit, and as this not only attacks the fruit, but the leaves and branches as well, it is a difficult thing to do. All dead wood, twigs as well as branches, should be removed and burned during the winter, and the tree should be drenched with a solution of iron sulphate made by dissolving 25lb. of iron sulphate in water to which sulphuric acid is added (1 pint). Pour the acid on the iron sulphate in a wooden vessel, then add the water gradually until 50 gallons have been added. In the spring spray the tree with Bordeaux mixture just when the leaves begin to develop, and again when the petals have fallen. The Bordeaux mixture must be used at half the strength of that used for spraying Potatoes. The variety is Cox's Orange Pippin.

Pruning standard and half-standard fruit trees (*F. C.*).—As regards standard trees of Apples and Pears, whether growing in the orchard or garden, provided there is plenty of head room for expansion, the system now generally practised and acknowledged as the best suited for this class of tree is that of thinning out and regulating the branches at winter pruning, with no summer pruning or stopping of the current year's shoots either in summer or winter. This system of pruning entails less labour, and results in the crop forming chiefly on the outside branches of the tree, with usually very little fruit in the middle. Half-standard trees may be treated in the same way with equal success, provided there is plenty of room for expansion. After saying this in favour of the thinning out process, or the extension system of pruning as it is termed, we must not be understood as condemning the closer pruning (understood as spur-pruning) of half-standard trees. No doubt the practice entails more work; at the same time the restriction of growth which follows the adoption of this system enables the grower to plant a larger number of trees per acre, with a heavier yield as a compensating factor. When trees are pruned on this principle, every main branch of a tree becomes as it were an independent cord, and should be treated as regards pruning in the same way as if they were grown singly on their own roots. The result is that, unlike trees pruned on the extension system, which bear fruit chiefly on the outside branches, every main branch of a tree so pruned is capable of bearing fruit the whole way from the base to the summit.

Fruit trees diseased (*L. T. Simpson*).—The shoot is attacked by the fungus *Nectria ditissima*, causing the disease known as canker. Certain varieties of Apples are more subject to the disease than others, and it would be well if, in planting, these varieties were omitted as far as possible. The fungus is spread by means of spores which are produced upon the cankered spots, and these spores can attack the shoots only through wounds. In this case the infection was through a dead spur.



PEARS.

BEURRÉ ALEXANDER LUCAS (PALE YELLOW).

EMILE D'HEYST (ORANGE-BROWN).

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

HOW TO DEAL WITH FROZEN PLANTS.

NOW that winter is close upon us our thoughts will naturally turn to the protection of those plants from frost which cannot be regarded as hardy in this country. In a well-regulated garden there will not be much danger of frost reaching such plants, as proper precautions will have been taken, but there is always the possibility of accidents happening to the heating apparatus, so that it is well to know what to do with tender plants which frost has reached. It has for some time been recognised that it is not the actual freezing which does the mischief so much as the method of thawing, the point to aim at being a gradual and slow dispersal of the frost.

In a normal plant the cells are filled with liquid which, when frozen, naturally expands, rupture of the cell walls occurs and the whole organism of the plant becomes disorganised. Providing we can thaw such plants sufficiently slowly, it has been proved that the cells will once more assume their normal forms and the plants be not much the worse. Another point of importance is to keep all tender plants, which are in the least likely to be reached by frost, as dry as possible without fear of injury from drought. It has been conclusively proved that a plant whose cells are comparatively empty of liquid will stand some degrees more frost than one of the same kind whose cells are turgid; hence the advice given above.

If by any means frost has reached a plant or plants, our duty is to thaw it as slowly as possible, and there are several ways of doing this. Where the plants are in frames the utmost care must be taken to prevent a sudden rise of temperature, and to this end all mats or other covering must be left on the lights if there is any possibility of the sun shining thereon. Amateurs who possess cold greenhouses, or glass structures but imperfectly heated, may perhaps some morning find that practically the whole of the contents are frozen; and such a catastrophe has even happened in good establishments owing to a sudden defect in the heating apparatus. In such a case the first thing to do will be to turn off the valves of the hot-water pipes and so prevent any possibility of the heating apparatus righting itself. Next procure mats, straw or any other material that will form a dense shade, and cover the glass with these so as to prevent the sun's rays reaching the plants. Then thoroughly syringe the frozen plants with very cold water, and keep up this syringing until it is evident that the frost has been gradually eradicated from the tissues.

This may mean an hour or more of very disagreeable and cold work; but better this than the total loss of a houseful of plants.

The remarks as to gradual thawing apply with equal force to rather tender plants which with some protection will stand the winter outside. Much damage is frequently done to such plants by the premature removal of protective material; it should be left on until there is no doubt whatever that a gradual thaw has taken place. It should also be remembered that the best material for protective purposes is that of an open, coarse nature, which will always contain an abundance of air and will not absorb so much moisture as that of a close nature. If these rather tender plants growing in the open have been severely frozen before protective material was applied, much good may be done by shading them from sunshine and syringing them with cold water, as advised for plants indoors.

A PRETTY WILD GARDEN IN GLOUCESTERSHIRE.

EARLY in September I received a kind invitation from Dr. Bowles to visit his beautiful garden, which is on a hill nearly 700 feet in height, with the vast Forest of Dean in the background and the Cotswolds in the distance. There, too, are seen the River Severn and the Wye, the whole forming a picture that can never be forgotten. The house and gardens are well sheltered on the north, and the wild garden, which is enclosed, occupies about two acres on the slopes and appears to the visitor to be much larger, as the approach is through a secluded wood with choice Ferns, large tufts of hardy plants and Fuchsias, and relieved here and there with peeps of the valley below and the reaches of the river. Dr. Bowles is an enthusiastic amateur and is very proud of his charming garden, and justly so, as he has done much to add to its charms, his chief regret, and one I fully share with him, being that the large, tender plants grow so freely that they entail more labour yearly to protect them, and each year a few are being left, as their size prevents their removal; it is hoped they may prove hardier than expected.

In the wild garden there are three stretches of water on different levels and arranged in a charming manner. The masses of Bamboos of various kinds are splendid, and there are stately trees of the Deodara and certainly one of the finest Araucarias I have ever seen. The tree, when it loses its lower branches, sends out large bushy growths, making it a telling feature in the landscape. Some of the conifers were planted sixty years ago. Immense masses on the water's edge threaten to thrust out others of a more delicate nature. I noticed fine bushes of *Arundinaria nitida*, and the previous owner of the beautiful garden, who planted so largely and with such good taste, evidently never expected such fine growths or the plants to occupy so much space. A very fine

group has flowered this year, and this will make a large gap, but Dr. Bowles and his interesting head-gardener, who had foreseen this, will give a trial to some of the smaller sorts of Arundinaria and Phyllostachys.

Here I saw some fine plants of *Hedychium* in flower. These are lifted and kept dry in the winter, and the *Brugmansias* are used with great taste dotted here and there, the variety mostly used being the large-flowered *Knightii*. To show how the tropical plants thrive here at this time of year, I would mention that noble plants of *Musa Ensete* have made magnificent leaves, which are not broken in any way, though each winter when the plants are housed these are removed for the sake of space. Seedling plants sown two years ago are from 5 feet to 6 feet in height, and there are others, *Musa sineensis* having more colour than *M. Ensete*.

The *Cannas* are important plants. Here they are very fine with a noble old *Pinus excelsa* in the background. There are some fine plants of *Ricinus* in variety and clumps of *Nicotiana* of the larger forms. Among the last-named are some clumps of *N. affinis*, grown for their perfume. The *Eucalyptus* has stood severe winters here and is over 20 feet high, and the *Aralias*, of which *A. papyrifera* does well, are very fine. Japanese Maples are quite a feature. In the spring and early summer the *Iris* plays an important part, and I think in future will do more so, as Dr. Bowles is gradually weeding out large masses of *Polygonums* that have had too much latitude. From these notes it will be noticed that the wild garden has a fair amount of tender plants which are somewhat prominent, and these I think in time will give way to hardier subjects, as they are equally beautiful and give less trouble. Still, I should regret the loss of the noble *Musas*; but of late years *Chamerops excelsa* and *C. humilis* have made excellent growth and are quite hardy. They have as companions the New Zealand Flax, *Yuccas* and *Agaves* in variety. On the higher banks are grand plants of *Hemerocallis* in variety and clumps of *Agapanthus*.

Considerable use is made of the *Fuckias*, which thrive well under the shade of the larger plants. The Grasses are well represented. *Eulalia japonica* thrives excellently, also *Arundo* conspicuous and others. The *Spiraeas* are also well represented, and there are fine examples of the shrubby section. Delightful nooks are filled with Ferns such as *Osmunda regalis*. On the outside of the wild garden, leading to the house, some of the best varieties of flowering shrubs are found. Dr. Bowles has recently added to the grounds, and an old wall is a feature with various interesting plants. Much more could be written of Priors Mesne, but my note concerns the beautiful wild garden and trees. G. WYTHES.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

* * * The dates given below are those supplied by the respective Secretaries.

November 26.—Royal Horticultural Society. Exhibition of Colonial Fruits, Bottled Fruits, &c., 1 p.m. to 6 p.m. Lecture at 3 p.m., by Mr. Archibald Brooks, on the "Cultivation of Citrus Fruits." Admission 2s. 6d.

November 27.—Royal Horticultural Society. Exhibition of Colonial Fruits, Bottled Fruits, &c., 10 a.m. to 6 p.m. Admission 1s. Royal Horticultural Hall, Vincent Square.

December 8.—Royal Horticultural Society. Exhibition of Flowers, Plants, &c., 1 p.m. to 5 p.m. Lecture at 3 p.m., by Mr. D. B. Crane, on "Chrysanthemums." Admission 2s. 6d. Royal Horticultural Hall, Vincent Square, Westminster.

National Sweet Pea Society.—The annual general meeting of members of the

National Sweet Pea Society will be held in the North Room, Hotel Windsor, Victoria Street, Westminster, London, S.W., at 3 p.m., on Friday, December 11.

French Chrysanthemum societies.—At this season of the year we cannot do better than draw our readers' attention to the French National Chrysanthemum Society, founded fifteen years ago, and which has done so much to popularise the flower in France. It now numbers 800 members and publishes an interesting and useful monthly journal which is supplied free to members. A much more recently founded society is that called the Association des Amateurs et Jardiniers Chrysanthémistes, whose headquarters are at Paris. This society, too, publishes a monthly journal called *La revue Chrysanthémiste*, issued free to members. To any admirer of the popular autumn flower desirous of keeping an *courant* with what is going on in the Chrysanthemum world, these two publications are indispensable. In both cases anyone interested in Chrysanthemums, either in France or elsewhere, is eligible for membership.

Renovating old Vines.—Will Mr. W. H. Wilson, who wrote the article on the above subject in our issue for November 14, kindly forward us his address?

Sweet Peas in bloom in November.—You may be interested to know that here on the East Coast we still have Sweet Peas in bloom, *Roses*, *Mignonette*, *Gaillardias* and *Geraniums*. Last week we had two good dishes of green Peas, and expect more if the frost keeps off. We also have been gathering good Mushrooms in the fields between us and the sea.—KATHARIN S. HOARE, *Sidestrand Hall, Cromer*.

Ernest Calvat.—This eminent Chrysanthemum raiser still finds favour among his own countrymen and apparently among American growers from what we have recently read in the American horticultural papers. At the Paris Show Calvat's new seedlings were awarded the grand prix d'honneur offered by the Minister of Public Instruction. At Tours he was also awarded an objet d'art, one of the highest prizes at the disposal of the jury. Eighteen first-class certificates were awarded to his seedlings by the Paris floral committee.—C. H. P.

Increasing popularity of the Sweet Pea.—As indicative of the tremendous strides that the Sweet Pea is making in popular favour, we may mention that at a lecture on Sweet Peas given recently by Mr. Horace J. Wright at Carlisle, under the auspices of the Carlisle Horticultural Association, about 200 members were present, the lecture and discussion occupying nearly two hours. When a similar lecture was given by Mr. Wright at the little town of Hailsham in Sussex the audience comprised about 100 persons.

Presentation to Mr. J. Andrews of Woodbridge.—On the 4th inst., at the autumn Chrysanthemum show at Southend-on-Sea, the chairman, on behalf of the society, presented Mr. J. Andrews with a silver cigarette case, suitably engraved, at the same time thanking him for the valuable services he had rendered the society at their annual exhibitions on so many occasions, and for the time he had given the society for many years. Mr. Andrews has been for a long time the principal worker and also secretary of the Woodbridge Horticultural Society, an important show in the Eastern Counties.

Chrysanthemums in Glasgow parks.—In the various winter gardens in the Glasgow parks an excellent display of Chrysanthemums is made every year, and this season they have, as a whole, been extremely good. The number grown at the Botanic Gardens has been considerably reduced to make room for other plants, but many large-flowered and other

varieties have been very good and have made a fine show in the Kibble Palace. At Camphill the blooms have been splendid, and the space devoted to these flowers has been utilised with great taste, good colour groups having been arranged. The blooms are large and of high finish. Bush plants and singles have been increased in numbers and have been very fine. A single raised here and called Camphill is in increasing favour. It has good pale pink flowers. At Tollcross Park, Mr. Wilson, the foreman, has made an excellent display, making the most of his somewhat limited accommodation and showing large blooms and bush plants, both single and double. Miss Wilson is a good deep pink single raised in this park and much grown about Glasgow. At Springburn the show has been one of the best ever seen in this park. A house has been filled with plants grown for large blooms and others in bush form. The display has been very fine indeed, the only drawback being the comparatively small size of the house, which is an annexe to the spacious winter garden. At Glasgow Green, in the People's Palace, there has also been a show of fine flowers, so that the people of Glasgow have no reason to complain of the provision of good flowers made for them.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Iris histrioides flowering early. Following my recent note on the precocious flowering this season of *Iris Vartanii*, it may interest some of your readers to know that *I. histrioides* was flowering freely with me on November 13, although I do not think it has previously flowered here before until after the shortest day.—F. HERBERT CHAPMAN, *Rye*.

Drying and bleaching Pampas Grass.—I should esteem it a favour if any reader of THE GARDEN who has successfully dried and bleached the plumes of this Grass will give me details of their methods. I have always dried mine by shaking it over a warm stove, thereby making it very fluffy, but it never remains so for more than a week or two. Mine is the erect-growing form.—Mrs. P. O.

Apples for the North of England.—The following Apples are some of the best for the North of England. They give a succession and should be planted in large quantities instead of planting a great number of different sorts. Dessert—Beauty of Bath, Worcester Pearmain, James Grieve and King of the Pippins. Kitchen—Lord Grosvenor or Potts' Seedling and Lane's Prince Albert. Dwarf trees are best.—(Rev.) J. BERNARD HALL, *Corbridge-on-Tyne*.

Colour of Chrysanthemums.—Among the many notes about Chrysanthemums which I have read this year, there is one thing I have not seen mentioned, viz., the curious want of colour in some of them. Of course, this may not be the case elsewhere, but here many which ought to be crimson are merely yellow, and pink or deep yellow ones are proportionately pale. For instance, George Gordon is yellow, Margot and Source d'Or cream and lemon-coloured respectively, Miss Chrissy is pale terra-cotta and many others quite unlike their usual colours. The plants are good and flowering abundantly, but were it not for the labels we should not know them again. One glorious crimson, viz., G. C. Child, seems to have become extinct. For two years I have sought it among leading nurserymen without avail, and am inclined to give it up in despair unless some kindly amateur will take compassion and restore to me once more this coveted variety.—C. B. MYERS, *Dunningwell, Millom, Cumberland*.

Comparison of garden features.

There was a singularly artistic bed in Greenwich Park during the month of October. It was about 20 feet by 5 feet, situated in a moist and sheltered hollow, and the soil was the usual made soil of parks. The background of the bed was composed of clumps of the feathery glossy-leaved *Phyllostachys* (Bamboo) in variety, and in the foreground, dotted plentifully between them, were the common Red-hot Pokers (*Tritoma Uvaria*). This combination formed a most beautiful picture, and may be as new to at least some of your readers as it was to me.—J. HEAP.

A prolific Marrow plant.—I do not know if I am justified in writing to you about a remarkable Marrow plant I have had this year. I have cut 115 Vegetable Marrows off one plant, hardly one under 8 inches long and a good size round. Being such a prolific plant I saved one fruit for seed, which I cut at the end of August, and it weighed 19½ lb. I was advised to save another, which I did, and out that the second week in October; this weighed 21 lb. We began cutting at the beginning of July and kept on till after the middle of October. Some of the runners were over 50 feet long. It was planted between the Potatoes, without any manure whatever in the ground, but I kept it fed with manure water. Off this plant at our annual show on Bank Holiday (August) I took second prize in the gardeners' and gentlemen's class with a pair, and also third prize in the amateurs' class with a pair.—H. CAPLEN, Sen., *Petersfield*.

Apple Worcester Pearmain.—The correspondence in THE GARDEN relating to this Apple is very interesting, especially to those gardeners who require a September dessert Apple. We grow several trees of Worcester Pearmain in these gardens, and find it an excellent Apple to follow Irish Peach and Beauty of Bath, both of which are practically over by the first week in September. Unfortunately, the colour of this variety seems a great attraction to the blue tits, these rogues usually sampling the finest fruit; and when the trees are of any size it is difficult to protect them from these pests. In South Devon we find the flavour, when eaten from the tree or a fortnight after storing, to be sprightly and sweet, but after that time the fruit seems to lose much of its crispness. The handsome appearance, however, of Worcester Pearmain will always ensure it a prominent position as a market variety, and as a September dessert Apple it is here preferred to that other beautiful sort, Lady Sudeley.—T. H. BOLTON, *Powderham, Exeter*.

Perpetual-flowering Carnations outdoors.—Now that these flowers are again being very extensively exhibited at the various shows, it may be of general interest to record my experiences with a few plants. Last winter several plants in 6-inch pots were obtained from Messrs. Hugh Low and Co. of Enfield, and, as a greenhouse was not available, they were stood in the window of a spare room where a fire was seldom made. During the cold weather the plants were frequently frozen, but despite this they gave an occasional bloom of medium quality. The second week in May two plants, *Brittania* and *White Lawson*, were planted in the open garden in Essex, and by the end of the month were firmly established. From that date until the end of October not a week passed without at least five flowers being gathered from *Brittania*, but *White Lawson* did not give so many. All the flowers were of good size and colour, although the plants were growing in full sun. Certainly they would have continued to give flowers several weeks longer could they have remained undisturbed, but removal to a new house necessitated the transplanting of the Carnations. Unfortunately, a strict count was not kept of the flowers produced during the months named by *Brittania*, but they could not have been many less than 100. The transplanted specimens I intend to leave outdoors during the coming winter and thus test their hardiness.—H.

MESSRS. CLIBRAN'S NURSERIES AT ALTRINCHAM.

THESE nurseries, situated at Altrincham, near Manchester, and close by Hale Station, rank among the most extensive and comprehensive in the country. We use the word comprehensive advisedly, as it would be difficult indeed to mention a branch of horticulture not dealt with by the firm. Both indoor and outdoor gardening is catered for, and every available inch of space appears to be put to the best possible use without in any way overcrowding the plants. To give readers some idea of the extent of the business, we may mention that no less than twelve distinct catalogues are published by the firm.

At the time of our visit the numerous large glass houses were full of interesting subjects, of which perhaps the new winter-flowering *Begonias* were the most beautiful of all. Readers will be comparatively familiar with the older members of the race, which are all stocked at Altrincham, in addition to several new ones, among the novelties being *Lucy Clibran*, a beautiful orange and salmon variety with double flowers; *Clibran's Triumph*, orange red double blooms and very robust and handsome foliage; and *Bowden Beauty*, large double pink flowers, which are produced in abundance and continuously from July to December inclusive. Of the well-known *Gloire de Lorraine* we noticed a magnificent stock. *Washington*, a lovely double-flowered scarlet tuberous variety, gives much promise of being an excellent subject for summer bedding.

Young Palms entirely filled one large house, and some idea of the extent to which these are raised at Altrincham will be gained from the fact that no less than 240,000 *Kentia* seeds were sown this year, in addition to many other kinds. The beautiful and rare *Phoenix humilis Roebelini* finds a congenial home here, and we noticed quite a large stock of it, the beautiful drooping leaves rendering it very attractive.

Although possibly *Crotons* and *Dracenas* are not grown so extensively as they were a decade or two ago, Messrs. Clibran must still have a heavy demand for them, as thousands of brightly-coloured plants occupied several of the houses. Some of the named *Crotons* are exceedingly beautiful and splendidly adapted for table decoration. We specially noticed *Prima Donna*, with narrow leaves of bright yellow and green; *Belle Kyrie*, twisted foliage; and *Alfreda*, narrow leaves and very vividly coloured. Those who are familiar with the old yet beautiful *Acalypha Sanderi* (*hispidula*) will be interested to know that at Altrincham they have a new one called *A. Clibranii*, which has beautiful variegated foliage that renders it exceedingly useful for decorative purposes.

Of *Bouvardias* we saw no less than 2,000 plants, and *Cyclamen* were being grown on the same extensive scale, some exceedingly good colours being noticed among them. The *Winter Cherry*, as *Solanum Capsicastrum* is popularly called, is a most useful subject for winter decoration, the bright orange red berries and green foliage being most welcome in the winter months. So large is the demand for this plant that the firm find it necessary to grow not less than 4,000 plants every year, the whole at the time of our visit being laden with green fruits, which by now have doubtless ripened and thus taken on their brilliant colour.

Now that the *Chrysanthemum* season is with us, it may be of interest to mention that about 2,000 decorative plants are grown at these nurseries for cut flowers, and exhibition plants are grown on the same extensive scale, all the best and newest varieties being included among them, and all were in the best possible health.

Retarded *Liliums*, *Lilies of the Valley* and other plants are also dealt with for providing their beautiful and fragrant flowers out of season.

Of the cone-flowered *Primrose* (*Primula obconica*) we noticed a particularly good strain, something like 4,000 plants being grown at one time. *Zonal Pelargoniums* are also largely cultivated, and we saw an interesting hybrid between a *Zonal* variety and one of the *Ivy-leaved* section.

Among outdoor plants were *Roses* innumerable, and several thousand climbers are grown in pots, so that they are suitable for planting out at almost any season. *Clematises*, *Passion Flowers* and, indeed, all kinds of climbers in pots seemed to prevail in several houses, a beautiful *Passion Flower* named *Clibranii* especially claiming our attention. This is a lovely shade of crimson, with white anthers, which give the flower a very refined and striking appearance. *Vines* and *Fig trees* in pots are a speciality of the firm, and we saw hundreds of healthy specimens ripening up their wood ready for the winter months.

Herbaceous plants, bulbs, hardy evergreen and deciduous ornamental trees and shrubs, fruit trees and bushes, forest trees, *Carnations* and other florists' flowers, such as *Dahlias*, bedding plants, landscape gardening and horticultural sundries are all dealt with in their respective departments. It may perhaps be thought that with such an extensive business it is impossible to give proper attention to every branch; but so far as we could see everything is divided up into departments, so that even the smallest order will receive prompt attention from the specialist to whose department it relates.

THE FRUIT GARDEN.**THE OUTDOOR CULTURE OF GRAPES.**

PROBABLY no fruit tree is capable of arousing so much interest, curiosity and enthusiasm in its growth as the *Vine*; but, unfortunately, in this country this enthusiasm and interest is almost wholly centred in its growth as an exotic under glass. I wish it were possible to arouse as much interest in its culture out of doors, on cottage and other warm walls; what a vista of delightful pleasure and keen enjoyment such a possibility opens out to not only those amateurs who find the greatest rest and recreation in the pursuit of some aspect of gardening, but also to those artisans and workers who, in ever-increasing numbers, find gardening in their spare time the best and greatest source of recreation and delight. Many are discouraged by the thought that great skill and considerable experience are required in its growth before success can be attained; but this is not so. It is as hardy as the *Virginian Creeper* and just as easy to grow, and the leaves of some of the varieties are equally as handsome in the autumn by reason of their rich, striking colours, to say nothing of the attractiveness and the value of the black or golden clusters of ripe Grapes. There are two simple but important conditions which must be provided before success can be attained. The first is a warm aspect. This is available in all the Home Counties round London, also in the South and West of England and in Wales. The best aspect no doubt is that facing full south; but the *Vine* will succeed very well when planted against a wall facing south-west or even west.

The *Vine* is a lover of warmth, both at its roots and its branches; therefore the soil in which it is planted should be of a warm nature. In fancy I can hear exclamations of disappointment at this statement, as the soil of many would-be growers is of a cold and heavy character, preventing, as it would seem to them, the possibility of their succeeding in the growth of the *Grape* out of doors; but it does nothing of the kind if the means I recommend are taken to improve the quality of the soil and to raise its temperature. This may be done in the first instance by

effective drainage, laying down pipes 3 feet deep for the carrying away of surplus moisture. One drain will be sufficient. The next thing to do will be to trench the ground 2½ feet deep over a 12-foot square where the Vine is to be planted. Before starting the trenching there should be prepared a good cartload of material ready to mix with the natural soil, composed of the following ingredients: To five barrow-loads of turfy soil add two barrow-loads of old bricks broken to the size of hen's eggs, one barrow-load of old plaster or mortar rubble, one barrow-load of well-decayed manure, half a barrow-load of quarter-inch bones and the same of fresh lime and of bone-dust. This must be thoroughly mixed with the natural soil in trenching, and a similar proportion of the worst and heaviest soil thrown out and wheeled away as trenching proceeds, to make room for the new soil. This treatment will raise the temperature of the ground by many degrees, and will form an ideal medium for the healthy growth of the Vine. In the case of lighter soil resting on a subsoil of gravel or some other porous material the drain may be omitted and also the broken bricks; but all the other constituents mentioned should be added at the time of trenching, and some of the poorer soil taken away to make room for the new. It sometimes happens that a path or some other obstruction is in the way, and in this case it must be broken up and relaid afterwards over the border; it will do no harm to the Vine, as the latter likes firm soil to root in.

Planting.—Any time in October or up to the end of November will do very well, or in spring from the end of February to the middle of April. A one year old Vine is the best, and by this I mean one propagated last spring—not a cut-back plant. With a fork prepare a hole, 15 inches square and 4 inches deep, in the border close to the wall where the Vine is to be placed, and have ready a small quantity of finer soil (the same as the border soil, only passed through an inch-mesh sieve) for placing among the roots of the young Vine in planting. Turn the Vine out of its pot

and shake away all the soil from its roots. Cut the ends of the strongest ones back by a few inches, disentangle them all as much as possible, lay them in the bottom of the hole, having pressed it firmly first, spread out the roots evenly, and with the hands place the prepared Vine soil carefully and firmly among and over the roots until the level of the surface of the border is reached.

Shorten the Vine rod to half its length and tie securely to a stake. Early in January it should be again cut to within 3 inches of its base. Early in November place a mulch of half-decayed strawy manure over the roots and round the stem. This will protect the roots against too much wet in winter, which is more detrimental than hard frost.

The Vine may be left without further notice until spring, when I hope to revert again to the subject, giving details of spring and summer culture. The Vine should have a good watering as soon as planted. The only varieties to be depended on for this purpose are the Black Hamburgh, the Sweetwater, Black Cluster, Royal Muscadine and Reine Olga, a new black variety [of great promise.

OWEN THOMAS.

WORKERS AMONG THE FRUIT.

MR. CHARLES ROSS.

As we intimated recently, this venerable and highly-esteemed gardener resigned his position

as head-gardener to Colonel Archer-Houblon, Welford Park, Newbury, Berkshire, at the close of last month, after a service of almost forty-nine years. This estimable gardener, now in his eighty-fourth year, is yet happily in full enjoyment of mental energy and experience. We trust that many years of such mental vigour and of much physical activity may be his. Mr. Ross has, it

may be said, more than any other raiser made his mark on the Apple. He has devoted fully forty years to the work of intercrossing varieties specially with the object of producing, if possible, a superior race of dessert Apples, and, as results have shown, not without material success. No doubt his greatest success was with the Peasgood's Nonsuch and Cox's Orange Pippin cross, two Apples of widely dissimilar character, but from which came the variety which bears the veteran's name, Charles Ross, also The Houblon and Rival, both very fine varieties. Charles Ross has, when it is grown large, very much of the quality of Peasgood's Nonsuch; but when grown small on older trees and not too liberally fed, the fruits have very fine flavour. There are few more striking figures in the world of fruit than this fine old gardener, who has been not only a distinguished raiser of fruits, but a faithful servant for many years.

It has fallen to Mr. Ross to obtain from the Royal Horticultural Society no less than three first-class certificates for Apples and ten awards of merit. Even now he has other fine seedlings to be presented, and some of these will doubtless add to the list of honours. Besides the three named, Welford Park Nonsuch (raised in 1892), Bella, Armored, Atalanta, Mrs. Phillimore, Rival, Paroquet, Hector Macdonald, Encore, Ruddy and Opal are of his raising and are in commerce.



THE APPLE ENCORE, RAISED BY MR. C. ROSS. (Much reduced.)



THE WELL-KNOWN DESSERT APPLE CHARLES ROSS. (Much reduced.)

A very fine late cooking variety is Excelsior; this has not yet been offered to public notice. A few years since the Royal Horticultural Society presented Mr. Ross with a Hogg Memorial medal as evidence of its appreciation of the work he had done in Apple-breeding. Mr. Ross is of Scotch extraction, his father having been head-gardener to a former Earl of Rosebery at Dalmeny, Midlothian.

As a youth he served several years in various good Scotch gardens, including Dalkeith, under the famous McIntosh; and later took the first position as head-gardener at Fairlawn, Kent. While there he planted a *Wellingtonia gigantea* as a memorial of the Celebration of Peace after the Crimean War in 1856. It was in 1860 he removed to Welford Park, and was head-gardener there for the long period named, securing the warm esteem of his employers, neighbours and friends. From their origin till this year he has not missed the Royal Horticultural Society's fruit shows as exhibitor or as judge.

THE KITCHEN GARDEN.

THE ART OF TRENCHING AND MANURING.

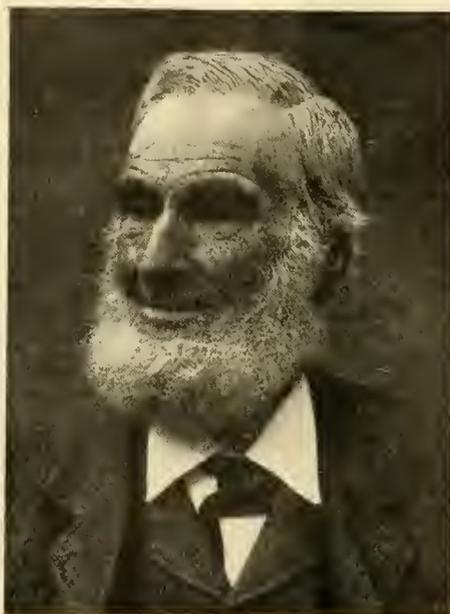
(Continued from page 574.)

USES OF TRENCHING.—As a means towards carrying out the above principles of (1) aëration, (2) regulation of temperature, (3) drainage and (4) soil nourishment the operation of trenching is of the greatest possible value, by reason of the opportunities it affords for pulverising and granulating the soil and for exposing it to atmospheric influences, thus improving both its mechanical texture and fertility and encouraging the healthy action of manures.

How to do the Work.—By trenching is, of course, understood digging the ground at least two spits in depth. In the kitchen garden, trenching three spits deep is desirable; the work should be carried out thoroughly once during each year. Herbaceous borders should be trenched two spits deep every third year at least, and this will give opportunity for the division and replanting of perennials. For the ordinary work of trenching two spits deep, commence by marking out a trench, 18 inches wide, across the surface of the plot or border, and remove the soil dug out to the place where it is desired to finish the work. The condition of the soil should be considered before deciding the question of complete or partial inversion; usually, however, it will be found that what is required is to deepen the tilth by allowing it slowly to assimilate with the barren subsoil, and thus also to improve the latter by the gradual exposure of a portion at a time. Having removed two spits' depth of soil from the first trench, loosen the bottom to a depth of 6 inches. Manuring, on which subject some notes will be found at the conclusion of this article, should begin here. Proceed to mark out the next trench and cut down to the depth of a spit. A sprinkling of Vaporite—against the ravages of the wireworm—may be given over the now equal surfaces of the two trenches. Dig out the remainder of the first spit of the second trench, placing the soil on the top of that already turned into the first trench. Here may be incorporated some other manure or fertiliser. Take out the second spit of the second trench and fill up the first with the soil dug out. These processes will be repeated until the entire plot has been worked, the last trench being filled with the soil removed from the first.

The Use of Manuring.—At the time of trenching, the nature and condition of the soil and the kind of crops to be grown must be carefully considered in deciding what materials are needed for enriching, lightening, &c. Here, again, it will

only be found possible to indicate a few guiding principles, which will, it is hoped, be supplemented by a deeper study of the subject. Lime or chalk is an essential to soil fertility, not only because, except in a few special cases, it provides a real plant food, but because it is necessary for the preparation, retention and distribution of plant foods already to be found in the soil and in manures. If doubt exists as to whether or no a soil requires liming, a mixed sample may be tested by placing it in a tumbler and pouring on it a wineglassful of muriatic acid. If the mixture does not fizz and bubble freely the soil is shown to be in need of lime, and a dressing of this should in some suitable form be carefully applied. The effect of chalk and humus, *i.e.*, the organic matter of soils, upon one another is very rapid. Together their work is of the greatest possible value, both in regard to soil warmth, drainage and nutriment. As the principal object of manuring lies in the maintenance in the soil of a sufficiency of humus, it will be found that dressings of farmyard and stable manure, leaf-mould and green garden crops may almost invariably be applied with safety. When the materials used are not well decayed they should be applied as a



MR. CHARLES ROSS.

bottom dressing only, so as to avoid the risk of injury to roots occasioned by contact with manures in a fresh state. Heavy soils are rendered lighter, more porous and more generally friable by the use of organic manure, while light soils are by the same means helped to retain moisture. The evolution of carbonic acid caused by manuring in this way assists in liberation of potash and corrosion of phosphates in the soil, while it also causes the retention and distribution, as required, of ammonia and of potash. Since nitrate, phosphate and potash are all necessary as plant foods—nitrate for promotion of growth, phosphate for increase in fruitfulness and potash for improvement in quality—the immense benefit of manuring as an indirect means towards plant nourishment will at once be clearly seen. If, in addition, the plant food directly supplied by organic manures, which is relatively small in amount, be carefully supplemented by applying suitable fertilisers of the artificial or inorganic description, a high state of soil fertility will in time be reached, a state which should be easy to maintain by continuing at regular intervals the operations here described, supplementing them by frequent surface cultivation with the fork and hoe.

THE FLOWER GARDEN.

ALSTROEMERIAS AND THEIR CULTURE.

THIS genus of pretty Amaryllids from South America is but poorly represented in gardens, for out of fifty species known to botanists but six are in cultivation, and of these only three are widely known. Judging from Mr. Baker's description of these plants in his "Handbook of Amaryllidæ," there are many that would prove of great interest and value as garden plants, while a few appear to be better than anything we have at present. Several of the strangers are doubtfully hardy, although it is likely they would do well where *A. pulchella* succeeds, and that a light soil and a warm position are all they would require. There is a general lack of absolute hardihood in most of the *Alstroemerias* grown to-day. They may thrive for years unprotected and yet succumb to a protracted frost of unusual severity, or they may fail to survive the frosts of the first mild winter unless the fasciated roots are deeply buried, the soil made firm about them and the growths protected with litter should they appear too early.

A. aurantiaca is the common Herb Lily, an invaluable border plant worth a lot more attention than it generally gets. It bears quantities of orange-coloured, green-tipped flowers, streaked rich bronzy red internally and arranged in umbels. The stems vary from 2 feet to 4 feet in length, according to cultivation. There are several garden forms, of which *aurea* (rich yellow and but faintly streaked) and *lutea* (a pale yellow unspotted form) are good.

A. haemantha is a very highly coloured *Alstroemeria*, with all the good attributes of *A. aurantiaca*. It has deep blood red flowers of similar size and shape. The true plant is somewhat rare and apparently more tender than a spurious plant; really a highly coloured *aurantiaca*. It is the more showy of the whole family, the petals being very broad, expanding fully, while the buds show the olive green tips in relief with the deep red of the petals. It hails from Chili, and was at one time more common in gardens than it is to-day. In cold, wet districts, where it fails to grow well, it should be afforded house-room. *Albida*, its white form, is not a refined plant; the white is a poor grey at its best, and the greenish tips change from green to a nondescript yellow.

A. Ligtu, more widely known under Dr. Phillipi's name, *A. chilensis*, is represented in gardens by a series of very beautiful forms varying from white through pink, lilac and red to crimson. The growths are quite deciduous, attaining a height of 3 feet to 4 feet, bearing large compound umbels of ten to forty flowers, 1½ inches to 2 inches across the petals of each, and often 18 inches across the entire inflorescence. Every flower is regularly striped a darker shade of the same colouring and flushed externally with purple. The finest of this series known to me is the beautiful variety *Mrs. Salter*. The variety *pulchra* is a refined variety of variable colouring, the flowers of which are as regular as a florist's *Amaryllis* and very shapely. These and many other forms of *A. Ligtu* grow well in any light, warm border, requiring the protection of light litter when newly planted and during very sharp, wintry weather, especially if the soil is very wet at the time of freezing. These forms of *Alstroemeria* are invaluable for their yield of cut flowers; sheaves after sheaves may be gathered from old-established cultivated clumps, and they never wear out and lose vigour if they can spread at will or are surface-mulched occasionally. The species is very widespread in Chili, and scores of forms have received distinct names.

A. pelegrina is a more tender species of tall growth, requiring greenhouse treatment and a

THE ROSE GARDEN.

THE NEWER ROSES.

(Continued from page 547.)

NADIA (Hybrid Tea).—I do not know the raisers of this Rose, nor have I grown it, but I have seen it in fine form at several nurseries, and it promises to be good enough for exhibition. Growth, moderate; colour, pearly white, with large petals of good substance; shape, globular and very full.

La France and the habit of Caroline Testout, and, if it combines the qualities of these two Roses, few of us will ask for anything better. It was strongly recommended to me by a German correspondent, so I pass on the recommendation; but I have not grown this Rose.

Pharisæer (Hybrid Tea, Hinner, 1903).—A beautiful Rose, but not often good enough for exhibition; full, long bud—not quite enough petals, perhaps, but very free-flowering. No doubt a cool season will suit it better than the one just past has done. Pale flesh, deeper centre; a fine grower with good foliage.

Princess Marie Mertchersky (Schwartz, 1903).—This is a great favourite of mine. The flowers are large with stout, long petals, and beautifully formed. When better known it is bound to become popular, as it has not a bad fault and at its best is very fine. A good grower and of delicate colour—pale flesh, pink centre. Makes a fine standard and can be recommended as a good all-round Rose.

Queen of Spain (Hybrid Tea, Bide, 1907).—This Rose I must admit has been a trifle disappointing with me. After seeing the raisers put up such fine exhibits one expected great things, but apparently it, too, prefers a cool season. I could not get any point to my flower, the majority coming with a hole in the centre, where the point should have been, very much after the style of Antoine Rivoire, of which Rose, I believe, it is a seedling. It was awarded the gold medal of the National Rose Society.

Reine Carola de Saxe (Hybrid Tea, Gamon, 1903).—A beautiful Rose this, fine shape, colour flesh pink, good all round, being free-flowering and occasionally good enough for exhibition.

Ronde Wilmart-Urban (Hybrid Tea, Pernet-Ducher, 1907).—The trade generally speak well of this Rose as likely to be very useful for exhibition. It is a great flower, pale flesh in colour, yet distinct, of excellent shape, and the plant grows well.

Robert Baessler (Hybrid Tea, Hinner, 1904).—Supposed to be an improved Frau Karl Druschki, but he who so described it must have had a vivid imagination. With me it has done nothing to justify such a description, and I cannot recommend it.

Souvenir de Maria de Zayas (Hybrid Tea, Soupert et Notting, 1906).—This Rose has done well with me, and I can strongly recommend it. The flowers all come a good shape, after the style of J. A. K. Williams, but bright pink in colour, tinted carmine; sweet scent, free-flowering and a good grower.

W. E. Lippiatt (Hybrid Tea, Messrs. Alexander Dickson and Sons, Limited, 1907).—A fine dark

crimson Rose that I can strongly recommend. The flowers are always of good shape and a good colour, but, of course, from its very nature an old flower turns maroon or purple. It has a fine point, plenty of substance, particularly free in the autumn and is strongly perfumed. I am inclined to think it the best dark Rose of recent introduction. I am not sure, but I believe this Rose was exhibited by the raisers on more than one occasion under the name of H. V. Machin.

roomy pot for its well-being. It has slender, leafy stems 4 feet to 5 feet high bearing lilac rose flowers in umbels of ten to fifteen, each flower 3 inches across and 2½ inches long, tipped with a large patch of green externally and heavily spotted purple on the inside of the inner petals. It is a splendid garden plant, well worth the little attention it requires, and reminding one of the more elegant Lilies in its graceful contour and pretty colouring. The plant is an old inhabitant of gardens and several seedling variations are sometimes met with, but none of these equal the old pure white unspotted alba, a beautiful plant bearing large umbels of spreading flowers faintly tipped with green. The forms of pelegrina have very long claw-like cusps and the outer petals are distinctly three-lobed. It flowers in May and June.

A. pulchella is a Brazilian plant with curious flowers of a deep crimson hue distinct from any others in the shape of the blossoms. It has stout stems 2 feet to 3 feet high, bearing small umbels of reddish crimson, green tipped, loose tubular flowers, the petal tips of which are furnished with a long incurving claw. They do not expand fully, hence the rich claret colouring of the interior is not apparent unless closely examined; the inner petals, small and also hidden, are striped, feathered and spotted with brown. It is a singular-looking plant, but possessing a certain type of beauty and resembling *Brodiaea coccinea* in its colour scheme, and also, in some degree, in the shape of its flowers. It dislikes a clay soil, and requires protection in the first season from wintry frosts in early spring as the growths push through the soil. It makes compact tufts and is not so prone to ramble as the other species. I have raised many plants from seeds but have seen no variation whatever, a remarkable feature in an *Alstroemeria*, for all the others have long ago sported forms till it is now impossible to determine where one species ends and another begins. It appears likely that an amateur with the necessary spare time would find this genus an interesting one to study and improve. The species *intercrossa* readily, seed freely, grow freely and their roots would travel round the world if carefully packed, hence there would be no difficulty in securing new species known to exist for extended operations in hybridisation. All of them are interesting, and many of them are markedly beautiful already. Who is to be warden?
G. B. M.

ODONTIODA CHARLESWORTHII GOODSON'S VARIETY.

At the Royal Horticultural Society's Temple Show in May last a considerable amount of interest was evinced in the beautiful crimson-scarlet bi-generic hybrid Orchid named *Odontioda Charlesworthii*. The subject of our present illustration is a highly-improved form of that remarkable plant, the flowers being larger and the colour more vivid. It was shown before the Orchid committee of the Royal Horticultural Society by Mr. H. S. Goodson of Putney on September 29 last and received a first-class certificate.



ODONTIODA CHARLESWORTHII GOODSON'S VARIETY. (Natural size.)

Otto von Bismarck (Hybrid Tea).—A Rose of this name has been expected for a long time; but I understood it was to be blood red in colour. Possibly the donors of the prize (a sum of £150), which was offered for the best Rose raised in Germany, to be called *O. v. Bismarck*, would not wait any longer. Frau Karl Druschki would have been awarded the prize if it had not been white; but the irony would have been too marked. This Rose is described as the colour of

William Shean (Hybrid Tea, Messrs. Alexander Dickson and Sons, Limited, 1906).—From the exhibitor's standpoint it is impossible to speak too highly of this Rose, undoubtedly the largest now in cultivation. It has been wonderfully well shown, not only by the trade, but by some of our leading amateurs, notably Mr. E. J. Holland of Sutton, in whose garden I saw the largest flower of this variety (and that means the largest Rose) I have met. I will not give the figures, as that might lead to controversy. This variety is bound to take a high place among exhibition Roses. Its only fault is that the colour is inclined to run, but perhaps the season has had something to do with it. Its size will make it one of the indispensable Roses.

Yvonne Vacherot (Hybrid Tea, Soupert et Notting, 1906).—A Rose of very different stamp, but of distinct merit. Its great feature is the very beautiful arrangement of the petals, large grand petals, finished off with a fine point, making a very refined flower. The early flowers are quite up to exhibition form, but those that come later lack size. A medium grower; colour, pale porcelain white with a suggestion or suffusion of pink. At its best a very beautiful Rose.

This is the last of the newer Roses that can be said to be exhibition varieties, treating them alphabetically, and I now pass on to the Teas for the same purpose. They, unfortunately, can be counted on the fingers of one's hands.

Dr. Felix Guyon (Tea, A. Mari, 1902).—This Rose has undoubtedly improved, both in size and vigour. On its behaviour with me this year I am inclined to say it is a better Rose than Mme. Vermorel. The colour is coppery yellow, the flower of good substance and the plant is a good grower. Should be more grown.

Friherr von Marschall (Tea, P. Lambert, 1904).—One of those Roses on the border line. A garden Rose first that will sometimes produce an exhibition flower. Fine colour, almost red—dark carmine perhaps best describes it; a good grower and fairly free.

Helen Good (Tea, The Good and Reece Company, 1907).—An American sport of Maman Cochet, pink in colour, that should be worth trying. I have not grown it.

Mme. Constant Soupert (Tea, Soupert et Notting, 1906).—As I anticipated last year when writing of this Rose, directly we could get it propagated naturally, by which I meant outdoors and not grafted under glass, we should find it a strong grower. In habit and general appearance the plant bears a great resemblance to that fine Tea Souvenir de P. Notting, and I should not be at all surprised to learn that that Rose was one of the parents of Constant Soupert. It is good enough and large enough to join the select body of the larger exhibition Teas, which hardly number more than half-a-dozen at the present time. The only fault I can find with Constant Soupert is that the petals are somewhat "papery." Deep yellow, shaded peach; large, well-formed flowers, and a strong grower.

Mrs. Myles Kennedy (Tea, Messrs. Alexander Dickson and Sons, Limited, 1906).—The powers that be—the seedling Rose committee of the National Rose Society—have decided that this Rose is a Tea, so it would be treason to suggest that it is anything else. The colour is delicate

silvery white, with a picotee edge of pale pink. This is a very beautiful Rose; the early flowers come of good size and excellent shape. It was awarded the gold medal of the National Rose Society, and every exhibitor will have to grow it.

Molly Sharman Crawford (Tea, Messrs. Alexander Dickson and Sons, Limited, 1908).—I have known this Rose for some time and can strongly recommend it. It is very distinct, of a beautiful shade of white that has a slight green tint in the younger flowers. Good growth and free flowering. I have no hesitation in saying it is the best Tea of its year; nay, of recent years. It will not be long before it will be recognised as one of the best six Teas for exhibition. I do not think it has been shown for the gold medal.

Paula (Tea, Messrs. Paul and Son, 1908).—Hardly full enough to be often found in the



ROSES GATHERED IN NOVEMBER

exhibition box, this is a beautiful Rose with a Maréchal Niel accent. Its parentage goes back to that variety, a seedling of Maréchal Niel being crossed with a seedling of G. Nabonnand, and Paula has retained the free-flowering characteristics of the latter Rose and the scent of the former. It is a good grower, makes a fine standard, pale sulphur yellow with deeper centre, and will be popular as a hardy garden Tea. Recommended.

W. R. Smith (Tea, Smith, 1907).—This is an American-raised Rose of some promise; creamy white, of good shape and size and vigorous in growth. As seen in nurseries it will be useful.

Purley, Surrey. HERBERT E. MOLYNEUX.

ROSES IN NOVEMBER.

The weather is seldom so favourable for our hardy plants in late autumn as it has been this

year. Among these nothing is more beautiful than the Roses. As can be readily seen by the illustration, it has been possible to cut blooms often equal to those of July, and in some cases, owing to the sun being less powerful, the rich tints of the blooms surpass those produced in summer.

The name Hybrid Perpetual suggests at once perpetual-flowering Roses, but few of this section bloom to any extent in autumn. The chief exception with us is that beautiful white Rose Frau Karl Druschki. It cannot, however, be considered a true Hybrid Perpetual, as one of the parents is a Hybrid Tea. No collection of Roses is complete without this variety. Other Hybrid Perpetuals we obtain a few good flowers from in autumn are Dupuy Jamain, bright cerise, and Victor Hugo, rich crimson.

HYBRID TEAS.

It is in this section that we find most of the beautiful autumn-flowering Roses. There are also plenty of buds and flowers on those of the Tea and China sections, but they do not open or stand the weather so well as the Hybrid Tea varieties. In addition to their value for the garden, they are unrivalled for cut-flower decoration, as can be readily seen by the enclosed photograph, which was taken on the 3rd inst., all the blooms being cut from the open air. The following are the most notable sorts at present in flower, given in approximately their order of merit: La Tosca, Richmond, Augustine Guinoisseau, Mme. Abel Chatenay, Caroline Testout, La France, Liberty, Grûs an Teplitz, Earl of Warwick, Mme. Ravary (the best yellow bedding Rose I am acquainted with; the buds are excellent for sprays and buttonholes, being a rival to William Allen Richardson, but not quite so deep in colour; this was introduced in 1899), Viscountess Folkestone, Mrs. W. J. Grant, Lady Ashtown (rose, overlaid with silvery pink, the base of the petals tinted with yellow; pointed buds, free and constant; one of the best of the newer Roses for bedding and of good growth) and Mme. Jules Grolez.

TEA ROSES.

At the present time the majority of these are clothed with buds and flowers, but being more tender than the Hybrid Teas they are susceptible to rain and damp nights experienced at this season of the year. When required for indoor decoration it is better to cut the buds and allow them to open in water. Several varieties are very good at present; the first two of the undermentioned are classed as Teas, although from their growth I suspect there is some Hybrid Tea blood in them. General Schablikine, coppery red, free-flowering, vigorous growth for a Tea Rose, an excellent bedding variety. Curallina, deep rosy crimson, beautiful in the bud for cutting, the strongest-growing Tea Rose with which I am acquainted, free and constant bloomer till spoilt by frosts; introduced in 1900. Souvenir de Pierre Notting, golden yellow, shaded apricot, large full flower, very free, plants at present covered with blooms.

Other good Tea Roses at present in flower are Anna Olivier, G. Nabonnand, Mme. Lambard and Princesse de Sagan. Baby Dorothy: This delightful little Rose is usually described as a dwarf Dorothy Perkins; the flowers, however, are several shades deeper in colour.

Surrey.

A. O.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE GREENHOUSE AND CONSERVATORY. — Anticipating next year's demands, I am just making a sowing of Cyclamen seeds in shallow boxes and pots and placing them in a temperature of about 55°. In such circumstances this subject will do well. I am also at the moment repotting Lilliums in anticipation of requirements early next season. Winter-flowering Carnations will now be making a free



1.—A YOUNG PLANT OF PARSLEY SUITABLE FOR LIFTING AND POTTING.

display, and if placed in a light position will continue to do so for some time. Herbaceous Calceolarias and Cinerarias, both of which are very susceptible to the attacks of injurious insect pests, need constant supervision and careful culture at this period. The best position for these is on shelves near the glass. Those who have inserted cuttings of Zonal Pelargoniums (Geraniums) are prone to keep the soil too moist at this season. They should only be watered when the soil becomes really dry, and then one copious application should suffice to keep them in a satisfactory condition for some time.

The Cold Frames.—In mild and open weather the frames should be well ventilated, especially in the case of those containing Calceolaria cuttings, as this assists to keep the atmosphere dry. Never hesitate to overlook plants repeatedly, removing decaying foliage and anything of a nature that is likely to promote decay. When watering has to be done—and this is very necessary in the case of many pot plants—this should be done in the morning, so that superfluous moisture may be carried off before late afternoon, at which time the frame-lights will need closing.

The Vegetable Garden.—Lettuces and Endives, which are so valued at this period of the year, should be sheltered from frost in some way or

other. All full-grown plants must have a covering in winter, and there is nothing better than dry leaves. If these subjects are tied when dry and a good mulching of leaves or Fern litter placed round about them, it will keep them in good condition. Continue to dig and trench vacant ground as opportunity offers. In frosty weather it is a good plan to wheel on to such quarters an abundant supply of good manure, so that when the weather becomes more genial digging operations may be proceeded with apace.

The Hardy Fruit Garden.—Recently-planted fruit trees, if not already mulched with manure, should have this attention at once. Cuttings of Gooseberries and Currants may be inserted at the present time. This is an easy means of increasing these useful subjects, and the cuttings root readily enough.

Window Gardening.—Hyacinths that were placed in glasses some time since are now giving evidence of growth. The foremost of these should be removed from their dark quarters to light and airy positions, as from this time forth their growth should go on unhindered. Plants indoors need watering with increasing carefulness. Avoid the use of cold water, which will have the effect of chilling the plants. I invariably use tepid water when this has to be applied, and the results are then all that can be desired. Plants that are growing away freely, such as Dutch bulbs in pots, as soon as they are removed from the plunging material should be freely watered.

The Hardy Flower Garden.—Complete as soon as possible the lifting and replanting of subjects in the hardy flower border, taking care to mulch the plants as soon as the planting has taken place. Borders that were somewhat impoverished, which the grower has not cared to interfere with this season, will derive considerable benefit by a heavy mulching with some good lasting manure. This should be thoroughly decayed, in which case the effect will not be unsightly. The present is an excellent time to form a rock and alpine garden—these are becoming increasingly popular, and deservedly so—and any beginner who desires to make his garden more than ordinarily interesting will be well advised to have even a small portion of his garden allocated to this purpose. Take advantage of every favourable opportunity to sweep the lawn, using a good Birch broom. This will have the effect of distributing worm-casts, and if the lawn be well rolled subsequently the result should be in every way satisfactory.

D. B. C.

HOW TO PROVIDE A WINTER SUPPLY OF PARSLEY.

In many gardens it is a comparatively easy matter to procure winter quarters for Parsley in a position sheltered from the cold and cutting winds of the north and east. During the late autumn and throughout the winter season the aim of the cultivator should be to keep the plants growing, and this may be assured by planting in well-worked soil of a light and rather dry nature. We make two or three sowings during the year, and for winter supplies find a

May sowing answers our purpose better than any other. We are quite aware that some growers make a sowing so late as July and succeed remarkably well with the crop; beginners, however, can hardly expect to do as well. The seeds are usually sown thinly in drills about 1 inch deep in rows 1 foot or rather more asunder. Parsley derives considerable benefit from frequent applications of soot in the growing period. Assuming the seed was sown during the summer months, the plants should now be useful pieces with which to deal and be quite equal to the specimen shown in Fig. 1. When lifting these plants take care to get down well underneath them, or the prospects of success may be jeopardised. We always use a fork for lifting Parsley and find that this answers the purpose very well.

We may safely anticipate long spells of hard frosty weather, and during such periods our outdoor bed, even though it may be in a warm aspect, will be likely to fail us. For this reason measures should be taken in anticipation for providing supplies of Parsley throughout the winter by other means. Many growers lift and replant their Parsley in rather deep boxes of good soil, and these are placed in a cool greenhouse or cold frame, from whence frost may be excluded in hard weather, especially by observing care in covering the latter structure. Other growers, again, make good use of large pots for this purpose, a few such pots providing a useful supply where the demands of the house are not excessive. Fig. 2 represents three plants potted up into a 9-inch pot. The latter should be crocked carefully and open soil of a rich kind be used for the repotting. Pot rather firmly and water in the plants immediately. Afterwards stand them in the cool greenhouse or frame, covering the latter in frosty weather with mats.

A system we much prefer, because of its simplicity and the ease with which the plants can be managed, is that of planting out Parsley in cold frames. In Fig. 3 we have a small frame in course of being planted with lifted plants of Parsley similar to those seen in Fig. 1. When planted in a cold frame it is so easy to give Parsley the advantage of ventilation in mild and open weather. We plant Parsley in frames for winter use about 8 inches apart. Fig. 4 represents a plant raised in heat in the early spring, grown on well during the summer and early autumn, and then lifted intact and placed in a 10-inch pot. This is a very simple means of providing a



2.—THREE PLANTS SIMILAR TO THAT SHOWN IN FIG. 1. POTTED UP INTO A POT 9 INCHES IN DIAMETER.



3.—A NUMBER OF PLANTS INSERTED 8 INCHES APART IN A COLD FRAME.

bountiful supply of their ever-welcome leaves and assures the grower a continuous supply for a long time to come. A few such plants should be ample for small households.

Growing crops outdoors may be protected by placing boards on either side of the rows, or by embracing the whole of the bed by the same means and covering the plants with mats during frosty weather.

HOW TO TREAT BEDDING PLANTS IN WINTER.

VERY often inexperienced persons lose many bedding plants during the winter months through wrong treatment. I have lately seen collections suffering greatly through neglect. Take Zonal Pelargoniums for instance; throughout the autumn there are scarcely any decayed leaves to be found on the rooting cuttings, only a few of the basal leaves; but when the fogs come and the dull, sunless days faded leaves are found in plenty. These leaves, if allowed to remain on the plants, become saturated with moisture which quickly affects the stems of the plants, ultimately causing the entire loss of the latter. Now, in the very best-managed structure some leaves will turn yellow and fade; but in every instance they should be removed forthwith before others near them are affected.

In indifferently-heated structures the difficulty of safely wintering the stock is the greatest; but much care should be taken in the matters of watering and ventilating. It is safer to keep the soil rather dry than too moist. When water is needed give sufficient to quite moisten the whole of the soil through, and then let the latter get moderately dry before applying more; also take care to do the watering in the early part of the day and avoid wetting the leaves. Keep the atmosphere as dry as possible and do not ventilate too freely in adverse weather.

Calceolarias in frames require more air than Zonals and damp is not as great an enemy to them; still, it is advisable to prevent it accumulating in excess in the frames, and to this end take off the whole of the glass lights for several hours during the early part of a sunny day when the air is not frosty.

Marguerites require almost similar treatment to Calceolarias, but frost must be excluded. If, however, either of these two kinds of plants get frozen, keep the lights closed and the glass well covered with mats day and night until the thaw has been complete. So treated the young plants will not suffer serious injury; but if exposed to the air and sunshine while in a frozen condition they will be badly damaged.

Tender Plants.—The more tender kinds of bedding-out plants, such as Coleuses, Iresines, Heliotropes, Mesembryanthemums, Verbenas, &c., are often kept on shelves near the roof-glass of a warm plant house; but during very

cold or frosty nights their position near the glass is a very cold one. The central part—on the stage—of the structure may register 60° of heat while the part immediately under the glass is at freezing-point. No wonder, then, the leaves become sickly and finally fall off. Even if it means the erection of a temporary stage, it would be better to do so and place the stock of tender plants near the centre of the house until the end of January. Some plants of a hardier nature may be put on the high shelves. Very little ventilation is necessary, and all water given should be of the same temperature as that of the house itself. Cold water will naturally lower the temperature

of the soil, which cannot be good for the plants.

AVON.

DIGGING AND TRENCHING.

Every unoccupied plot of ground will be considerably improved if it is at once trenched or at least deeply dug, leaving the surface as rough as possible. By treating it thus many grubs and insect eggs are exposed to birds, and frost will pulverise the soil so that in the spring a light forking over is all that will be needed to ensure a beautiful fine tilth for seed sowing. In ordinary digging beginners frequently make the mistake of inserting the spade or fork in a sharply sloping manner, with the result that the soil is not turned up to the full depth of the tool employed; it is proper to thrust the tool in as straight as possible, and thus take advantage of its full length.

THE TOWN GARDEN.

PROTECTING TEA ROSES.—In those gardens where there is a good amount of fresh air, Tea Roses thrive very well and bring a considerable amount of pleasure and satisfaction to their growers; but the losses during the winter are apt to be rather severe unless methods of protection are resorted to. As a rule it suffices to carefully cover up the junction of the stock and the bud, for if the shoots above get killed back, new breaks will come away with the genial growing weather of the spring. In many gardens ashes are used for this purpose, but as far as one can

see they have no material advantage over the ordinary soil. Whichever is employed should be built well up to the stem to such a height as to cover the union at least 2 inches beneath the surface. It should be brought up with fairly sharp sides so as to throw off the rain, as when this runs down to the stems persistently in the winter, it is as likely to do serious injury to the plants as the frost itself.

LIVE EDGINGS.—There can be no doubt that these are far more attractive in gardens than such "dead" edgings as tiles, bricks or stones; but it is equally certain that they have substantial disadvantages. As a harborage for slugs, snails, and other pests they serve a real if not a useful purpose, and it is well-nigh impossible to keep them clean. However, they are highly appreciated, and it is most unlikely that they will ever go entirely out of favour. Apart altogether from the disadvantage to which allusion has been made, there is one other point that is often overlooked in connexion with them, which is that they demand attention. Some people appear to think that when the plants are put into position they will not require any attention at all, but will continue to grow satisfactorily for an unlimited number of years. Such, as a matter of fact, is very far from being the case, for in almost all instances they demand remaking once every three years, and if this work is due for carrying out this winter, it should either be accomplished forthwith or left over until the spring. The first thing is to lift the plants, and as the weather is now somewhat uncertain, it is wise to do the border in sections so that only a comparatively few plants shall be out of the soil at one time. Directly they are up, thoroughly dig over the soil to a depth of at least 12 inches, and work into the lower part some sweet manure. This done, plant pieces from the outer sides of the old clumps, as the centres are almost sure to be brown, bare and weak. The soil must be thoroughly firmed about the roots and heavily watered when the plants are in position.

THE VALUE OF LIME.—Considering how valuable lime is as a corrector and sweetener of the soil, it is a matter for surprise to me that it is not more extensively used by town gardeners, who rely so largely upon natural manures to maintain the fertility of the garden. The constant use of these things leads to an excess of humic matter and the soil becomes greasy-looking. When this state of affairs prevails the plants will not grow satisfactorily, for although there may be an abundance of food in the ground it will not be available for the plants. Lime will put matters right again. It should be applied generously, covering the surface to a depth of half an inch or three-quarters of an inch; leave it on the top for a few days and then work it in, taking very small spits so as to equalise the distribution. Not only will the lime act upon the humic matter and set free the stores of unavailable food, but it will also destroy the spores of any fungi with which it may come in contact and also the grubs of lurking insect pests. Where natural manures are used exclusively, liming should be had recourse to once in about every five years; but soils differ so much that each cultivator has to ascertain the precise period from his own practical experience. It is sometimes difficult to procure, but a friendly local builder will usually come to the rescue with a sufficient supply for a small garden.

HORACE J. WRIGHT.



4.—A PARSLEY PLANT RAISED FROM SEED SOWN IN FEBRUARY. SUCH PLANTS LIFTED AND POTTED NOW PROVIDE A GOOD SUPPLY OF PARSLEY THROUGH THE WINTER.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

PREPARING PLANTS FOR FORCING.—This will now be necessary. Therefore place a few Roman Hyacinths in heat, some very early Daffodils, a few Azaleas Deutsche Perle and also some of the old Single White. This forces very quickly into flower and is a beautiful clear white. Also place Lilacs, Azalea mollis and Laburnum in a gentle heat, and a batch of Freesias. *F. refracta* alba is the earliest to flower. Retarded Spireas should now have a light position. These are more useful at Christmas than later in the spring. Put in more Lily of the Valley crowns to keep up a succession. The retarded roots should not be put into heat for at least ten days; a cool, moderately-dark position is the best until then. A frame covered with mats or under a cool-house stage are suitable places to start them.

Plumbago rosea or *coccinea* now showing flower should be kept in the intermediate house with a temperature of 60°. This is a fine showy flower for the cold, dark days.

FRUITS UNDER GLASS.

Peaches.—Prune, dress and tie the trees in the early house as soon as possible. Prune away as much of the big wood as possible, remembering it is on the wood of the current year where we expect fruit next year. Do not tie the branches too tightly, but as straight as possible from the base, and allow plenty of room between the shoots. Do not be afraid to prune too much. All thin and weakly wood should be taken out; if not done now it interferes with the growth later on and has to be cut away.

Cherries should be pruned and cleaned and the house got ready. As soon as it can be done, pot Strawberries. These must now be got into cold frames to protect them from heavy rains.

HARDY FRUIT GARDEN.

Cherries may still be planted. Well-drained soil with plenty of old mortar rubbish mixed will be found to be a good growing mixture. Cordon trained trees should be 2 feet apart; fan shape, 15 feet to 20 feet; bush and pyramids, 9 feet to 12 feet. I find Cherries do not like being pruned very much; therefore as much of the pruning as is possible should be done with thumb and finger in the growing season. May Duke, Black Tartarian, Elton Pine, Knight's Early Black, White Bigarreau, Waterloo, Bigarreau Napoleon, Florence, Early Rivers and Frogmore Bigarreau are all varieties that do well here, both as cordons, bush and dwarf trained.

Apricot trees should be cleaned and trained as soon as possible. The more work of this kind that can be done at this season the better, as often such weather comes that it cannot be got on with, and when there is a pressure of work it is sometimes done carelessly. See that no old ties remain; all should be cut and replaced with new.

PLEASURE GROUND.

Autumn Tints have this season been glorious; in fact, I have never seen them so fine. Acers of all kinds may now be planted, and also Berberis Aquifolium, B. Thunbergii and B. vulgaris. B. acuminata, B. diaphana and B. Thunbergii minor are newer varieties and are most beautiful. Among some of the best Acers are A. rubrum, A. dissectum, A. japonicum (Oaksakuki), A. polymorphum var. platanoides and A. pennsylvanicum (the wood of this variety is striped with white lines and is effective after the leaves have fallen).

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

POINSETTIAS.—The most forward of these will now help to brighten up the dull days with their showy bracts. Feeding must be discontinued, but younger stock intended for Christmas decoration should be liberally fed, syringed and fully exposed to all available light. A nice brisk temperature should be afforded now the colder season is here.

Cinerarias.—Plants raised from the earliest sowing will soon be pushing up their flower-stems. The pots by this time should be quite full of roots, and will, consequently, require frequent applications of diluted liquid manure. When subjected to more than an ordinary greenhouse temperature, the flower-stems become drawn up so as to render the plants unsightly.

The Christmas Roses or Hellebores.—A cold frame or even hand-glasses will bring these plants into bloom by Christmas if put on now. Though the plants are very hardy, the glass covering keeps the flowers clean. There are some beautiful varieties, and the pure white sorts are the most valuable. *H. angustifolius* is one of the best; this has large flowers with a fair length of stalk, is a pure white and of free growth. *H. maximus*, the largest of all, is a beautiful flower, but not so pure a white, being slightly tinged with pink. The well-known major is also a beautiful winter flower, having pure white blooms when given glass protection. Good strong plants full of flower-buds may be purchased at a trifling cost from any nurseryman making a speciality of the Christmas Rose; and if potted up now and placed under glass will produce a wealth of blooms from Christmas onwards.

FLOWER GARDEN.

Besides the alteration of some borders and the planting of others, there is not much to chronicle in the way of flower garden work at present, except the gradual digging up of beds that remain empty through the winter, and mulching those herbaceous borders that are in a satisfactory condition and require no alteration.

Pampas Grass.—Now the winter season is last approaching, I may draw the attention of those having young plants of this to the advisability of protecting them in some way. My method is to place some dry Bracken round the collars of the plants to the height of about 1 foot. In this way the plants get enough protection, and they grow away well the next season. I never protect the large clumps, and find that they invariably take care of themselves.

HARDY FRUIT.

Peaches on Walls.—In the northern parts of the kingdom there is often much difficulty in getting the wood of these well matured, particularly during a season like the present, when there has been so little sunshine during the autumn. To assist the ripening allow the trees to remain nailed to the wall, as what little warmth is generated thereby will be of great benefit in maturing the sappy growths.

KITCHEN GARDEN.

Turnips.—The Turnip crop will now have completed its growth, but the roots, like those of many other things, are best when left in the ground till wanted. I do not, however, advise that they should be completely exposed to all weathers, as this tends to rotting at the crowns and to a general falling-off in quality, but they may be kept in the best possible condition by having the soil drawn over the roots. To provide for a supply in case sharp frosts should set in, some portion of the crop may be covered with sufficient litter to keep the frost out of the ground. Late-sown batches may be left to take their chance, as they will continue growing through the winter whenever the weather permits.

T. B. FIELD.

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ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Herbaceous border (Vicar's Wife).—Our chief objection to your arrangement of the plants is the repetition of long lines, and unless the border is situated at the extremity of a lawn, for example, and viewed chiefly from the front, it will savour of formality. We note, too, that you do not include any of the white perennial Marguerites or white Phloxes, and you would do well to embrace some of the white Michaelmas Daisies, such as *ericoides*, *vimineus* and *Purity*, and such blue-flowered ones as *Calliope*, *William Marshall* and *Novi-Belgii densus*. One of the most desirable of blue-flowered plants is *Delphinium Belladonna*, 2½ feet high and almost perpetual blooming. You do not say what Veronicas you possess, but the most valuable is *V. subsessilis*, 2½ feet high, of vigorous growth, and much the best for massing for effect.

Seedling Carnations (Miss E. M. Boghurst).—The better way to have treated the Carnations would have been to layer all the strongest shoots as soon as the flowering was completed, and in this way the rooted layers would have made good plants for setting out in September or in October for flowering again next year. Now, however, it is too late for layering, and the success of transplanting examples of large size will largely depend upon the way it is done. We do not quite understand why the plants "are so out of the ground." If you mean the basal growths and roots are out of the ground, a mulching of soil will suffice; but if the phrase refers to the top growth or stem-shoots, then it would appear that some at least of your plants are of the Tree variety, in which case the shoots on the upper branches or stems may be treated as cuttings. The better way with seedling Carnations is to sow seeds in January each year and plant out in May, the plants flowering a year later.

Tulip bulbs for inspection (E. Strange).—The Tulip bulbs are badly diseased and are not worth putting into the ground; it would be far better to burn them. It is quite probable that new bulbs put into the same soil would be attacked by the fungus which has destroyed these, unless the ground has a dressing of lime, which might check the growth of the fungus.

East border (A. H.).—You do not say whether you wish for flowers or fruit on the wall, and you give no idea of its height or even its length. In much the same way you give no information about the size of the border, and we may therefore give you a list of plants quite unsuitable to your purpose. Why not tell us whether the soil is light or heavy, and, in addition, the width and length of the border? With these particulars before us it might be possible to give you useful advice. In any case the border should be prepared by deep digging and manuring, and this done the planting could follow in due course.

St. John's Wort not flowering (E. R. B.).—It is impossible to give more than general information on this subject without knowing which particular variety of St. John's Wort you refer to, as there are a great many sorts. *Hypericum calycinum*, the common large-flowered one, may be cut over each year. *H. moserianum* may also be cut over fairly hard. *H. patulum* may be cut about half-way back; that is, half-way down the previous year's shoots. *H. Androsæmum* may be cut almost to the ground like *H. elatum* should be treated like *H.*

patulum, and also *H. hircinum*. The small-flowered forms require no more than the removal of the old flower-heads. As a rule, *Hypericum*s blossom freely. If yours are inclined to form weak shoots, give a surfacing of manure next spring.

Sutherlandia frutescens not flowering (*B. R. O.*).—The non-flowering is merely a question of age, and if all is well and the plants given protection for the winter—they will not prove hardy in the open in your district—the strongest should flower in the early summer of next year. The plant, as indicated by its specific name, is of sub-shrubby habit, and youthful plants rarely flower in the first year from seeds, unless the seeds are very early sown and the young plants grown under the most favourable conditions. As a foliage plant in northern gardens it is not to be despised. The plants should be early potted up and wintered in a greenhouse at about 45°. If you bed the plants out next year, you had better plunge them in their pots, as this is calculated to promote an earlier flowering. You would, of course, have to water them during hot weather.

TREES AND SHRUBS.

Name and information about a plant (*J. M. B., Monmouth*).—The specimen you send is *Phillyræa media*. It will be unwise to cut it down this autumn. The most favourable time for pruning such a shrub is April or early May, just as growth is commencing. *Phillyræa*s are, however, rather bad subjects to prune hard back, for although they sometimes break again well this is not always the case, and even if the plant grows it takes several years to make a respectable-looking specimen again. If you cut it down now, it will have to remain in a dormant state until next spring, which will have anything but a beneficial effect on the plant. If at the present time it is a shapely specimen, it would be advisable to leave it alone.

Pruning Heaths (*A. L.*).—It is not advisable to cut Heaths back into old wood, but it is advantageous to shorten them a little annually, not going lower than within a few inches of the base of the previous year's wood. By judicious pruning you can certainly obtain much more shapely plants than is possible without, and if you commence while the plants are young you do not need to resort to hard pruning. Frequently all that is necessary is to remove the old flower-heads within 1 inch or 2 inches of growth. *Daboecia polifolia alba* may be cut back any time during winter and spring, but with such things as *Erica carnea* and *E. mediterranea* you must wait until after the flowers have fallen in spring before you attempt to prune. All the autumn-flowering sorts may be pruned during winter or early spring, the spring-flowering sorts as soon as the flowers are over.

Ericas growing too strongly (*Daisy*).—We advise you to lift the plants at once and pull them to pieces, then replant the best of the tufts and thus afford the *Lilium* more space. You could, of course, cut them back, but we think the replanting would be best. The size of the bed, 6 feet by 4 feet, would be a very suitable one for the *Daboecias*, and they should succeed if you have the bed mulched in hot weather.

Lilac leaves browned (*Mrs. L. R. R.*).—From the appearance of your Lilac leaves we imagine that the plants have suffered from drought; this you may, perhaps, be able to ascertain now if you remove the soil from one side of the roots. Lilacs are improved by pruning, if the work is carefully done. The best time is as soon as the flowers are over. You may then remove suckers and all weak inside wood, so that the strength will be thrown into the permanent wood which is intended to produce flowers. In July the bushes may be looked over a second time and some of the weakest of the current year's shoots rubbed out. A good watering with manure water two or three times during spring and summer will be helpful, while a surfacing of rotten manure is also beneficial.

Name and information about a shrub (*C. H. Goodie*).—The shrub, of which you send a specimen, is *Leycesteria formosa*, a native of the Temperate Himalayas and a near relative of the *Diervillas*, or *Weigelas* as they are sometimes called. It thrives in any good garden soil, but it is not satisfactory in that of poor quality. It may be increased by means of seeds, which are borne freely, or cuttings of half-ripe shoots may be inserted in sandy soil indoors during summer. You can grow it as a specimen bush, or, if planted in rich soil, you can cut it down to the ground each year in March. By this method of culture you will obtain good strong shoots, which will flower well and be ornamental to winter after the leaves have fallen by reason of the bright green colour of the young bark.

THE GREENHOUSE.

Preserving Poinsettias (*A. Reader*).—The best way to preserve Poinsettias is, immediately after they are cut, to immerse the ends for about 1 inch in boiling water for a couple of minutes. This does not prevent the absorption of water by the stems; consequently, the foliage as well as the coloured bracts are preserved fresh. Searing the ends with a red-hot iron has been recommended, but while this prevents bleeding it checks the absorption of water; consequently, while the bracts are preserved in a fairly fresh state, the leaves droop quickly.

Raising Nerine seedlings (*Greyhound*).—The seeds of *Nerines* quickly deteriorate, for which reason they should be sown as soon as they are quite ripe. In a temperature rather above that needed for established plants, the seeds soon germinate and push up their grass-like leaves. Even young plants resent being disturbed at the roots more than is absolutely necessary; therefore a compost of a lasting nature should be chosen. The major portion may consist of good loam, lightened by some silver sand, and, if necessary, by some well-decayed leaf-mould. This last, however, will to a great extent depend upon the consistency of the loam. The first season the young plants should not be subjected to any drying-off process, as the bulbs are so small, but the second year they may be treated as established plants. In three years from seed many of them should flower.

Cattleya Mossiæ (*A. B. C.*).—The flowering season of *Cattleya Mossiæ* is in the summer months. As yours are in such a bad condition, the better way will be to turn them out of their pots, shake quite clear of the old compost, cut off any decayed roots and repot in a mixture of peat sod sphagnum. The pots must be clean and half filled with broken crocks. Care should be taken that the pots used are not too large, for overpotting is likely to prove fatal to plants in poor condition.

Treatment of Calceolaria Burbridgei for form tall plants (*J. M. G.*).—*Calceolaria Burbridgei* is naturally of quick growth, so that it is a simple matter to obtain large plants from 3 feet to 6 feet in height, and even taller. All that is necessary is to shift the plants on as they require it into larger pots, using a fairly good holding compost, such as four parts turfy loam to one part each of well-decayed cow manure and leaf-mould, with about half a part of sand. As illustrating their rate of progress, we may mention that some plants of ours, struck from cuttings in the spring of last year and wintered in 5-inch pots, were in the early spring of this year shifted into pots 10 inches in diameter, and are now about 5 feet high and full of bloom. Of course, they were wintered in the greenhouse, and after potting kept there till all danger from frosts was over, when they were plunged outside. Plants like this can be kept on for flowering year after year, as, if the pots are sufficiently large, they can be assisted by occasional doses of liquid manure or some of the stimulating plant foods now so much used.

ROSE GARDEN.

Protecting Rose William Allen Richardson (*Beta*).—This Rose requires very little protecting; in fact, it will pass through an ordinary winter unharmed. As the position of your tree is somewhat draughty, it may be advisable to bind up its growths with a dry hay-band when a sharp frost threatens, and release them again at mild intervals. You could bind them in an upright position, securing them to a tall stake. At the end of September pinch out the points of the shoots. This will tend to harden them and thus prepare them to stand the weather better.

Roses and mildew (*Mrs. M. G.*).—The varieties you name are not specially subject to mildew, although we cannot say either of them are perfectly immune from the fungus. This pest has, as you say, been very troublesome this year, especially since the first blooming, but we think if you sprayed the plants immediately a few spots are seen with Lifebuoy soap solution you would keep the mildew in check. The various remedies, of which the above is a good one, should be persistently applied as new growths develop if they are to be effectual, and it certainly pays to do this. Half a bar of the

soap to three gallons of soft water is the strength recommended.

Rose Helene Guillot with unripe growth (*Beta*).—It frequently happens that some plants will send up from the base late in the season such a growth as you describe and such shoots are practically useless another year. The best plan is to pinch out the point at once; then at pruning time cut it down to one eye. Nearly always an early shoot starts from this one eye and proves very useful the same year, for it will carry a grand truss of bloom.

Rose Conrad Ferdinand Meyer with blighted foliage (*L. Dinall*).—The fungoid disease which has attacked the foliage is the Rose rust, known also as orange fungus. It is very often met with, and causes little harm excepting that it does not look nice to see the Roses prematurely denuded of their foliage. Next spring, just when the new leaves are expanding, spray them with a solution of sulphide of potassium. If the rust spots appear on the wood, the patches should be painted with a solution of equal parts of methylated spirits and water, rubbing it well in with a sponge.

Rose Gruss an Teplitz failing to bloom (*R. M. Stanley*).—You did wrong in cutting out the old wood at pruning time. This should only be done with the rambler race and exhibition Roses. Our plants of Gruss an Teplitz have had none of the old wood taken quite away, but, of course, it has been shortened. If you preserve the shoots that are made this year and cut them back to about 4 feet from their base and tie these over next spring, you will obtain plenty of bloom, although perhaps it will be rather late. Some growths springing up from the base of the old wood this autumn carried fully thirty buds and blooms in one cluster.

Yellow companion to Dorothy Perkins (*G. H. Ripplin*).—We wish we could say there was a yellow Dorothy Perkins. There is one on the market a white variety of this popular Rose, but at present no yellow. One of the best Roses to plant to bloom at the same time as Dorothy Perkins is *Alister Stells Gray*. This has yellowish white flowers in clusters and is a perpetual bloomer. There is no double crimson Rose of the type of Dorothy Perkins. *Rubin* is a rosy red double flower and *Non Plus Ultra* is a good rich purplish crimson, but these bloom at the same time as *Crimson Rambler*, which is a little in advance of Dorothy Perkins. Gruss an Teplitz is a good scarlet climber for autumnal flowering.

Roses with erect double blooms (*R. Small*).—Of the varieties you name only Joseph Hill and Dean Holo can be said to have large double flowers produced upon erect stems. Some of the others are splendid garden Roses, such sorts as *Mrs. Peter Blair*, *Betty*, *Le Progrès*, *Harry Kirk* and *Mme. E. Boulet*, producing their blooms upon erect stems, and although rather thin they make up for it in profusion. *Paul Ledé*, *Hugh Dickson* and *Caroline Testout* are large and handsome, but their blooms droop a little. It is becoming exceedingly difficult to satisfy all our varied desires, and it is far better to be content to take Roses as they are than trying to obtain what does not exist. The following are very fine Roses and might comply with your stipulations: *Florence Pemberton*, *Mrs. Theodore Roosevelt*, *Antoine Rivoire*, *Captain Christy*, *Corona*, *Dora*, *Hélène Guillot*, *Kaiserin Augusta Victoria*, *Lady Ashtown*, *Mme. Maurice de Luze*, *Lady Falmouth*, *Mme. Émilie Metz*, *Mme. Jules Grolez*, *Marquise Litta*, *Duchess of Portland*, *Mildred Grant* and *Queen of Spain*. If you want extra large double Roses you will have to go to the Hybrid Perpetuals for them, but do not expect much autumn bloom.

FRUIT GARDEN.

Grapes diseased (*W. E. Napier*).—Your Grapes are suffering from a disease termed shanking. No one so far has been able to discover the actual cause of it, but all experienced men are agreed that it results from some over-strain the Vines have been subjected to in the previous year or two. The following causes, or a combination of them, will bring it about: Allowing the Vines to carry too heavy a crop, destruction of the foliage by red spider the previous year, defective root-action, and keeping the border too wet or too dry. It is seldom or ever that this disease attacks a healthy, vigorous Vine.

Apple trees on flower border (*Enquirer*).—If the two Apple trees on your herbaceous border make strong growth, the shade they throw and consequent drip from the leafage in wet weather on the plants beneath would be almost as harmful as the exhaustion of the soil by the roots. If you wish to save the trees, would it not be better to turf down the portions of the border under the trees rather than have in these starved hardy plants? If you wish to keep the border intact, why not have the trees removed, replacing them with tripods of stout Larch poles, over which to train strong climbers or rambler Roses? If you open a trench all round the tree 3 feet from the stems,

cutting off close every root, possibly so drastic a course would kill the tree, and you could then shorten the heads and cover the stems with climbers. But with the trees removed, soil worked deep and manured, then the Larch poles fixed, climbers would do far better than in starved soil.

Nectarines cracking (*Nectar*).—We think it is decidedly a case of scalding the skin of the fruit at the time of stoning. The skin of the Nectarine being smooth and thinner than the Peach makes it more susceptible to this injury. The remedy would be to remove the trellis further away from the glass and to ventilate more freely for a short time at this stage while the sun is hot at midday. When the stoning is over the danger is past.

Book on fruit culture (*W. H. S.*).—"The Fruit Garden," a splendid work recently published, dealing exhaustively with the Apple as well as all other fruits, written by George Bunyard, V.M.H., and Owen Thomas, V.M.H., may be had from this office, carriage paid, for 13s. A useful book, devoted to the culture of the Apple alone, is "The Book of the Apple," by H. H. Thomas, which may be had from the Publisher, 41, Wellington Street, London, W.C., price 1s. 2d., post free.

Walnut trees not fruiting (*Fruitless*).—It is impossible to say why your Walnut trees do not produce fruit. From what you say of the conditions under which they are growing they ought to do well. From their size they are evidently old enough to fruit well, though it is a tree that fruits better as it advances in age. You might try the effect of root-pruning on one tree. This will check growth and possibly result in the production of fruit, though it will prevent the tree from forming such a fine specimen as it would otherwise do.

Mulberry tree injured by an application of agricultural salt (*Lady F. C.*).—The old tree, from the description given, has, we are afraid, suffered serious injury. The hopes of its recovery must rest on whether the roots are strong enough to reassert themselves when growth commences in spring. If they do, it will greatly help the recovery of the tree if a top-dressing of turfy loam (with half a gallon of bone-meal added to every barrow-load) is placed over the roots on the surface as far as the branches extend and about 4 inches deep. In the meantime the best thing to do will be to give the tree two or three good soakings of clean water as soon as possible. This will be sure to wash away some of the saline properties left about the roots.

Nectarine tree unsatisfactory (*J. Heap*).—Judging by the texture and appearance of the leaves, we conclude that your tree is in feeble health and not strong enough to properly nourish and mature so heavy a crop. This, we think, is the cause of the fruit being small and of imperfect flavour. The spots on the leaves are what are termed sun spots, and are caused by a sudden burst of hot sunshine striking on the leaves while they are damp and before adequate ventilation has taken place in the morning. Sometimes the same effect is produced by the over-application of an insecticide or a fumigating preparation. Your best remedy is to replant your tree this autumn in new turfy soil, so as to infuse new strength and vigour into it, and to avoid overcropping in future.

Fruit growing on chalk (*B. T. F.*).—Our knowledge of the Chiltern Hills is too limited to enable us to advise you as to a good position there for fruit growing. Apart from having a suitable site, it is also needful to be near a railway and a good market. These are important considerations. As to what fruit will grow well on chalk, we find in all directions almost every description of hard fruit, Apples, Plums, Cherries and bush fruits do well. Some of our great Kentish and Sussex fruit nurseries are on chalk, and yet they produce fine growth and superb fruit. Naturally, much depends on the shallowness or depth of the surface soil before the chalk base is reached, but even then the surface is full of carbonate of lime. Pears probably are the least satisfactory fruits if the chalk base is near the surface. Look well about your district and note how fruit trees thrive.

MISCELLANEOUS.

Peat moss and horse manure for Mushroom-growing (*H. and S.*).—This has been frequently tried, and, as far as we know, always without success.

Keeping gold-fish during the winter (*Weybridge*).—The best plan to adopt with the gold-fish will be to remove them from the outdoor tank on the approach of frost and place them in a tub of water in a cool greenhouse or dwelling-house; then place them outside again when danger of frost has gone.

Climbers for a garden screen (*D. C.*).—The following climbers will be suitable for your screen: *Jasminum nudiflorum*, *Lonicera japonica*, *L. j. reticulata*, *Clematis montana*, *C. viticella*, *C. Jackmanii*, *Rose Dorothy Perkins*, *R. Hiawatha* and *R. Fea Rambler*. You might use a mixture of these or select any one and use that alone.

Painting the insides of plant-tubs (*H. E.*).—It is not wise to paint tubs inside in which plants are to be grown, and probably St nicholm tar would be quite as detrimental. The best plan is to slightly char them. This is easily done by giving the wood a painting over with ordinary petroleum and then placing a handful of lighted shavings or paper inside. When this is blazing, roll the tub slowly along on the ground until the whole of the inner surface is charred and blackened; then turn

the tub upside down and thus extinguish the flames. Tubs treated thus and painted or tarred outside will last for a long time. Care must be taken not to burn the wood much during the charring process.

Liming a garden (*G. H. Rippling*).—As your garden has been some twenty years in course of formation, we should say a dressing of lime would be very beneficial. You can, however, ascertain whether lime is needed by a very simple chemical test. Take ten or twenty small samples of the soil from different parts of the garden and mix them together; then place a small sample in a tumbler and pour on it a wineglassful of muriatic acid. If the liquid fizzes and bubbles freely, the soil may be taken to contain a sufficiency of chalk. If it is necessary to give a dressing, this should be done in the winter months. Slaked lime should be used at the rate of 6oz to the square yard.

Learning market gardening (*B. W. N.*).—The conditions under which market gardening is conducted in this country differs greatly, because of diverse soil, climatic conditions and labour, from the conditions which prevail in British Columbia. To get needful information concerning those conditions in that colony your best course would be to write to the Agent-General's Office for British Columbia, Victoria Street, Westminster. If you resolve to start as a market gardener here, we should strongly deprecate your attempting to do so from mere book knowledge. It really needs practical training in a market garden for a few years and some practical experience in market selling to fit anyone to start in such a business. However, you may get from the Publisher, 17, Furnival Street, "London Market Gardens," price 1s. 2d. post free, and from the Publisher, 41, Wellington Street, Strand, "Fruit Farming for Profit" and the "Book of Market Gardening," 2s. 9d. each, post free.

Laying out a garden (*Landscaper*).—We have numbered the more important spaces to which you refer and give you some suggestions, but it is by no means an easy task to advise in the case of a site of which we have no knowledge. Could we have seen the spot we should have been in a position to give you more definite advice. The position marked No. 1 would be best if grouped with flowering shrubs such as *Rhododendrons*. No. 2 space could be levelled up and made into a Rose garden, arranging and planting the beds with one variety only. At the house-side a pathway would appear necessary and possibly a narrow border for showy flowering plants. The No. 3 plot could be devoted to grass with choice conifers here and there and a variety of beds filled with choice herbaceous things and bulbous plants, the No. 4 position being devoted to a rock garden extending to the summer-house if need be. As you are willing to pay a fee, cannot you get advice on the spot?

Removing "fairy rings" from a lawn (*Salop*).—To remove "fairy rings" from lawns, water the rings, especially on the outer edge, with a solution of sulphate of iron. Dissolve 3lb. of sulphate of iron in 10 gallons of water and use it when the ground is damp. If the turf is hard, loosen it with a fork previous to use. It will probably be necessary to repeat the watering two or three times at intervals of a fortnight. Another way to clear the ground is to dig out a trench 1 foot deep where the turf is affected, fill up with new soil and return. Well-rotted farmyard manure forms as good a dressing as anything for lawns, while malt-dust, bone-dust, fish soil or sea-sand are also good. If the ground is poor you cannot do better than use farmyard manure now and a mixture of malt-dust and sea-sand next April. The latter should be sown thinly during damp weather. Snot is also an excellent manure for lawns, and may be used two or three times during the year. It should be sown during wet weather. An index is always published at the end of each year to articles and notes which appear in THE GARDEN.

Gold-fish dying (*W. E. M.*).—The disease you mention as having attacked your gold-fish has been frequently noted. It is difficult to account for its appearance, but it may have been introduced with the fish and been practically dormant until the fish were removed to another tank where conditions may have been more favourable for its development. There is really no reason why the Water Lilies should not thrive in your tank, providing they were transplanted carefully. The death of the Apogoneton is probably due to transplanting. It is a good plan with both new and old tanks to change the water frequently, especially where it remains at all stagnant. Whenever possible, it is advisable to allow the water to run continually in and out of the tanks. It is quite probable that your Lilies will improve next year, especially if you give them a little new loam before they commence to grow next spring. The cement ought not to have had any injurious effect on the plants, though a lot of lime in the water might affect the fish. The Lilies ought to thrive in either rain or your well water, as they thrive alike in districts where water is comparatively free from lime and where lime is prevalent. We advise you to run the water out of the tank, clean it well and refill. Any fish that appear to be free from disease should be kept apart from infected ones. Next year it will be advisable to change the water at least once a fortnight if you cannot let it run in and out continually.

Names of fruit.—*W. Martineau*.—1, King Harry; 2, Reineette du Canada; 3, Cox's Orange Pippin; 4 and 6, Lamb Abbey Pearmain; 5, Emperor Alexander; 7, Blenheim Orange; 8, King of the Pippins. —*R. Eddy*.—Allen's Everlasting. —*M. Bavin*.—1, Wellington; 2, Winter Quarrenden; 3, Annie Elizabeth. —*Reader*.—1, Oslin; 2, Cornish Gilliflower; 3, King of the Pippins. —(*Miss*) *E. A. Perkins*.—1, Annie Elizabeth; 2, Belle Dubois; 3, Newton Wonder; 4, Pickering's Seedling; 5, Golden Noble; 6, Golden Spire.

Names of plants.—*Jim*.—1, *Salvia Grahamii*; 2, *S. coccinea*; 3, *Aeclipsis caracasavica*; 4, *Erigeron mucronatus*. —*Mrs. May*.—*Sedum reflexum* var. *monstrosum*. —*J. T.*.—1, *Cupressus lawsoniana aurea*; 2, *Thuja orientalis flifera*; 3, *Picea excelsa* var. *dimosa*; 4, please send when the plant is in flower; 5, *Cupressus lawsoniana erecta viridis*; 6, *C. obtusa*; 7, *Thuja orientalis*; 8, *Cupressus lawsoniana*; 9, *C. (Retinospora) pisifera squarrosa*; 10, *Juniperus communis* var.; 11, *Cistus speciosus*; 12, *Lycium chinense*; 13, Wayfaring Tree (*Viburnum Lantana*). —*J. E.*.—1, *Cotoneaster frigida*; 2, *Taxus baccata fastigiata aurea*; 3, *Thuja occidentalis*; 4, *Abies nobilis glauca*; 5, *Thuja orientalis aurea*; 6, *Cupressus lawsoniana*; 7, *Taxus baccata* variety. —*Marland*.—*Artemisia lactiflora*. —*Frederick Parks*.—1, Cannot name without flowers, probably *Salvia* species; 2, *Berberis vulgaris*. —*Charles F. Webber*.—*Symphoricarpos orbiculatus*.

SOCIETIES.

COLCHESTER CHRYSANTHEMUM AND FRUIT SHOW.

THE annual exhibition in connexion with this society was held in the Corn Exchange and a portion of the Town Hall on the 14th inst. The principal feature of this show is the splendid array of hardy fruit and the great interest displayed by amateurs, and the society is most fortunate in having such an enthusiastic horticulturist as chairman in Mr. O. G. Orpen, the eminent amateur rosarian, and a good committee.

Groups were excellent and above the average as regards quality, the premier position being obtained by Mrs. de Larpent, Loxden (gardener, Mr. Richardson), this being beautifully arranged with a splendid lot of plants of incured blooms and singles at the back. Mr. W. Diaper, Colchester, was a good second. The last-named exhibitor had the best plants in bloom, Mr. H. H. Weatherall being second; Mr. Weatherall was first in the smaller class and Mr. Beard second.

Cut Flowers.—In the Japanese section Miss Willmott, V.M.H., Warley Place (gardener, Mr. Preece), was an easy first with grand blooms, the best being F. S. Vallis, Lady Talbot, Reginald Vallis, President Viger, Bessie Godfrey and Leigh Park Wonder. Miss Willmott also exhibited the best bloom in the show, taking the National Chrysanthemum Society's silver medal with F. S. Vallis; W. E. Eyre, Esq., Braintree (gardener, Mr. Doig), was an excellent second, having fresh flowers of good size and quality. In the incured section Miss Willmott was first with a beautiful stand, the best blooms being Duchess of Fife, Mildred Lynne, Daisy Southam and Embleme Potovenne; W. E. Eyre, Esq., was a close second. For singles Mr. Fincham, Colchester, had splendid flowers, Mr. P. Wollie being second. In the smaller class for amateurs C. Portway, Esq. (gardener, Mr. Stock), was first and H. G. Tetley, Esq., Braintree, second. In the incured section Messrs. Portway and J. Arnold were the leading exhibitors.

Dinner Tables, Vases and Baskets.—There was a most spirited contest in these classes, and no less than eleven tables were shown, Miss C. F. Harwood, Colchester, being first with a delightful arrangement of Mme. A. Chatenay Roses, Lilies of the Valley and autumn foliage; Mrs. H. Turner, Bures, was second, and Mrs. F. Chapman third. Mrs. F. H. Cooke, Birch, was first for baskets, Miss Harwood second, and Mrs. Butcher, Ipswich, third. Miss H. Seabrook, Tolleshunt d'Arcy, and Mrs. Butcher were equal in the vases, which were delightful. For a distinct floral design Mrs. O. G. Orpen, Hillside, West Bergholt, was first with a very choice arrangement of Tiger Lilies and Lilium Harrissii, with Croton foliage forming a cross on a floral base, which was much admired; Mrs. C. E. Rice of Colchester was second. R. G. Francis, Esq., was first with splendid Violets.

Fruit.—For Grapes the Hon. W. Lowther, Campsea Ashe, Wickham Market (gardener, Mr. Andrews), was an easy first with fine bunches of Black Alicante, A. T. Osborne, Esq., being second. The last-named exhibitor had the best bunches of Muscat of Alexandria. For the best collection of Apples (cooking varieties) the Hon. W. Lowther was first, having very fine Bramley's Seedling, Lane's Prince Albert, The Queen and Emperor Alexander; this class contained the best dish in the show, viz., Peasgood's Nonsuch. The second award was secured by Miss K. M. Courtauld, Colne Engaine, who had very fine examples of Gascoyne's Scarlet, Warner's King and Peasgood's Nonsuch. In the smaller class J. L. Godlee, Esq., Wakes Colne, was first and E. F. Boggis Rolfe, Esq., Warmingford, second. The Hon. W. Lowther had the best lot of Peasgood's Nonsuch in a class for these, J. L. Godlee, Esq., being second. Mr. Bullock of Colchester had the best prize in the class for a collection of late dessert varieties was secured by Miss K. M. Courtauld (gardener, Mr. Barthing), O. G. Orpen, Esq., Hillside, West Bergholt, being a close second. For a collection of Pears the Rev. R. W. Chilton, Warmingford Rectory, was first with grand fruits, and for the smaller collection the Hon. C. Hanbury was first and the Hon. W. Lowther second. Mrs. H. de Larpent, Loxden, had the best Doyenné du Comice, this also being the best dish in the Pear classes, the Rev. R. W. Chilton being second. The best lot of cooking Pears came from Mr. W. Strowler, Colchester.

Vegetables.—The best collection in the large class came from the Right Hon. J. Round, Birch Hall, Colchester (gardener, Mr. H. Bishop), the Hon. W. Lowther being a close second and Mrs. S. Webb third. Messrs. Strowler and Harwood were the leading exhibitors in the order named in the class for six varieties.



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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

THE WINTER TREATMENT OF OLD FRUIT TREES.

IN thousands of old orchards and gardens all over the country fruit trees may be found whose condition is most deplorable and which renders them veritable cumberers of the ground. Probably in many instances the best course to adopt with such specimens would be to dig them out and burn them; but this is not always desirable, nor is it altogether necessary, especially if the varieties include such good old favourites as Apples Blenheim Orange and Ribston Pippin or Pear Williams's Bon Chrétien, as it frequently happens that they may be induced to once more produce good crops of fruit of excellent quality by the expenditure of a little time and money.

There is no better time than the present for the overhauling of such trees, and as work is usually not very pressing in the garden at this period, the labour may be well expended in this direction. The branches will be the first portion of the tree to attend to, and usually with neglected specimens these will be found in very bad condition. The growths will be overcrowded; canker, American blight, moss and lichen will probably abound; and possibly some of the wood will be dead. Overcrowding can, of course, be comparatively easily remedied, yet it must be done with intelligence and care, else more harm than good may accrue. The first growths to be removed are any that are dead or badly infested with canker or American blight, following with those which have been allowed to cross and chafe each other. When all such have been got rid of, it is probable that the tree will need very little more thinning; but should it still remain too crowded, the oldest and most worn-out branches should be taken out next. In the removal of growths care must be taken to cut down quite flush with a main branch, and in the case of dead shoots the cut must be made well into live tissue, the wound in either case being pared over smoothly with a sharp knife and then coated over with coal tar, taking care to keep this off the surrounding bark.

Any canker wounds that remain must be carefully pared out with a sharp and strong knife, cutting well into live wood, and these must also be painted over with tar, preferably Stockholm. Bad patches of American blight may be dealt with in the same way. Where moss and lichen are present these must next be dealt with, and where they are at all dense they should be scraped off, together with any loose and dead bark, using a blunt knife or scraper for the purpose. After this scraping and cleaning give the tree a thorough syringing or spraying with the

well-known Caustic Winter Wash, after which it will have a clean and much-improved appearance. Previous to the spraying, all wood and rubbish removed from the tree should be taken away and burned, as thereby any insects, eggs or fungoid germs that may be present will be destroyed.

Having devoted so much attention to the branches, we must next turn to the roots, and it is in the treatment of these that the most good can be done. If possible, the soil or turf should be entirely removed to a depth of 4 inches from the trunk outwards, about as far as the spread of the branches (taking care not to injure the roots), replacing it with some well-chopped turfy loam. Where it is impossible to remove the old soil as advised, much good may be done by forking it up and placing a 6-inch-thick layer of the new soil on top for the same distance from the stem. After the new soil is placed in position, make up a mixture of the following manures: Superphosphate of lime, 10lb.; nitrate of potash, 5½lb.; nitrate of soda, 7lb.; and sulphate of lime, 7lb., and spread this evenly over the surface at the rate of a quarter of a pound to every square yard. This mixture may either be given now or early in the spring, and it is specially recommended for trees that are subject to canker.

Another point not very well known in the treatment of these old trees is the application of liquid manure to their roots during the winter months. This may seem contrary to general ideas, but it has been the means of putting new life and vigour into many a old and apparently worn-out tree. It may be applied strong without any fear of it doing harm.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

* * The dates given below are those supplied by the respective Secretaries.

December 8.—Royal Horticultural Society. Exhibition of Flowers, Plants, &c., 1 p.m. to 5 p.m. Lecture at 3 p.m., by Mr. D. B. Crane, on "Chrysanthemums." Admission 2s. 6d. Royal Horticultural Society's Hall, Vincent Square, Westminster.

December 9.—Perpetual-flowering Carnation Society's Show, 1 p.m. to 5 p.m. Admission 1s. Royal Horticultural Society's Hall, Vincent Square, Westminster.

South-Eastern Agricultural College.—At the recent examination held by the University of London, the following students of the South-Eastern Agricultural College, Wye, presented themselves, and all three were successful in obtaining the B.Sc. (Agriculture) Degree: C. J. Alexander (Kent), W. G. Burgess (Surrey), and R. V. Q. Hart-Synnot (Ireland).

Potatoes in Great Britain.—The preliminary statement regarding the estimated produce and yield per acre of Potatoes and other root crops has now been published by the Board of Agriculture and Fisheries. The estimated total produce of Potatoes for the current year is 3,919,798 tons as compared with 2,977,485 tons in 1907. Of these England heads the list with 2,719,539, Scotland and Wales following in the order named with 1,048,559 and 151,700 tons respectively. In England this year 391,083 acres were devoted to Potatoes as against 381,891 in 1907, the figures for Scotland and Wales being 143,692 and 27,330 as compared, respectively, with 138,888 and 28,141 acres last year. The average estimated yield per acre for 1908 is: England 6.95 tons, Scotland 7.30 tons, and Wales 5.55 tons, the average of ten years being, respectively, 5.75, 6.03 and 4.99.

Pear Dana's Hovey.—This is a rather small, russety Pear, but of soft buttery flesh and very pleasant sweet flavour. It is by no means new, as it has been grown in various parts of England for some years. On stiff soils it is liable to come gritty, but on drier soils and worked on the Quince stock the fruits are sweet and very pleasant eating. It is a midwinter Pear, as the fruits often keep well till January. For some reason or other it has not previously been sent to the Royal Horticultural Society's fruit committee. It was so much liked that on the 24th ult. it received a practically unanimous award of merit. Shown by Messrs. James Veitch and Sons, Chelsea. The variety is said to have been raised by Mr. Francis Dana of Massachusetts, and by him named after Mr. C. M. Hovey of Boston.

A home-made fruit preserve show.—The showing of various American and home-made preserves before the Royal Horticultural Society's fruit committee from time to time led, at a recent meeting of that body, to the strong expression of a wish that a special exhibition, with classes and prizes to suit all sections of competitors, should be annually instituted for the purpose of affording to this description of home industry all possible encouragement. At present this form of industry is largely in the hands of traders who, as a rule, do their work remarkably well. But all the same, it is felt that to every form of preservation of fruit or vegetables as food by private persons, and especially by the working classes, the fullest aid should be given. The Colonies having had several shows specially devoted to their products, and no material benefit to them having resulted, it is worth while turning to home-workers and giving them every possible assistance. On the 24th ult. there was an interesting exhibit of vegetable chutney in bottles from Buckinghamshire, and a large one of fruit products from New York.—D.

Colonial and home-grown bottled fruit show.—A splendid exhibition of Colonial fruits and home-bottled British-grown fruits was opened by the Right Hon. Lord Strathcona and Mount Royal, G.C.M.G., in the Royal Horticultural Society's Hall, Vincent Square, Westminster on the 26th ult. The exhibition was held under the auspices of the Royal Horticultural Society, and proved a great success. British Columbia was represented by a huge and beautiful display of Apples. The Government of Ontario sent Apples, Pears, Grapes and a large consignment of vegetables, the latter comprising Celery, Potatoes, Parsnips, Beetroots, Cabbages, Cauliflowers, Carrots and others, the quality, however, after making due allowance for the long journey, being much inferior to exhibition vegetables staged in this country. A huge collection of Apples, some Pears and bottled Gooseberries, Currants, Cherries, Plums and Raspberries were well shown by the Government of Nova Scotia. The Botanic Section of the Imperial Department of Agriculture, Dominica, staged an excellent group of West Indian fruits such as Limes, Cocoanuts, Oranges, Shaddockes, bottled Guavas

and Bananas. The West Indian Produce Association, Fenchurch Street, London, E.C., also had a very attractive collection of West Indian produce. The New Zealand Government sent a consignment of Apples that had been preserved by cold storage. Among the home-bottled British-grown fruits some attractive displays were seen. Lady Algernon Gordon-Lennox sent a beautiful collection from Broughton Castle, where her ladyship established a small factory in the village last year for the purpose of encouraging the culture of fruit among the cottagers. Mr. W. Poupert, jun., and Miss Edith Bradley also staged good exhibits. Other prize-winners in this section were Miss C. Jones, Orpington; Mrs. W. H. Plowman, Westminster; and Mr. G. H. Jolly, Long Acre, W.C. For home-bottled vegetables (amateurs), Mrs. V. Banks, Park Street, W., and Mrs. W. Parlour, Croft, Dartington, were the prize-winners; and for a collection of fruit jellies and fruit cheese, Mrs. Banks and Miss M. G. Thompson, Potter's Bar, took the prizes. For a collection of jam Mrs. Banks and Miss Thompson were equal first, and Mrs. E. J. Beckett, Aldenham House Gardens, was second.

Dundee allotment gardens.—The plot-holders of the Kinnaird and Stirling Street allotment gardens are concerned at the intention of the Corporation to take the ground for the building of cottages in connexion with a housing scheme they are entertaining. A few days ago a committee of the Council visited the gardens and received the plot-holders, who pointed out the loss they would experience in the event of the gardens being taken over. They also expressed the opinion that other suitable sites could be secured for building. The committee has agreed to have a report on other sites for the houses, so that it is hoped the threatened evictions of the allotment gardeners may not now take place.

PRIZES FOR READERS. DECEMBER.

THE BEST EVERGREEN SHRUBS
FOR WINTER EFFECT AND HOW
TO GROW THEM.

A First Prize of FOUR GUINEAS,
A Second Prize of TWO GUINEAS,
A Third Prize of ONE GUINEA,
And a Fourth Prize of HALF A-GUINEA
are offered for the best essays on the above
subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The essays must reach this office not later than Thursday, December 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE

(The Editor is not responsible for the opinions expressed by correspondents.)

Flowers out of season.—We had on the 25th ult. several Azaleas (mollis) in flower,

also Azalea sinensis, Rhododendron dahuricum, R. ponticum (also several plants of R. noble-anum, which, of course, is not out of season), Erica codonodes (lusitanica), Primroses (blue, yellow and white), many Roses and Fatsia (Aralia) japonica variegata, sprays of which were exhibited at the meeting of the Royal Horticultural Society on the 24th ult.—W. A. Cook, *The Gardens, Leonardslee, Horsham, Sussex.*

Perpetual-flowering Carnations out of doors.—Your correspondent refers on page 583 to a very interesting point on this plant, for although most of the varieties of the perpetual-flowering Carnations have been grown out of doors at Messrs. Hugh Low and Co.'s Bush Hill Park Nurseries during the last winter, thus proving them quite hardy, I think your correspondent is probably the first to grow them in a dwelling-house. It would be interesting to hear if other readers of THE GARDEN have succeeded in this way. Your correspondent's success was possible because he started with good plants in 6-inch pots. I would not recommend the experiment with small plants.—L. J. C.

Placing slates under fruit trees.

May I be allowed to say a word in favour of the practice of placing slates or other material under fruit trees with a view to curtailing their roots? which practice your correspondent Mr. A. H. Pearson so thoroughly condemns in your issue of the 14th ult. I do not suppose for one moment that any advocate of the method would adopt it in growing Apple trees under the conditions of soil which prevail in Messrs. Pearson's nurseries, as doubtless those conditions are favourable to the cultivation of fruit trees; otherwise they would not be grown there. Mr. Pearson appears to have fallen into the practice of condemning customs or methods which are of no apparent benefit in their own circumstances, therefore must of necessity be useless everywhere else, quite regardless of the difference of soil and other conditions which exist in different places. I wonder if Mr. Pearson ever had to grow fruit trees on walls in strong clay loam, with clay to the depth of 4 feet to 5 feet, into which the roots could spread, causing annual shoot growths of anything up to 6 feet in length; or did he ever attempt to root-prune such trees. If he were ever to attempt such a task he would perhaps realise that the plan he so disagrees with can be of some utility. To thoroughly root-prune trees of ten years' growth or so is no light matter under such circumstances, as a trench of 2 feet to 3 feet in width must be dug out to allow an excavation sufficiently large to be made, to get at the roots under the tree, right back to the wall; whereas if the tree is resting on a base of some material impermeable to roots of 3 feet or so square, the labour involved in the operation is considerably diminished, as the necessity for completely undermining the tree is obviated, and directly the edge of the slate, or whatever else is used, is reached all round, one can rest assured there are no other roots that require to be cut through. We have in these gardens several young Plum trees on a wall 6 feet high, planted in a border about 3 feet wide, bounded by a hard garden path. These trees were root-pruned two years ago as well as possible under the existing conditions. One side of the path was taken up to give the necessary room to work. During the present year they have again made shoots of 5 feet in length, despite the dry season. Had the plan I am writing about been adopted when they were planted, the labour of keeping them efficiently root-pruned regularly, till they had acquired a fruiting habit, would have been very much reduced, as will be apparent to anyone who has ever done any root-pruning. Personally, I consider the practice to be of the greatest utility, especially in the case of Peaches and Nectarines where their cultivation has to be attempted in such soil as I have described, and provides a means by which failure may be turned into success, proper attention being given to other matters. Mr. Pearson's simile *re* live eels

in a frying-pan and the roots of fruit trees, taken in connexion with the kind of soil mentioned above, savours too much of the hypothetical.—R. W. DEAN, *Audleys Wood Gardens, Basingstoke.*

What amateurs have done for the garden.—The death of Mr. Martin Smith of Hayes, Kent, removes from horticulture one of its leading amateur florists. Although keeping a staff of gardeners, Mr. Smith was a devoted florist, and the work he did personally among Carnations will live long after him. It is to men such as Mr. Smith, the Rev. Mr. Horner, the late E. S. Dodwell, Samuel Barlow and others who, while having ample means, were or are devoted florists, that floriculture owes so much. These men all found in its pursuit a delight and an attraction that were to them of the strongest.

Happily we have some other good amateur gardeners and florists like them yet; but there is in such work ample room for many others to find enjoyment. Necessarily the amateur who embarks in the cultivation of any one or more kinds of flowers should first fully realise what each kind needs, and, having done so, then proceed to work for improvement and development in such directions as may seem most desirable. The great florists' flowers have been Auriculas, Polyanthuses, Tulips, Pansies, Roses, Carnations, Dahlias and Chrysanthemums; but the work of the old florists was largely limited to the four first-named and Carnations and Dahlias. Of course, any description of flower may be regarded as a florists' flower in the old or recognized sense, if it be specially made the subject of florists' labours, in its development, in the same way that others have gone through the mill. So far as Tulips, show Auriculas, Pansies, Roses, Carnations, Dahlias and Chrysanthemums are concerned, while new varieties having some slight difference from others may be raised, yet in form, outline or other florists' properties no advance is now being made. In such things as Pelargoniums, Fuchsias, Petunias, Verbenas, Begonias, Gloxinias, Cyclamen, Chinese Primroses, Cinerarias, Calceolarias and some others, all, to some extent, regarded as florists' flowers, there is little or no room for improvement in form or beauty. Hence, when so much that is florally perfect has been accomplished, it is but wasting time to work where the work is practically done. The old gold-laced Polyanthus

was once an excellent florists' flower, but in Cheshire Favourite and Exile were found practically perfection, and not a seedling so good as either has since been raised; but the border Polyanthus and the border Auricula offer to any enthusiastic florist a fair field for labour. Probably no plants more deserve such devotion; none would better repay it. Among the border perennials, the Phlox, in spite of all that has been done, offers a good field for further labours; and possibly also does the Sweet Pea, although its field of operations, because there are so many workers in it, is materially limited. If Chrysanthemum raisers could furnish a superior race of singlea they would render good service. Myriads so called and named are devoid of form and beauty, are really not singles, and have colours which are detestable.—A. D.

MR. HARRY J. VEITCH'S GARDEN.

A BEAUTIFUL garden has developed during the past ten years at East Burnham Park, Slough, a fact which will surprise no one who is aware that the place belongs to Mr. Harry J. Veitch. To the satisfaction of everyone except himself, circumstances have forced Mr. Veitch back to the control of the great nursery at Chelsea; but, fortunately, the principal work in the garden of his charming Buckinghamshire home had been done before the crisis which brought about his return to Chelsea arrived. I cannot enter upon a full description of the garden, but I may



THE LATE MR. MARTIN R. SMITH AND HIS GARDENER, MR. CHARLES BLICK, ADJUDICATING ON SEEDLING CARNATIONS.

mention one or two features that must be of interest to your readers.

The Rose Garden.—Apart from the question of design, the leading principle is one variety in a bed. In the case of all beds (not those of Roses alone) Mr. Veitch is against mixtures. He holds that differences of height and habit are sufficient in themselves to condemn the mixing system. The pergola in the Rose garden is somewhat uncommon. The pillars are thick, square ones of burrs. Timber is only used at the top, and consists of the usual rustic material. The sides are quite open. The pergola is well covered, and is a very handsome feature.

Bulbs in the Grass.—Throughout all the principal parts of the flower garden the plan is adopted of planting up the grass with bulbs. Alongside most of the main paths there is a broad

belt of grass that is kept free, and is closely mown and trimmed in the orthodox manner, but beyond this the turf is all filled with bulbs. The consequence is that there are many series of charming colour expanses, especially in late winter and early spring. There were groups of Cyclamen in bloom in September.

Portulacas in the Rockery Paths.—As my visit was paid at mid-September the rock garden was naturally far from being in full beauty, but it had its interest all the same, and not least in the paths. These are laid with flattish pieces of Portland stone, those in the centre averaging about 18 inches square, and those at the sides half the size or less. A variety of plants find homes in the interstices, but much the most beautiful on this occasion were the Portulacas. They were really lovely, and I commend the use of these beautiful and inexpensive annuals for the same purpose elsewhere. They were mainly sown near the edges, and the brilliant flowers of yellow, carmine, rose and other colours made a glittering border to the walks.

The Flame Nasturtium.—Near the front door there was a belt of *Tropeolum speciosum* in full bloom, making a most glowing picture, and even suggesting (if I may be pardoned the parallel) something of the warmth and cordiality of the welcome which the visitor receives at these hospitable portals. The Flame Nasturtium in the Home Counties! "Why not?" asked the host, smiling. Many people who had tried the plant would only groan at the question. But there it is, full of vigour, quite at home and flowering gloriously. I do not know if it is doing better than usual this year as a result of the heavy summer rains. Perhaps so; certainly it is thriving as well as could be wished.

The Sub-tropical Garden.—Some readers will probably remember the sub-tropical gardening that used to be such a feature of Battersea Park twenty-five years ago. Mr. Veitch has revived its glories at East Burnham Park—nay, I think he has done better. So far as I can remember the work at Battersea Park (and my memory seems tolerably fresh) it savoured a little too much of design and was somewhat overcrowded. There is a breeziness about Mr. Veitch's plan which irresistibly reminds one of the manner of the man himself. It is broad, expansive, spacious; in fact, the mind is robbed of all sense of a set design in it. The garden is on the out-skirts of the park, beyond the rock garden, of which it is, in a sense, a continuation. It is the end of the gardening and merges almost imperceptibly into the park. The beds are large and there are broad belts of turf around them all. The dominating one in September was a fiery mass of *Kniphofia aloides* Mrs. Charles Mason in front of bushes of Golden Elder and Purple-leaved Nut. The effect was superb. Another splendid bed was one of *Nicotiana sylvestris* (the white Tobacco), with a belt of the annual Prince's Feather (*Amaranthus hypochondriacus*) in front. Being in semi-shade the flowers of the Tobacco open early. Among foliage beds was one of the Grass named *Eulalia japonica gracillima* and another of the common Cardoon; both were very effective.

WALTER P. WRIGHT.

THE FLOWER GARDEN.

SUITABLE PLANTS FOR EDGINGS.

NOW that alterations are in full swing in our gardens, it may be useful to draw attention to those plants whose habits render them suitable for forming edgings to beds or borders. Too frequently one sees the useful Box monopolising all the edges, with the result that many other useful and interesting plants are excluded. It is only intended to deal here with those edgings which may be regarded as permanent; those formed for summer effect only can be better treated in the spring months.

Among those plants of a shrubby nature suitable for edgings, the pretty little *Euonymus radicans* must take a foremost place, and, as it will thrive well under trees, it has an extra claim to our consideration. The type has green leaves, but there is a lovely silver variegated form which makes an equally good edging. The growth of both is more rapid than that of Box, and, as they will stand clipping well, they may be regarded as splendid edging subjects.

Where the soil is comparatively light and free from lime, some of the Heaths make charming and uncommon edgings. Provided a fair amount of leaf-soil can be incorporated with the natural ground, peat will not be necessary. Of course, these plants will not stand clipping the same as Box or *Euonymus*, but they may be kept within bounds by annually removing the old flowers with a portion of the wood, this being done as soon as the flowers have faded. Among the best for this purpose are *Erica carnea*, *E. cinerea*, *E. mediterranea hybrida*, the common Ling (*Calluna vulgaris*) and *St. Dabeoc's Heath* (*Dabecea polifolia*).

For a hot position where the soil is sandy and dry the pretty little Rock Roses are splendid. The type is a native of this country and is known botanically as *Helianthemum vulgare*. It grows but a few inches high and gives its yellow flowers in abundance during the summer months. Varieties with scarlet, orange, crimson and white flowers may also be obtained, and some also have double blossoms. The growths should be shortened back after flowering is finished.

The common *St. John's Wort* (*Hypericum calycinum*) forms a most attractive edging during the greater part of the year, and, like *Euonymus radicans*, will thrive in moderate shade. This also needs its growth shortened back after flowering. The smaller *Periwinkle* (*Vinca minor*), is another excellent edging subject for a shady position, its dark green foliage and bright blue flowers rendering it most attractive. With the exception of the *Euonymus*, all the plants mentioned above are best when allowed to form an edging 9 inches to 1 foot wide, but the *Euonymus* may be kept as narrow as Box.

Among herbaceous subjects mention may be made of *Pinks*, *Armerias*, *Cerastium tomentosum* and *Saxifrages* of various sorts, all of which must be kept in bounds by an annual lifting and replanting. With so much material to select from there is little excuse for monotonous effects, and still less for the use of ugly dead edgings which have little beyond durability and cleanliness in their favour. F. W. H.

MOISTURE AND ALPINE FLOWERS.

It is unfortunate that there are so many people under the belief that alpine flowers are necessarily denizens of dry and arid mountains, thriving best when in the crevices of bare rocks, deriving almost all they want from the air and basking all the summer days in the brightest of sunshine. These have not learned that the number of alpine flowers which flourish under such conditions is but small and that many require for their happiness and welfare plenty of moisture at all times. A *Sempervivum* or a *Sedum* may delight in almost unbroken daily

sunshine, and may flourish perfectly in a dry corner between two rocks; but this treatment will be fatal to the vast majority of alpine, which require a fair amount of moisture if they are to be long-lived and happy. One sees such things constantly disregarded, although, of course, the offenders are generally beginners. Yet "old hands" may at times be observed planting some moisture-loving subjects far up on the rockery, where they can only make a struggle to exist—a struggle which generally ends in defeat and the loss of the plant. To plant, say, *Primula rosea* far up on the rockery in a dry and sunny place is simply to court its destruction, while there are also many beautiful subjects, which, while they may live high up on dry soil, would simply revel were they treated to a considerable amount of moisture at all times.

One cannot well give a list of such subjects, for the fact is that no such list would be nearly complete. There are many experiments yet to be made, and there is also this circumstance to be taken into account—the plants require more moisture in one district than in another, this depending upon the amount of the rainfall. I am thus making this note more suggestive than exhaustive, and the grower will be wise to do some experimenting upon his own account.

Among the *Primula* species we find a good many examples, as may be expected when we see the behaviour of even our common wild *Primrose* when on a dry hedge-bank compared with one "by a river's brim," which is free and magnificent as compared with that which is starved and dry. But there are species which need even more moisture than this and which delight in such a place that their roots are constantly within reach of water. *Primula rosea* is a case in point, and it is never really happy except when its conditions are such that it can have water in abundance at all times. And, curiously enough, some of these plants are much hardier in water than they are when under dry conditions. This is probably because they are thus more vigorous and better able to stand hardships. Thus, for example, *Primula Poissonii* is much hardier in wet places than in dry, and even in boggy ground covered at times in winter with almost 2 feet of water, caused by the flooding of the adjacent stream, it is much hardier and more flourishing than in a drier place. In dry soil it will only give a short flower-stem some 6 inches, 8 inches or 12 inches high. In moisture it will run up to 1½ feet to 2 feet and live for years.

Acænas are other plants which seem to like moisture, although they will thrive in a dry place also. The finest example of *A. microphylla* I ever saw was in a low boggy place in a garden, where it had covered a space some yards across with its bronzy leaves, all brightened up by the crimson spines on the flower-heads. Compared with a similar plant in dry soil it was as the sun to the moon in brilliancy.

To take another example, the *Spring*, as well as the *Summer Snowflakes*, are much finer in a moist place than in a dry, and these are followed in this preference by some of the *Chionodoxas*, *C. Tmolusii*, for example, which at home flowers amid the melting snow, thriving with a good deal of moisture about its roots and bulbs. *Chrysobactron Hookeri* is another good plant which delights in moisture, although it will grow in the border or the rock garden; while among the *Gentians* we find that *G. Andrewsii* to be long happy needs to be so planted that its long roots can touch the water or be at least within reach of the moisture percolating from it. One can grow the *Calthas* in the border also, but they are never so glorious in their colouring as when within touch of moisture. The lovely *Galax aphylla* is another example, and the exquisite *Linnea borealis*, which is but poor when in dry soil, will cover a good space with its tiny leaves and exquisite flowers in a bog or marshy piece of ground.

Few can grow *Nierembergia rivularis* well, but they would be more successful did they treat it

as a moisture lover. I have never seen this lovely *White Cup* so charming as in pots set in pails of water so that the drainage of the pots was covered with the liquid. One might go on almost *ad infinitum*; but, as I have already said, this note is merely suggestive, and is written with a view to showing that the cultivator should experiment until he discovers which of his plants require moisture with him and which do not. Of course, this must be done with discretion, as there are some things which do not require or which detest moisture. All plants of a succulent character should be relegated to the drier places, as well as most of those with silvery or woolly leaves, although this rule is not invariable.

In advising experimental work I am also hearing in mind that moisture at the roots is less required in a heavy soil than in a light one, in shade than in sun and in wet districts than in dry ones. S. ARNOTT.

THE GREENHOUSE.

LIFTING AND FLOWERING CHRISTMAS ROSES.

IT is really most surprising how amateurs with a cool or slightly-warmed greenhouse will worry themselves and also their gardening friends over the attempt to grow plants quite unsuitable for such a structure, and yet at the same time ignore many beautiful and suitable subjects because they happen to possess the good trait of being hardy. One of the best that can be included in the latter category is the *Christmas Rose*, as *Helleborus niger* and its varieties are popularly called.

There are numerous gardens where a good supply of these plants may be found, and to lift, pot and transfer some of them to the greenhouse is but a simple task. Where plants are not available they may be purchased; but it is well to buy them locally if needed for greenhouse work, as the roots should not be out of the soil for long. As these roots are naturally long, deep receptacles must be used, and unless extra deep pots are available it will be well to rely on small wooden tubs or even lard pails, the latter being obtained very cheaply from the grocer. Of course, a number of holes must be made in the bottom for drainage, and over each of these a good-sized crock must be placed, this usually sufficing for drainage with a little well-decayed manure placed over the bottom of the tub.

Each clump should be lifted with a bountiful supply of soil adhering to its roots, and care must be taken not to break the clump into several pieces. If the plant is a large one, it is highly probable that its mass of roots and the soil adhering to them will almost fill the receptacle; but this does not matter in the least, providing just sufficient room is left to enable the operator to work a little fine soil down the sides of the clump and thus make the whole snug and firm. Give a good soaking with water, and then stand the plant either in the cool greenhouse or in the coolest part of a warm one. Buds will soon begin to push from the crowns, and until they open a light syringing with clear tepid water each morning will greatly assist their development. As the blossoms naturally open outdoors in midwinter, hard forcing or anything approaching it must not be resorted to.

In addition to the old *Helleborus niger* the varieties *maximus* and *major* are excellent, the flowers of these being larger. If the flowers are needed for placing in water they should be cut, not pulled, and the stems slit up at the base for 1½ inch, otherwise they appear to be incapable of absorbing sufficient moisture and, consequently, quickly fade; but treated as advised the blooms will last fresh for several weeks.

PHOTOGRAPHIC COMPETITION FOR OUR READERS

WE have much pleasure in announcing that the first prize in our Photographic Competition has been awarded to Mrs. T. H. Barnard, Kempston Hoo, Bedford, whose picture of a bordered garden path is reproduced in this number, together with a short description of the garden in which it was taken. The second prize is awarded to the picture of a Herefordshire garden that appears on this page, together with a description given by Miss K. D.

A BORDER OF PICTURESQUE BEAUTY.

This photograph (page 599) shows a narrow path in my garden which for three or four weeks in the autumn is quite a picture. The path is about 50 feet long, and is bordered with Aster (*Callistephus*) *sinensis*—mauve is the colour—backed by a hedge of Michaelmas Daisies, chiefly *laevis*, *Novi-Belgii* and *Novi-Angliae* varieties. These are staked with twiggly branches, not bunched up to single posts as is so often the case. The result is extremely attractive, particularly on a sunny morning early in October when multitudes of bees and many butterflies throng the air and flit from flower to flower. At the

SWEET PEA NOTES.

CROSS-FERTILISATION OF SWEET PEAS.

YOUR correspondents "A. A. G." and Mrs. G. Leigh Spencer on page 560 mention the presence of small black beetles in the keel of Sweet Peas, and suggest that it might be possible that cross-fertilisation is brought about by them in some way, seeing that they possess wings. Now, I have known about these small beetles for years, and have come to the conclusion that their presence in the keel is of small moment; in fact, I attach so little import-



A STRAIGHT PATH FLANKED WITH HERBACEOUS BORDERS AND YEWE HEDGES. SECOND PRIZE PHOTOGRAPH IN OUR PHOTOGRAPHIC COMPETITION.

Pilkington of her garden. A very large number of photographs were submitted for this competition, and among them are several excellent garden pictures that we hope to reproduce later. A number of competitors, who clearly have beautiful gardens, have overlooked the fact that, as a rule, it is impossible to reproduce satisfactorily in a photograph a comprehensive view of a beautiful garden. Had greater attention been given to small pieces of the same gardens, far more satisfactory and pleasing pictures would have been obtained. The photographs from the following are highly commended, and will be reproduced in THE GARDEN in due course: Mrs. J. E. Ward, Mr. Thomas Taylor, Mrs. J. M. New, Mr. W. Virtue, and Miss D. Page-Roberts. We are very much gratified with the result, and hope to have another competition shortly.

end of the border, nearest the building, are two clumps of pink Chrysanthemums. In the transverse border, a glimpse of which is seen under the window, are pink Pompon Chrysanthemums and *Crocus speciosus*.

MRS. T. H. BARNARD.

Kempston Hoo, Bedford.

A HEREFORDSHIRE GARDEN.

THIS is a garden in Herefordshire we rented for several years. The herbaceous border was a constant source of enjoyment, beginning with the bulbs in the spring. The old Yew hedges made a lovely background, though no doubt they drew a good deal of goodness out of the soil.

MISS KATHLEEN D. PILKINGTON.

Sandside, Thurso, N.B.

ance to them that I purposely avoided them in my notes when I said that neither insects, wind or any other agency (except human) could bring about cross-fertilisation. It was for this reason: These small beetles could not get into the keel before the flower was properly developed, therefore cross-fertilisation was not possible, seeing that pollination was effected and fertilisation had taken place before or just when the flower was half developed. This, to my mind, is the one main point in the fertilisation of this flower.

I will endeavour to explain in as few words as possible how I have come to the above conclusion. If the flower of a Sweet Pea is cut in two longitudinally just before it is half developed and the stamens and pistil are examined carefully, the stamens will be found to be united by their filaments to form a kind of tube, the anthers remaining free, the ovary running up

this tube formed by the united filaments. Now at this stage the pollen-sacs are just beginning to burst, and the stigma is situated just below the anthers. Examine another flower a few days older in the same manner, and this will be found with the stigma a little longer than the first and embedded in the midst of the escaped pollen and the stigma completely covered with it. At this stage pollination has taken place, and within a few more days the stigma will have extended quite clear of anthers, and fertilisation will have been effected and the pod begun to develop. All this has taken place *before* the flower became properly expanded, and also before the stigma has reached the apex of the keel. After this stage and while the petals are expanding to a fully-developed flower the pod is making rapid progress, and very soon the stigma appears outside the keel. After some days the apex of the pod makes its appearance and the flower gradually dies.

In those cases where the stigma has been seen to protrude outside the keel it is the fertilised ovary which is developing. If this ovary is examined as in the case of the flower longitudinally, the young ovules or seeds will be found to have made some growth.

I must thank the Editor for his kindness in allowing the pages of THE GARDEN to be open for this interesting discussion. It has brought to light the opinions of various growers, some for and others against cross-fertilisation, and to a few it still presents a problem of some complexity. To my mind it will not be properly settled until some recognised authority takes it in hand and extends over some years careful observations, with records as carefully made that not a doubt will be cast upon its authenticity.

P. CLAPHAM.

The Gardens, Brookleigh, Calverley, near Leeds.

HAVING read several letters in your paper on the fertilisation of Sweet Peas, I think the following extract from the "Life of Charles Darwin," by his son, the present Professor of Botany at Cambridge, may be of interest to your readers: "Papilionaceae were the first flowers to attract Darwin's attention by their obvious adaptation to the visits of insects, and one of his sorest troubles. The common Pea and the Sweet Pea gave him most difficulty, because as they are as obviously fitted for insect visits as the rest of the order, yet their varieties keep true. The fact is that neither of these plants being indigenous, they are not perfectly adapted for fertilisation by British insects. He could not at that time know that the co-ordination between a flower and that particular insect which fertilises it may be as delicate as that between a lock and its key, so that this explanation was not likely to occur to him. The pollen or fertilising element is in each species adapted to produce a certain change in the egg-cell, just as a key is adapted to a lock. If a key open a lock for which it was never intended, it is an incidental result." A. E. S.

It may interest your readers to know that I also found the little black beetles emerging out of the folded flowers of the Sweet Peas, and concluded that there could be no doubt that they were main agents for the fertilisation of the flowers. On the 14th ult. I picked two bunches of Sweet Peas—Scarlet Gem, Nora Breadmore, Lady Griseld Hamilton and Frank Dolby—very sweet and with very fair stems. The plants have been in flower since June, and they were watered twice in June and July with Nitro-Bacterine, to which I attribute the vigour and long flowering season of the plants. They were sown in pots and planted in clumps of from five to six plants.

FRESHWATER.

I HAVE frequently seen bees and other insects gathering pollen from Sweet Peas, but as fertilisation is effected *before* the flower is properly opened, these cannot effect cross-fertilisation.

A. W. H.

THE ROSE GARDEN.

IN DEFENCE OF EXHIBITION ROSES.

AN AMERICAN'S VIEWS.

TO those who have attended any of the National Rose Society's metropolitan exhibitions, and have seen there the thousands of glorious blooms of exhibition Roses, the above title and these notes may seem, to say the least, superfluous. Nevertheless, I am convinced that many beginners and inexperienced amateurs, who do not look upon the Rose simply as an ornamental plant to be grown principally for colour effect and to beautify the garden, but who believe that "the value of the Rose is in the glory of its individual flowers"; in other words, who want the perfect Rose—perfect in form, size and colour—have been prevented from growing the so-called exhibition Rose principally for two reasons, which I will try and give in a few words as possible.

The first is, I take it, the fear of failure, caused by the idea that somehow the name "Exhibition Rose" was given to a class of Roses that were very difficult to grow and were only suitable for the skilled exhibitor. This is an error. The definition given in the National Rose Society's catalogue is as follows: "Exhibition.—That its blooms are sufficiently large, full and well-formed to allow of their being shown singly at Rose shows." That is all, and the growth of the plant has nothing at all to do with it.

As a matter of fact, there are, among the exhibition Roses, some few varieties that are very difficult to grow successfully, but they are generally so noted in the catalogues and may readily be avoided, while the great majority are as safe for the novice to grow as most of the so-called garden Roses, except, perhaps, some of the very strong growers, such as the *wichuraiana*s and *Polyanthas*.

This may sound like a rather strong statement, particularly as one is apt to see in the gardening periodicals at least two articles in praise of garden Roses to one of exhibition sorts, and I would not like to have anything here written construed to mean that the beginner may expect at the start to be able to grow exhibition blooms up to the standard set by the experienced exhibitor at the Rose shows—far from it; but I do assert most emphatically that, if he will give to his exhibition Roses, and particularly to the preparation and location of his Rose beds, the care that would be necessary to grow successfully the majority of so-called garden Roses, he will be rewarded with blooms that for form and colour will leave little to be desired, though they will probably be lacking in size until study and experience shall have taught him the art of pruning and disbudding more thoroughly. He must not, however, expect that all blooms will come well, but even those that are faulty in shape will, for the most part, compare favourably with the garden sorts for interior decoration. The other reason for the neglect of exhibition Roses (particularly the newer varieties) by those for whom these notes are written is that so much has been said lately of their lack of perfume. Well, if it be really so that any considerable number of the newer exhibition Roses are wanting in scent, perhaps the point is well taken (though we do not give up growing many other beautiful flowers because they have no perfume); but is it so? I must confess that on going carefully over the catalogues and Mr. Mawley's excellent "Rose Analysis," the cause of this general lament still remains a mystery to me.

If by perfume we mean only the attar, or otto, of Roses scented, then I will willingly acknowledge that many of the newer Roses are without it. But surely this is not the only perfume to be prized! If so, why is the Violet or Mignonette so highly esteemed? Is not the fragrance of the Tea Rose and

the perfume peculiar to many another Rose as much a Rose perfume as that of *Rosa centifolia*?

To me the delicate fragrance of such Roses as Bessie Brown, Dean Hole, Mrs. W. J. Grant, Killarney, Joseph Hill and the like is much more delicious than that of the attar of Roses; but of course that is only a matter of taste (and the reader will probably add "very poor taste" when I confess that the scent of Gloire de Dijon, Kaiserin Augusta Victoria, Florence Pemberton, Queen of Spain, &c., are actually disagreeable to me) and I quarrel with no one for having his own choice of perfume; but that is a very different thing from denying any fragrance to those Roses which do not have the so-called Rose scent.

Beyond question, there are some very beautiful Roses that are entirely lacking in scent, but the number is comparatively few; and as there are so many fragrant ones, it seems unfair that these few, beautiful and important as they are, should cause the whole class of newer exhibition Roses to bear the reproach of lacking fragrance.

In conclusion, I wish it understood that in no way have I meant to belittle the wealth of beautiful garden Roses that have recently come among us; there is no question as to their value. The object of these notes is simply to encourage those who, while admiring and loving the exhibition Rose, have felt that it was beyond their skill to grow it, or, having a limited space in which to grow Roses, felt they could not spare any for scentless varieties.

White Plains, New York. A. L. SQUIRE.

HYBRID PERPETUAL ROSES AS CLIMBERS.

SELDOM do we see this type of Rose treated as climbers, yet they succeed well trained in that way. Some six years ago I planted a number at the back of a wide herbaceous border, training them up Larch poles; in fact, they were the tops of trees with 10 inches of the branches left on next the stem, which have a rustic appearance as well as being useful to train the Roses upon. The spring following the planting the Roses were cut hard back, but since then they have not been pruned at all, except in cutting the flowers, which are most profuse. It is surprising what a quantity of flowers can be had from the strong-growing Hybrid Perpetual Roses growing on the let-alone principle, especially if the roots receive annually a good dressing of farmyard manure carefully dug in without doing damage to the roots.

E. M.

COLOURED PLATE. PLATE 1362.

WEeping STANDARD ROSES.

WITH the advent of the lovely *wichuraiana* Roses weeping trees have had a great development, and it will soon be as uncommon to find a garden without its weeping Roses as without its ramblers on arch, pergola or pillar. The superiority of the tribe named for this special purpose is owing to the great flexibility of their growths, and they are capable of forming a natural drooping tree, which we only find in their rivals the Ayrshire and Evergreen sections. The subject of our coloured plate, Dorothy Perkins, is recognised as one of the very best varieties to form a weeping standard. It will give us its wealth of blooms from July right on to October, and for this reason it is perhaps still the most popular of the group. Not only are the long, drooping growths covered with clusters, but we have enormous bunches of blooms arising right from the very crown of the tree.

In planting weeping Roses it is advisable to procure them as tall in the stem as possible, but it is rarely that they can be purchased with more than a 5-feet to 6-feet stem, although 10 feet to

12 feet would be none too tall. They should be planted as early in the autumn as practicable, and great care is needed to give them a good start. The position must be well prepared. If the soil is good, let it be trenched 3 feet deep and the same in length and width, incorporating some good, well-decayed farmyard manure. The stations for each tree should be prepared fully a month before planting. When planting keep the roots within about 9 inches or 10 inches of the surface, taking care to provide good substantial supports to protect the trees from the violence of gales. The first season after planting little or no pruning is necessary; but the growths may be adjusted by means of a wire hoop placed beneath, so that a uniform head is maintained from the commencement. After a year or two the trees will grow naturally without any artificial aid. As the heads develop in bushiness they should be relieved of some of the oldest growths quite early in the autumn; but the long, young growths should be retained, as they provide us with the grandest clusters of blooms.

There is a growing demand for wichuraiana Roses of ordinary standard height, and really useful they are to plant in certain conspicuous angles in the Rose garden where they are thoroughly isolated. These standards are also delightfully displayed in the centre of a bed of dwarf Polyantha Roses, which may either harmonise or form a suitable contrast. For instance, a drooping standard of Hiawatha could have as an undergrowth the charming Eugénie Lamesch, or use Alberic Barbier as a standard and Perle des Rouges beneath. In addition to the sorts already named, others that do well in weeping form are Lady Gay, Elise Robichon, Edmond Proust, René André, wichuraiana rubra, Paul Transon, wichuraiana alba (type), Ferdinand Roussel, Jersey Beauty, Gardenia, Evergreen Gem, Pink Roamer, Débutante and Sweetheart, and there are three recent novelties that must not be overlooked, namely, Paradise, Joseph Billiard and, last but not least, the White Dorothy Perkins.

Of the Ayrshire and Evergreen Roses the best are Félicité Perpétue, Flora, Bennett's Seedling and Virginian Rambler. The multiflora group, represented by such as Crimson Rambler, Rubin and Aglaia, can be trained to form weeping standards, although their natural habit of growth is more diffuse than drooping. By the aid of wire hoops for two or three years their growths may be trained downward, and well-developed heads make a gorgeous display.

Another most charming Rose for weeping is *Rosa sinica* Anemone, but it should be planted in a very sheltered position. Some of the strong-growing Teas, Hybrid Teas and Noisettes are capable of being formed into most beautiful objects as weeping standards. Perhaps some of the finest specimens of this class are to be found at Sherfield Manor, near Basingstoke, the seat of J. B. Taylor, Esq. Here we may see wonderful standards of M. Desir, Souvenir de Mme. Joseph Metral and such like, and their growths nearly reach the ground. All who know these Roses will readily

understand what effect they would make when in full bloom. The long, young growths are kept tied down to wire hoops and over the old wood, so that there is a prodigious display of bloom. Of course, the merit of employing these Tea Roses as weepers is the more continuous blooming we receive, although it should be remembered that they require a well-sheltered position so that the old growths escape injury from frost.

All weeping Roses should be liberally fed with liquid manure from the time their buds

are seen until they show colour, and a dressing of good farmyard manure should be given each spring. The value of weeping standards as pot specimens has not yet received full recognition; but all who have grown them are loud in their praise, especially when the stems are not too tall, for then they may be employed in a great variety of ways by the skilled decorator.

The specimen from which the accompanying coloured plate was prepared was kindly supplied by Hobbies Limited, Dereham, Norfolk. P.

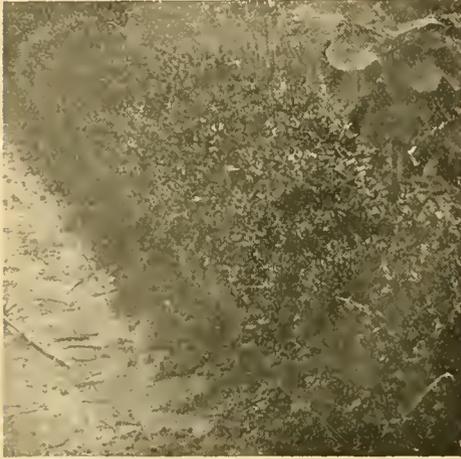


A BORDER OF PICTURESQUE BEAUTY. FIRST PRIZE PHOTOGRAPH IN OUR PHOTOGRAPHIC COMPETITION. (See page 597)

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

CHRYSANTHEMUMS.—Plants that are past their best I am now cutting down, as this will encourage the development of fresh shoots which will provide the necessary cuttings from which next year's supply of plants is to be obtained. After the plants are cut back, give them a light and airy position in



1.—AN EXAMPLE OF OVERGROWN BOX EDGING THAT NEEDS LIFTING AND REPLANTING.

the greenhouse or conservatory near to the glass; this will keep the new growths short and sturdy. Should green fly be seen on the shoots, dust the affected parts with Tobacco powder. Late-flowering varieties that are fast coming into flower should be given manure water until the blooms are two-thirds expanded. Ventilate with care and maintain a buoyant condition of the atmosphere.

The Vegetable Garden.—At this period Seakale roots may be lifted for the purpose of forcing. I prefer comparatively young roots to all others, leaving strong old clumps in the ground in their usual quarters. The latter should be covered with proper Seakale pots, boxes or tubs that are bottomless, which can be covered with lids and removed as required. Cover the pots, &c., with horse or other litter sufficient to create a brisk heat, and growth will not be long before it is apparent. When forcing the roots under glass I prefer to arrange the young ones close together in large, deep pots or boxes in good soil, leaving the crowns just visible above the surface and providing a genial bottom-heat. Progress may soon be reported.

The Hardy Fruit Garden.—Recently-planted fruit trees should have the surface soil round about their bases mulched with some long manure. Wall fruit trees are better dealt with at this period rather than deferring the work of pruning and nailing until the early spring. The first to receive attention are the Pear. Prune these with a strong, well-sharpened pruning-knife, observing the greatest care that the spurs shall not be torn away. The general idea in pruning is to see that all the main branches of the tree are well furnished with a number of short spurs in dense clusters. Continue to plant fruit trees when the weather is suitable, i.e., when frost is absent and the soil in a condition to deal with it satisfactorily.

The Greenhouse and Conservatory.—There is a tendency with plants that have been kept in too close and ill-ventilated glass-houses to become subject to the attacks of green fly, and any so affected should have speedy attention. It is imperative that the plants be fumigated, and, that the result may be satisfactory, I recommend the use of any of the well-known vaporising compounds for this purpose. Ventilation is a most important item in cultivation at this period. Give air on every favourable occasion. Currents of cold air are most injurious; for this reason, therefore, open only the top ventilators and do this cautiously, otherwise a serious check may be experienced by the plants. Greenhouse climbing plants that have hitherto been neglected should be pruned without further delay. Cleanliness must be specially observed in these dull and often sunless days. Foliage plants will derive considerable benefit from a periodical sponging, and in the case of very dirty plants it may be wise to use a solution of soft soap and water for the purpose.

The Hardy Flower Garden.—Although it is getting very late to plant spring-flowering plants, I am filling a few spare beds with these subjects. I am hurrying on with the hardy flower borders, hoping to complete the work of lifting the overgrown plants for the purpose of dividing them, and also busy in mulching other plants in the border before hard weather sets in. D. B. C.

LIFTING AND REPLANTING BOX EDGING.

THE use of dwarf Dutch Box as an edging to beds and borders was quite common some years ago, but in more recent times the practice is less frequently followed than the excellence of this subject fully justifies. Opinions differ very considerably as to the material that is best as edging for our gardens. Many present-day gardeners are disposed to ignore the use of Box as an edging, arguing that this subject encourages and harbours slugs and snails, and also that it is not possible to use weed-killer to destroy weeds on the paths when a live edging such as Box is planted. From careful observation and in the writer's experience the above-mentioned arguments do not hold good. Slugs and snails do not give more than ordinary trouble when the hoe is brought into frequent use. The constant stirring of the soil is most distasteful to these pests, and by the frequent use of the hoe the surroundings become less tenable. It is possible to use weed-killer in the centre of the paths, &c., providing a good layer of soil be spread over a space within 12 inches or 18 inches of the Box edging; this will lessen the risk of damage to the roots, and weeds near to the edging must be hoed up or removed by the hands. If allowed to go unclipped too long and in other ways neglected, Box will, of course, become very unsatisfactory, but when planted with due care and clipped periodically the result is very pleasing. To grow Box edging well it should not be clipped too often nor too hard. Newly-planted Box edging should be clipped but once in two years, except in the case of plants that are doing exceptionally well. Subsequently, when thoroughly established, an annual clipping will be necessary to keep the edging in neat and trim order. Opinions differ as to when Box edging should be trimmed, some growers urging a spring operation, while others are equally strong in their opinion that a late June or early July clipping is better. At this latter period the growth is practically completed, but if, through lateness of the season, the plants are still growing away freely it would

be better to defer this work for a week or two longer.

In my experience Box edgings may be planted within a period beginning in October and ending in April if frost of a severe nature does not prevail. Box edgings must not be planted under trees, where the drip from this source is a serious deterrent. Neither should an absolutely shady position be chosen. Those who have no old plants or edgings to lift may purchase suitable material from a nurseryman at so much a lineal yard, and one such yard will make 3 yards when broken up and replanted. Fig. 1 is a good illustration of Box edging that has been neglected. To lift such plants, however, is not a very difficult matter. A good spade or fork inserted well down under the plants will lift them with comparative ease. Fig. 2 depicts a small portion of the old Box edging as portrayed in Fig. 1. With ordinary care useful material may be obtained from the old plants, as illustrated in Fig. 3. Here, it will be observed, are three of the shorter pieces, each with a few roots adhering, these latter largely ensuring a satisfactory result to the planting operation. I have often planted pieces that were quite devoid of roots, and these have come through the ordeal very well. More than ordinary care has, however, been taken in preparing soil of a fairly good and friable nature with which to fill in the small trench that is usually taken out. Previous to the replanting it is necessary to mark off the position with proper lines, and then to cut out



2.—A SMALL SECTION OF THE EDGING SHOWN IN FIG. 1.

a vertical trench some 6 inches or rather more in depth. It is important to keep the surface soil level and also to make this firm, as this facilitates the planting in no mean degree. Proceed then to one end of the trench, placing the sprays of the prepared pieces so that they just touch one another and form a continuous line throughout the whole length of the row. As the sprays are adjusted in position soil should be placed in the trench and this made



3.—DIVIDED PIECES OF THE PLANT SHOWN IN FIG. 2. NOTE THAT EACH PIECE HAS A FEW ROOTS.

firm to prevent them from falling out, subsequently banking up the soil to the Box edging and treading the former in quite firmly to complete the operation. The tops of the divided pieces of the old plants should be kept about 2 inches to 3 inches above the soil, so that the reader will see the prepared pieces should be some 8 inches to 9 inches in length. Fig. 4 aptly portrays the method of planting. The illustration shows a portion of a row already planted, and also reveals the open trench, indicating how this work is proceeded with.

D. B. C.

THE CARE OF GARDEN TOOLS.

It always pays to take care of garden tools. Sometimes the amateur notices work requiring attention, and if he could lay his hands on the tools required immediately, with the assurance of finding them in a good condition, a considerable amount of time and trouble would be saved. Frequently, however, after an exhaustive hunt, he finds the implements not far from the place where they were last used, and, of course, in anything but a satisfactory condition.

After using garden tools, always clean them and see that they are thoroughly dry before placing them in a dry shed or other store. Tools which are allowed to become clogged with soil and stowed away in this condition are very bad to work with, and the work done with such tools cannot be satisfactory. The same applies to tools which rust through being left out in the wet or which are not dried after use.

During the winter it is a good plan to rub a little oil over tools before hanging them up in the shed. This ensures freedom from rust, and all gardeners know well how beneficial it is to have clean, sharp tools to work with. These rules apply to all implements used in the garden—spades, forks, rakes, &c., as well as shears, scythes, and other sharp-edged tools. When one once gets into the way of cleaning his tools after using them, he will be amply repaid by the greater ease with which the various garden operations can be performed.

C. RUSE.

LILIES OF THE VALLEY IN WINTER.

MANY amateurs fail to force these flowers satisfactorily, and there are several reasons why they fail. For instance, the crowns and roots of the Lilies are kept too dry and the temperature is allowed to vary too much. We will presume that the crowns have to be purchased. When they are brought in see that they are kept in a moist condition until safely potted. They are best kept in a cool, dark place; but do not lose any time in getting them potted. Thoroughly drain each pot, put in the crowns at 1 inch

apart and make the soil firm around them. If the roots are very long shorten them somewhat, but not more than is absolutely necessary. When duly potted in a compost of light, fresh loam and leaf-soil in equal proportions, with a free admixture of coarse sand, give a good watering and then place the pots in a cool frame, or plunge them rim deep in fine ashes. Keep the crowns free from frost. When forcing keep the pots surrounded with moisture, and this is best done by plunging them in Cocoanut fibre in a box or frame fixed on hot-water pipes and then covering all with damp moss 3 inches in depth. If the plunging material be watered occasionally, the moss sprinkled with a temperature of about 60° maintained in a house, with a few more degrees around the pots, the spikes of flowers will appear in about ten days. At this stage the moss must be gradually removed, the pots stood on the plunging material for two days and then removed to a warm position on the open stage. Shade the plants from bright sunshine, and if desired they may be placed in the greenhouse after the flowers and leaves have well developed in the warmer structure. At all times avoid exposing the plants to a draught. Always give tepid water.

OVERHAULING STAKES.

DURING the dull and cold days of December, when work outside is frequently at a standstill, the amateur cannot do better than overhaul the stakes which have been used for plant supports during the past summer. It will be found that many of these are partially decayed at that point which corresponds with the surface of the soil, and to use them in this condition next summer would be waste of time. They should be cut through at the point named and re-sharpened, and any that need it given a coat of paint. When this is dry the stakes may be sorted into their various lengths and tied into bundles of a dozen, twenty-five or fifty, according to their thickness. They will then be ready for use without delay next summer, when waste of time must be strictly avoided.



4.—METHOD OF PLANTING THE DIVIDED PIECES SHOWN IN FIG. 3.

THE TOWN GARDEN.

FALLEN LEAVES.—In those town gardens where there are shrubberies it is practically certain that the surface of the soil will now be covered with fallen leaves. These cannot be allowed to remain, as they make the garden so untidy; but the general custom of raking them off and transferring them to the rubbish-heap is equally undesirable, for in rotting down they provide the natural food of the plants that produced them, and their removal means deprivation for which compensation is seldom made in the form of manure. The best course is to dig the border over carefully, going sufficiently deep to well bury the leaves and weeds, but not so far down as to seriously injure the roots of the plants. A disadvantage arises where bulbs have been planted, for these are almost certain to be disturbed. In these circumstances it is wiser to prick over the surface with a fork when the leaves have been removed and afterwards to apply a good mulching of natural manure, covering this in its turn with a layer of fine soil. The leaves taken off will rot down in the rubbish-heap and will eventually find their way back to some part of the garden, there to afford some sustenance to other crops; they should never be wasted, but, of course, the heap must be in an obscure corner.

DIVIDING PINKS.—Where these most beautiful and fragrant plants have been established for three or four years and are commencing to get bare in the middle, no time must be lost in lifting, dividing and replanting healthy, vigorous young pieces. As soon as the old plants are taken out, the soil must be deeply dug and generously manured in the second spit, while into the top spit some old mortar rubbish may be advantageously incorporated. Firm the ground well after moving it, or it will settle considerably and the plants may suffer seriously in severe frosts. In selecting portions for replanting, always take those from the outer sides of the lifted clumps, for they are cleaner, healthier and more vigorous, and, consequently, make finer plants in the ensuing season. For a time after the operation the border will look rather thin, but the excellent attention which was accorded to the soil will ensure rapid growth and the plants will soon fill out and produce a much more satisfactory display than they did in the previous season. Other live edging plants may be similarly treated if they require it.

CHRISTMAS ROSES.—These plants thrive splendidly in town gardens where the soil is deep and in thoroughly good heart, but it is futile to attempt their culture where the soil is thin and poor, at least, without having previously deeply worked and judiciously enriched it. The great trouble in those places where the plants do grow is not to get an abundance of flowers, but to have them spotless in colour; as a rule, unless some special measures are taken, they soon become dirty with smuts and are then practically useless. There are two courses open for adoption by the cultivator, and he must choose the more convenient. The simpler plan is to procure some hand-lights with which the plants may be covered where they are growing; the blooms will expand admirably and they will remain perfectly clean. The other method is to lift clumps of medium size well set with buds and put them into large pots; it is not essential that there shall be much fresh soil, but the roots must be worked well down and the soil made firm about them. If these are placed in the conservatory or greenhouse and carefully watered, the buds will develop into beautiful white flowers of considerable size.

FUMIGATING.—With the excellent materials that are now procurable at such reasonable prices and are so clean and effectual to use, there is less excuse than ever there was before for the presence of insect pests in conservatories and greenhouses.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

EARLY CHRYSANTHEMUMS.—Propagate these and throw the old stools away to make room, or one or two of each may be kept in case of accident with the cuttings. Late varieties should be kept in a dry, airy house and afforded a little heat when the weather is damp. Another batch of bulbs should be taken from the frames to the house now, in order that a good supply may be ensured for the festive season. A number of early Azaleas, which have made a good growth and have prominent flower-buds should be put into a warm house and forced slowly, when they will quickly give flowers. See that the foliage is quite clean and free from thrips before they are taken into a clean house, and if any doubts exist mix up a preparation of NL All and soft soap in a large tub or tank and immerse the plant bottom upwards in this, taking care not to wet the soil. Have another tank handy full of clean water and in this rinse it thoroughly. A batch of well-ripened Lilacs and Laburnums can be introduced also. These will do well in a vinery just started if no other accommodation is available.

Ferns.—Keep these on the dry side, but maintain the stages and floor moist and thus keep down insects and the plants fresh. Lilies of the Valley, Roman Hyacinths, Cypripediums and Cymbidiums may be brought into the fernery for effect and for a slight hardening before being used in the house for decoration.

PITS AND FRAMES.

Take care that plenty of protecting material is kept close at hand, as sharp frosts may occur any night and the work of many months be destroyed.

Cinerarias must be watched for aphides and slugs; the latter soon spoil the foliage of good plants. Give plenty of air on all favourable occasions.

FRUIT UNDER GLASS.

Early Vinery.—If the rods have been cleaned and pruned, the border renovated and the house thoroughly cleaned and disinfected, the latter may be closed now, but no fire-heat applied.

Peach Houses.—Continue to clean these as fast as possible. Many gardeners have to house a considerable number of their Chrysanthemums in these, and, as the plants will be rapidly disappearing, lose no time in getting the houses cleaned and painted where necessary; also attend to any trees that require attention at the roots. Many plants can be again stored in the houses after this operation has been effected.

KITCHEN GARDEN.

Cucumbers.—Keep this house at 70° in the day and 65° at night. This temperature will grow and satisfy the wants of the plants. Cut the fruits as soon as they are full grown and syringe the foliage twice daily.

Give plenty of air to all frames in the kitchen garden, and in dry weather pull the lights off. See that young Cauliflowers and Lettuces are free from slugs, and dust the soil around the plants with Sluicide or lime and soot mixed. Keep decaying leaves from Endive and Parsley. Take up some Mint and Tarragon and place in pots or boxes, according to the demand, and stand these in frames. Keep a fire going to burn up all rubbish, and the ashes will be useful to go back again to the land. These are very good for placing in seed-drills and for putting over the top of the soil at pricking-out time.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

COOL ORCHIDS.—The cool Orchid house at the back of a north wall is not so frequently met with as formerly. It is in the winter time that the advantage of a more open and light position is most beneficial. The majority of the section of *Odontoglossums*, to which *O. crispum* and its allies belong, will be growing freely, and the roots should be now working well in the new material supplied some time ago. The glass should now be kept quite clean outside by frequently washing it down and inside by syringing. The plants, too, in some instances are arranged too far from the glass, and may, by elevating on inverted pots, be brought much nearer to it.

Rivina humilis.—This pretty berried plant is often grown in far too much heat and heavy shade, the result being that the berries fall off with the least disturbance and the leaves fall early, leaving a half bare-looking plant. If brought on slowly in a cool greenhouse with barely any shade, pretty and useful plants will be the result, and the berries will be of good colour and so firm that a vigorous shake will be necessary to make them fall.

Azaleas for Forcing.—Where a large quantity of cut flowers is desired early, old plants are the best for this work. Such varieties as *Deutsche Perle* and *Fielder's White*, if the growth has been well ripened early, will come into flower at this season with very little forcing. Azaleas are very liable to the attack of thrips and red spider. Syringing the plants freely and on no account letting them become dry at the roots will keep these pests at bay.

FLOWER GARDEN.

The flower garden in winter, as a rule, presents anything but an attractive appearance. Much might be done, however, to brighten and adorn the beds from November to May by planting ornamental shrubs and conifers in small, shapely specimens. The following are some of the most useful plants for this kind of work: Gold and silver conifers, Tree Ivies, variegated Box, *Cryptomeria elegans*, the various forms of *Euonymus*, golden Hollies in quite a small state and *Aucubas*.

KITCHEN GARDEN.

Asparagus Beds.—The sooner now all Asparagus beds are divested of their ripened growth the better, as the surface soil can be cleared of weeds which have grown since applications of salt became impracticable. Opinions differ as to the value of manuring Asparagus beds which are in good bearing condition. I think manuring at this season in many cases does more harm than good, as a mass of manure causes many roots to decay, and those which do survive are weak and only throw up poor Grass. I would much rather rely upon liberal supplies of food through the growing season than give manure now, as at that time the roots can more readily absorb the food given.

LEAF SWEEPINGS.

At this season the main task of the gardener consists in sweeping up fallen leaves from walks and lawns, and the ordinary workman enters upon an almost insensate struggle to restore neatness to Nature. Personally, I like a certain amount of disorder in our gardens in the autumn, for the colour of the leaves and their rustle in the wind teach us many moral lessons. Besides, in many cases the natural dead leaf covering is of the greatest use to plants, whose roots are protected by it against their winter trials. Most of the sweepings in shrubberies and the rougher parts of the pleasure grounds are not only waste of labour and money, but actually injurious.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

NEW PLANTS.

CYPRIPEDIUM ARETHUSA.—This is a very pretty member of the Lady's Slipper family, and is the result of a cross between *Milo* and *Sallieri aureum*, both of which it partakes. The large dorsal sepal is very pretty, a very broad white band surrounding a rather small zone of green, the latter and part of the white being heavily besprinkled with medium-sized dull carmine circular dots. The petals and labellum are of the usual size and shape but of a pale yellowish green hue, slightly tinted bronzes. The plant shown had two good flowers and an abundance of healthy foliage. Shown by Lieutenant-Colonel G. L. Holford, Tetbury, Gloucestershire. Award of merit.

Odontoglossum Groganæ.—This is one of the larger-growing hybrids, and the specimen shown possessed a large compound raceme some 5 feet long, the rather small dull carmine and crimson flowers being rather thinly placed thereon. The plant makes huge pseudo-bulbs and long, narrow leaves with acute apices. Shown by Mr. J. Hubert Grogan, Slaney Park, Baltingham, County Wicklow. Award of merit.

Cypripedium etoniense.—This is a large and beautiful flower, the result of crossing *actæus langleyensis* with *insigne* Harefield Hall variety, both parents of which it partakes and, consequently, must be good. The large dorsal sepal has a broad margin of white, the edge being daintily frilled, with a pale green well-defined patch at the base, this green colour and a little of the white being well dotted with large and small dull carmine spots. The petals are rather narrow and long, and the lip is large with a narrow pale yellow margin, the colour of lip and petals being glossy bronzes overlying pale yellow. The pale yellow column is very conspicuous. Shown by Messrs. J. Veitch and Sons, Limited, Chelsea. Award of merit.

Vanda cœrulea R. Chollet.—This is one of the finest and most beautiful Vandas we have ever seen, and is very decidedly a great advance on the type. The flowers are the same shape as the old and well-known *cœrulea*, but very much larger and the colour is a much deeper sky blue. The plant shown was carrying one huge raceme composed of fifteen perfect flowers, and formed a very striking and beautiful subject, fully deserving the first-class certificate awarded.

Cypripedium Dreadnought.—This is the result of a cross between *Troilus* and *insigne* Harefield Hall variety, and a very beautiful flower it is. The dorsal sepal is enormous, with a slightly incurved margin of pure white about half an inch in width. Under this comes a large patch of very pale green, freely dotted over with irregular brownish crimson dots. The petals are comparatively narrow, with the edges much crimped, the colour of these and the rather long lip being bronzy crimson with a glossy sheen. First-class certificate. Both were shown by Messrs. Sander and Son, St. Albans.

Polystichum aculeatum gracillimum Drueryi. This absolutely unique novelty will make a splendid addition to hardy Ferns, and it is certainly one of the most elegant varieties we have seen. The plant, too, is remarkable by reason of the wide break it forms as compared with its immediate ancestor, a frond of which was also on view. The fronds are distinctly arching and of graceful character, their lace-like delicacy constituting quite a feature. From Mr. C. T. Druery, Acton. First-class certificate.

Chrysanthemum Merstham Jewel.—A very beautiful variety of the single-flowered section, the blossoms at a short distance being not unlike a *Gaillardia* in colour. As shown in the undisbudded sprays, the variety was distinctly pleasing and good and should become exceedingly popular. From Messrs. William Wells, Limited, Merstham. Award of merit.

Primula Malacoides.—A new species collected in Yunnan, China, at an altitude of 9,000 feet, and said to be quite hardy. In its flowering the

plant resembles a glorified *P. Forbesii*, but the blossoms are of much larger size, more starry and the general effect much more graceful. The predominant colour of the petals is lilac, succeeded by a white ring and yellowish eye. The obovate petals are deeply indented, the numerous blossoms being produced on short peduncles, the spike carrying several whorls of the flowers. The leaf character is intermediate or nearly so between *P. cortusoides* and *P. Veitchii*, the bluntly obtuse leaf-blades being 2 inches or 3 inches long, heavily notched at the margin, supported on petioles about 3 inches in length and obscurely tomentose on the under-surface. The flower-stems and blossoms are covered with farina. The exhibited plants were rather more than 1 foot in height, profusely flowered and had resulted from a sowing of seeds made in April last. An elegant novelty of very considerable merit. Exhibited by Bees, Limited, Mill Street, Liverpool. Award of merit.

Chrysanthemum Calcdonia.—The largest single-flowered variety we have seen, the flower-heads being about 6 inches across and flat or nearly so. The colour is pink, a ring of white appearing at the base of the florets. Exhibited by Messrs. George Williams and Sons, Manor House Nursery, Cardiff. Award of merit.

All the above were shown before the Royal Horticultural Society on the 24th ult., when the awards were made.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Turistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Tennis court border (A. H.).—If you could widen the border and secure a width of 4 feet or even 5 feet you might get a very fine display for a considerable period. For example, at the margin you could plant a broad band of white, yellow, or blue Tufted Pansies, next to this scarlet or pink Pentstemons, behind which the fine white Phlox Mrs. E. H. Jenkins could be placed, and last of all a line of scarlet Tritoma Uvaria. These things are especially valuable for effective planting and would afford a display for some weeks. It would be necessary to obtain by early sowing strong seedlings of the Pentstemons, but the Pansies and other plants, all of which should be planted in lines, may be planted now or in March. As the border would require some preparation, we think your better plan will be to prepare it first by trenching and manuring. If the width we have suggested is too great, reduce it to 3 feet and leave out the back row of plants.

Agapanthus not flowering (K. R.).—It is very probable that the dull, cold weather experienced last summer has a good deal to do with the non-flowering of the Agapanthus, as it is very important that the growth is well ripened. For this reason they should, during the latter part of the summer and in autumn till it is necessary to take them indoors, be fully exposed to the sun.

Planting Parma Violets (C. B. B.).—The Violets may be planted now in a frame with every prospect of success, provided you have, or can obtain, good, strong, well-established plants for the purpose. The soil in which they are planted should consist of half good garden soil and half decayed leaf-mould. Press the soil firmly to the plants. When planted the top of each should be

within 6 inches of the glass. Give the plants a good watering after they are in, and plenty of air day and night while the weather is open. They should be protected from frost by placing mats over the glass at night.

Anemone diseased (R. R. Gibb).—The plant you send is a form of *Anemone japonica* (the Japanese Wind-flower), which has been attacked by a fungus at the root. Your only safe course is to dig up the diseased examples and burn them, and you will be well advised if you dig out the soil and discard this also. Unfortunately these fungoid diseases are on the increase, and there is a great probability of the germs remaining in the soil to affect new plants. We have no desire to unduly alarm you, but it is not unlikely that the disease may spread to the remaining plants in the bed. If you discard the soil and burn the stricken plants, you might, with fresh soil added to the bed, plant a centre of *Aster cordifolius*, which, in conjunction with the margin of *Anemone*, would be distinctly pleasing.

THE GREENHOUSE.

Keeping Daturas and Oleanders through the winter (Clapham Common). Both the *Datura* and *Oleander* may be safely wintered in a greenhouse, provided the temperature during sharp frosts does not fall below 40°. You complain of the plants not flowering and state that they were put out of doors during spring and summer. This, we should think, is the cause of their non-success, as they cannot be safely put out of doors till the middle of June. Both plants are liberal feeders, and it is possible that they need either repotting or a stimulant of some kind; but you say nothing as to their size, the condition they are in, or, in fact, anything about them on which we can base our opinion. While very anxious to oblige our correspondents, we are frequently greatly handicapped by the entire absence of details in the query submitted.

Roman Hyacinth bulbs for examination (Miss E. C. H.).—The bulbs are much too small to flower in a satisfactory manner, and you could not possibly hope for even a fair display from them, however treated. It appears to us very probable that the bulbs were kept dry too long before being potted. Being so small they would naturally suffer more quickly than the larger bulbs. You speak of the others doing well, but the Roman Hyacinth ripens earlier in the season than the various Dutch bulbs, and if not potted till the latter are it will, of course, have been out of the ground for a longer period than any of the others. The tiny white worms were no doubt in the soil, possibly in the egg state, and as soon as they were hatched the decaying portion of the bulb furnished them with food. With regard to covering Roman Hyacinths with ashes when potted, we have, after several experiments, failed to find any advantage in this treatment. That it is at all events not necessary is proved by the fact that, on August 20, we potted a quantity of Roman Hyacinths and stowed them in an ordinary greenhouse on a stage occupied by Pelargoniums, Fuchsias, &c. There they rooted freely, and have been for the last fortnight in full flower.

Grubs eating Cyclamen (J. S. Grubs).—The grubs which are attacking your Cyclamen and other plants are those of the black Vine weevil (*Otiorhynchus sulcatus*) or a very nearly-allied species, the clay-coloured weevil (*O. pifurvus*). These grubs are so alike that it is very difficult to say to which species they belong, and their habits are exactly the same. No liquid insecticide is of any use, but you might try Vaporite. Make four holes in the soil round the plant 2 inches or 3 inches deep and half an inch in diameter, put a little Vaporite into each (enough to fill 1 inch in depth of the hole) and fill up the rest with soil. If this does not kill the grubs, the only thing to do is to pick them out from among the roots. The parent weevils feed on the foliage of Vines, Ferns and many other plants; they only feed at night, hiding themselves very carefully during the day. If you suspect that a plant is attacked by the weevils, lay it on its side on a white cloth, and about an hour after it has become dark throw a bright light on the plant and the beetles will probably fall on to the cloth; if they do not, give the plant a good shake. Small bundles of hay or dry moss, placed so that the beetles can creep into them to hide, make good traps.—G. S. S.

ROSE GARDEN.

Roses for a novice (A. H. C.).—You will find Jubilee to be a very good dark Rose and Victor Hugo a good scarlet. As you have such good sorts as Captain Christy, Frau Karl Droschki, Mrs. John Laing, Ulrich Brunner and Navier Olibo, we recommend the following: Hugh Dickson, Caroline Testout, Charles Lefebvre, Mme. Abel Chatenay, Mme. Ravary, Mme. Jules Grolez, Anna Ollivier, Mme. Hoste, Antoine Rivoire and Prince de Bulgarie. Three good ramblers different to Crimson Rambler, Dorothy Perkins and Aglaia would be Hiawatha, Blush Rambler and Félicité Perpétue.

Rose foliage diseased (The Young Gardener).—The injury to your Rose foliage has been caused by what is commonly termed the Rose blight. Its scientific name is *Sphaerotheca pannosa*. The only way to prevent a serious attack is to be on the look-out for it in its early stages, when it may easily be destroyed by the application of sulphur to the leaves and branches. The cause of one row of Peas coming deformed and the other not must be due to some local conditions about which we do not know.

Roses for new beds (M. A. S.).—We think the width of the parallel beds a very good one. You will be able to plant in these beds three rows each. For the centre row we suggest half-standards. They take off the formality that all bushes possess and tend to elevate the Rose garden from the stereotyped style. The quantity of plants required would be twelve half-standards with stems of about 2 feet 6 inches and thirty-two bushes or dwarfs. Be careful to choose free growers and free bloomers for the half-standards. For the diamond-shaped centre bed you could not do better than plant your standard weeping Dorothy Perkins, and around it we recommend four half-standards and sixteen bushes. Beds Nos. 3, 4, 6 and 7 would take thirty-six bushes each, and we suggest a pillar Rose in the centre of each of these beds. As to arrangement, we think it would be best if each bed were a distinct colour. You could, of course, have several sorts in each bed. The centre bed should be crimson, Nos. 3 and 7 yellows, Nos. 4 and 6 pinks, Nos. 2 and 8 crimson and reds, and Nos. 1 and 9 whites and creams. Arches would look well at the points where the paths approach nearest to the diamond bed, and these should be of contrasting colours to the beds near them.

FRUIT GARDEN.

Plum trees barren (Sage).—Do not cut back the branches of your trees, but cut right out the weakest. Then dig a trench half-way round the tree, 3 feet deep and 1½ feet wide, 6 feet distant from the stem of the tree, wheeling the soil away and cutting all roots seen. Fork the soil away from the roots to within 3½ feet of the stem of the tree, shortening back all the strong roots seen, but taking care of the smaller ones for replacing in the new soil. This should consist of turfy soil (without the grass) cut about 5 inches deep from a pasture-field, mixing with it a peck and a-half of lime and a gallon of bone-dust to every barrow-load. Place the roots carefully in this new soil, making it firm about them until the whole trench is filled up, afterwards giving the whole a good watering. This root-pruning will check the vigour of the tree's growth and induce it to bear fruit. The other half of the tree may be served in the same way two years hence. Towards the end of October is a good time to carry out this work.

Hardy Vine Reine Olga not fruiting (Ber. G. R. E.).—Seeing that your young Vine has grown freely and is healthy it ought to have shown fruit before now. The trouble is, we think, that the growth it has made has not been properly ripened by the action of the sun, and free passage of air among the branches has been excluded by allowing the Vine to carry too many branches and too much foliage. Should this be so, the best thing for you to do at once will be to reduce the main branches or spurs radiating from the stem of the Vine to a distance of 10 inches apart, and shortening each of these spurs or branches to 15 inches in length. Out of these main branches or spurs sub-laterals (or what are commonly termed second and third growths of young shoots) will have possibly grown. These should be cut back to within four leaves of their base, and every subsequent growth they make should be cut or pinched off at the third young leaf, the object being to concentrate the force of the Vine in forming and maturing plump and fertile buds which will produce fruit the following year. The only winter pruning necessary will be to cut back these main spurs to within two buds of their base. If you will remind us we will recur to the subject next spring.

Apples, Pears, Plums, Apricots and Cherries to plant in a light loam with sand and gravel subsoil (A. L. Simpson).—If you have a good depth of light loam resting on sand and gravel subsoil, say, 2 feet to 2½ feet of loam, you may venture to plant the trees named with every prospect of success, provided the land is properly prepared for their reception: but if you have only from 9 inches to 1 foot of loam to deal with, your prospect of permanent success would be a poor one. The trees would probably go on all right for a few years, but as fruit-bearing time came on the trees would collapse, especially in hot summers, and prove a loss and disappointment. The way to prepare the land is to trench it 2½ feet deep, applying well-decayed manure at the rate of twenty tons to the acre, planting the trees towards the end of October. We should prefer to start with three years' old trees. These will be well formed by then, and have also abundance of good fibrous roots. They will not bear much the first year, but half-a-dozen fruits each will not hurt them. The second year more may be allowed, but they should not be allowed to carry a heavy crop until the fourth or fifth year. You do not say whether you require dessert or cooking varieties of Apples, so we give six of each from which to choose, all of

which are among the best in their season. Dessert Apples: Mr. Gladstone, July and August; Devonshire Quarrenden, July and August; Lady Sudeley, April; Cox's Orange Pippin, October and November; Allington Pippin, December and January; Allen's Everlasting, March and April. Cooking Apples: Potts' Seedling, August; Stirling Castle, October; Lord Derby, November and December; Blenheim Orange, November and December; Bramley's Seedling, January; Newton Wonder, February and March. Pears: Jargonelle, July; Williams's Bon Chrétien, August and September; Louise Bonne of Jersey, October; Beurré Hardy, October and November; Doyenné du Comice, November and December; Beurré de Jonghe, January and February. Apricots: You had better plant two Moor Park and one Powell's Late, against a wall, of course. Cherries: Frogmore Early Bigarreau, Governor Wood, White Heart and Waterloo.

Nectarine Lord Napier shrivelling while young (*Enquirer*).—After the good treatment you say your tree has had it is difficult for us to assign a cause or to suggest a remedy for the shrivelling of your fruit at this stage of their growth. What is termed "ringing," which means the slitting of upright shallow cuts in the bark of hide-bound trees, has been known to produce good results in the way of increasing their fertility by aiding the expansion of the bark in such congested parts, and, consequently, giving a freer vent to sap circulation. You might try this by cutting three slits (bark deep) one in the middle and one on each side, nearly the whole length of the stock. These cuts disfigure the bark more or less, but they do no harm. We suppose the tree was not syringed about this time with any insecticide? Or do you think that bad quality glass in the light over the tree has had anything to do with scorching the fruit? This happens sometimes. We are strong believers in the practice of lifting and replanting Peach trees whenever there is anything amiss with them. We have never known the practice fail in producing the desired result. We advise you to try this again this autumn, lifting your tree completely out of the soil and replanting in rather heavy turfy virgin loam, mixing with it a gallon of bone-meal and a peck of lime to each barrow-load of soil. If it does not improve after this we should throw it away and plant another.

MISCELLANEOUS.

Destroying lawn weeds (*T. O.*).—The weed-killer you enquire for is known as Lawn Sand, and is a composition in powdered form that, strewn over lawns which contain broad-leaved weeds, burns them up and in that way destroys them. The result is, of course, to make the lawn look spotted and disfigured until the weeds die away and the grass grows over the vacant spaces. This Lawn Sand afterwards exercises certain manurial powers, causing the grass, which does not retain the sand, to grow all the stronger. You can purchase it from any horticultural sundriesman, and probably any seedsman; it is sold in tins or in casks. Particulars as to its use are usually given with the article. In any case you can purchase Lawn Sand from the Boundary Chemical Company, 27, Cranmer Street, Liverpool.

Names of fruit.—*A. E. W.*—1, Beurré Clairgeau; 2, Marie Louise d'Uccle.—*Ancius*—Cat's-head; 2, Golden Noble; 3, a small King Harry; 4, Hambling's Seedling.

Names of plants.—*T. B. P.*—*Cestrum elegans*.—*E. Keep*.—*Ornithogalum lacteum*.—*E. H. P.*—Cannot name from material sent.—*S. H. B.*—*Escallonia exoniensis*.—*J. Cozens*.—1, *Cycas revoluta*; 2, *Davallia elegans*; 3, *Pandanus utilis*; 4, leaf insufficient for name; 5, *Strelitzia Regine*; 6, *Sparmannia africana*; 7, *Albizia lophantha*; 8, *Eupatorium wlemannianum*; 9, *Eucharis amarantha*; 10, *Dracena Sandere*; 11, *Podium aureum*; 12, *Asplenium Nidus-Avis*.

SOCIETIES.

DARLINGTON HORTICULTURAL SOCIETY.

The annual autumn exhibition in connexion with the above society was held in the Drill Hall, Darlington, on the 18th ult., when a grand display of flowers, fruits and vegetables was made. The show was opened by the Mayoress (Mrs. B. Biggs), who was accompanied by the Mayor, and during the day the Lord Mayor of York visited the hall.

For twenty-four Japanese Chrysanthemums, not less than eighteen varieties, the silver challenge trophy was won by Mr. J. E. Hathaway, gardener to Mr. J. Brennard, Baldersay Park, the second prize going to Mr. J. Lester, gardener to Sir J. E. Backhouse. In Mr. Lester's collection was found the best bloom in the open classes, this being a magnificent specimen of Duchess of Sutherland.

For twenty-four incurved varieties Mr. Hathaway was again first, Mr. M. Sargent, gardener to Lady Payne Galloway, being second; and for twelve Japanese Mr. J. Lester was placed first, Mr. W. G. Chandler securing the premier prize for twelve incurved blooms.

For specimen plants of Japanese varieties Alderman Bartlett was the champion, Mr. E. Hutchinson being a good second. Mr. Hutchinson was first for three pots of Begonias.

In the class for two bunches of black Grapes Mr. Hathaway secured the first prize with splendid bunches, Mr. J. R. Gardiner, gardener to Lady Cowell, being second. In a similar class for white varieties Mrs. T. Brown was placed first. For six dishes of culinary Apples Mr. W. C. Modrell was first, and in a similar class for dessert varieties Mr. Modrell was again first.

For a collection of vegetables the prizes were won respectively by Mr. T. Seymour, Mr. G. Danby and Mr. W. Knight.

In the amateurs' classes the first prize for a collection of Japanese Chrysanthemum blooms was won by Mr. G. Dalton, Mr. W. Chandler being first for a collection of incurved blooms. Mr. Stewart was first for a dish of Apples and Mr. T. Watson for a dish of Pears.

NORWICH CHRYSANTHEMUM SHOW.

THE opening day of this three days' fixture was unfavourable with regard to the weather, and this, no doubt, kept away many visitors, causing a marked falling off in the attendance. St. Andrew's Hall and Blackfriars Hall, Norwich, were well filled with exhibits in spite of the fact that the entries numerically were behind those of several previous years. Three good circular groups of pot Chrysanthemums and foliage plants were staged; the first prize here went to Mr. W. Palmer, gardener to J. B. Coaks, Esq., Thorpe, who was closely followed by Mr. C. Burtenshaw, gardener to H. Skelton, Esq., St. Helen's House, Mr. W. Rush, gardener to F. P. Hinde, Esq., Thorpe, bringing up the rear. The large Japanese cut-bloom classes lacked that spirited competition one likes to see. The best stands of blooms in this section came from T. A. Rising, Esq., Ormesby; Mr. H. Goude, gardener to E. Reeve, Esq., Cutton; Lord Rendlesham's gardener; Mr. M. W. Brooke, Attleborough; and Mr. W. Laws, gardener to E. G. White, Esq.

Pompons, singles and naturally-grown flowers seem to become more popular each year; incurved varieties are fast falling away from public favour in this district and made a poor display.

Miscellaneous cut flowers and pot plants were classes that allowed of a wide range of choice subjects to be exhibited. In these were a grand collection of Orchids from Mr. H. Rider Haggard, Ditchingham. Some fine cut blooms of exotic flowers came from Mr. L. Smith, gardener to Robert Fellows, Esq., Shotesham Park; he also set up a fine batch of choice and rare specimens of Orchids from his valuable collection. Mr. H. Goude, gardener to E. Reeve, Esq., exhibited six exceptionally good Begonia Gloire de Lorraine in a class for these. The plants, growing in 5-inch pots, were perfect in every way and reflected great credit on the grower. The other classes for Primulas, Cyclamen, Pelargoniums, Salvias and the like all added beauty to the floral section. Mr. W. Allan, Gunton Park Gardens, won the silver challenge bowl for the best collection of twelve varieties of fruit. Lord de Ramsey (gardener, Mr. A. Coombe) sent some wonderful Alicante Grapes, which were far away winners in a strong class.

Apples were the most keenly contested section of the whole show, and some choice examples of both dessert and kitchen sorts were seen. Pears had for their champions such growers as Mr. G. Davison, Westwick; Mr. Hanson, gardener to Sir Savile Crossley; Mr. W. Allan, Gunton; and Mr. H. Goude.

Vegetables included all the seasonal sorts and were numerous. The trade growers made a good display, the more prominent of these being Messrs. Daniels Brothers, Limited, Norwich, with all the subjects in season from their Town Close Nurseries. Hobbies, Limited, Dereham, had a bank of single Chrysanthemums and outdoor Roses; these were good for so late in the season. Mr. R. C. Notcutt had flowers and fruit.

ABERDEEN HORTICULTURAL SOCIETY.

THE annual meeting of this society was held in the Music Hall, Aberdeen, the other evening, when there was a good attendance. The chair was occupied by Bailie Milne. The directors' report was of a rather disappointing character, due mainly to the reduction in the drawings at the show, owing to the wet weather of the last day. There had also been a falling off in the membership. The income amounted to £416 13s. 8d. and the expenditure to £477 2s. 11d., a loss on the year of £60 9s. 3d. There is, however, a balance to the credit of the society of upwards of £30, and it is hoped that more favourable weather will recoup the loss on the year. The following office-bearers were appointed: Hon. president, Lord Provost Wilson; chairman, Mr. Burnett of Powis; auditors, Messrs. W. Reid and W. Wyllie; secretary and treasurer, Mr. J. B. Kennet.

DUNDEE CHRYSANTHEMUM SOCIETY.

THE annual two days' show of this society was opened in the Kinnaird Hall, Dundee, on the 27th ult. by Mrs. Urquhart, wife of the Lord Provost of Dundee. The show, taking it as a whole, was much superior to that of last year, the entries showing a slight increase, while the quality was generally considered finer. Cut blooms were very good, although the absence of such well-known exhibitors as Mr. James Beisant and Mr. D. Nicoll was expected to militate against the character of the blooms in the leading class. From the display in other classes it is evident that the smaller decorative varieties and the singles are gaining ground in the district. Chrysanthemums in pots were splendid, and a notable feature was the competition for Begonia Gloire de Lorraine, where some very fine plants were shown. Decorative work was particularly well done. Little encouragement is given to exhibitors of fruit and vegetables, and in the latter section the display was of no special merit.

In the premier class for Chrysanthemums—that for twelve vases, for which the City of Dundee Corporation Vase was offered—Mr. J. F. Stewart, an exhibitor coming to the front with these flowers, took the leading position with twelve fine vases, among his best blooms being Lady Conyers, F. S. Vallis, Mme. Cadbury and Algernon Davis; Mr. James Rae, Ethie Castle, was second. For eight vases of Japanese, Mr. James Beats, Binrock, was first. For six vases, Mr.

W. Dickson, Adderley, led; and other first-prize takers with Japanese were Messrs. A. Stephens, J. E. Davis, A. Duncan, J. F. Stewart, D. K. Meston and G. Scott. Mr. D. K. Meston was first for singles. Mr. George Scott, Seathwood, was first for twelve pots, Japanese, and he occupied a similar position for six pots. Mr. R. Collic, Drumkilbo, was first for Grapes; Mr. W. Benvie, Errol, for kitchen Apples; Mr. R. M'Naughton for table Apples; and Mr. A. M'Intosh for Pears. Mr. James Kinnear had the best collection of vegetables.

Trade exhibits were not numerous, but were very fine. Messrs. Storrie and Storrie, Glencarse, made a good display of fruit trees in pots, Apples and various pot plants. Messrs. W. P. Laird and Sinclair made a great exhibit of decorative designs and other specialties of the firm. Mr. D. C. Hutcheson exhibited American Carnations, and Mr. G. Reid, Invertay, Broughty Ferry, made a capital show of Cyclamen.

ABERDEEN CHRYSANTHEMUM SOCIETY.

THE annual show of this society was opened on the 27th ult. in the Music Hall, Aberdeen, by Mrs. Ogilvie Gordon. The exhibits were considerably fewer in number than last year, but showed no diminution in quality. Cut blooms were very fine, the premier award for twelve vases of Chrysanthemums falling to Mr. A. Morton, gardener to the Dowager Duchess of Seaford, Cullen House, Banff, with twelve splendid vases of Japanese. Mr. W. Patterson, Balmiedie, Aberdeen, was a good second. Mr. Morton was also first for twenty-four vases in twelve varieties. Mr. A. Oliphant was first for twelve in nine varieties. For incurved, Mr. J. Jenkins, jun., was first. Decorative and single Chrysanthemums were very finely shown, Mr. John Petrie, Crathes, being first for eighteen decorative Japanese in vases. Mr. R. Begg was first in the leading class for singles. An unusual feature is provided here, this being a class for twenty-four trusses of Christmas Roses. Mr. William Milne was first for these. Other cut flowers were also good, and baskets, bouquets and other florists' work were admirably exhibited. Leading winners were Mr. A. Douglas, Mr. J. Joss, Mr. J. Petrie and Mr. J. Strachan. An exhibitor from Dumfries, Mr. R. A. Grigor, Dalswinton, had it all his own way with the decorative display. Plants were good, the first for four Chrysanthemums going to Mr. J. Tough, and that for six in 6-inch pots to Mr. R. Begg. Fruit made a good display, Mr. R. Singer being first for a collection of baking Apples and Mr. A. Paterson for dessert varieties. For black Grapes Mr. A. M'Leod was first, and for white Mr. A. Reid. The best collection of vegetables was shown by Mr. E. Joss.

OBITUARY.

MR. DAVID STALKER, NAIRN.

WE regret to have to record the sudden death of Mr. David Stalker, head of the firm of Messrs. David Stalker and Son, nurserymen, Nairn. Mr. Stalker, who had been in delicate health for several years, was eighty-two years of age, having been born at Cornhill, Banffshire, in 1826. He began life as a farm servant, afterwards becoming an apprentice gardener. On the expiry of his apprenticeship he moved about for a considerable time to gain experience and improve his position in his calling. His last appointment as gardener was at Holme Island, Grange-over-Sands, whence he went to Wales to take up an appointment as factor. Thence he went to Hunterston Castle, Ayrshire, in a similar position, where he remained for several years. He then bought the Nairn Nurseries, where he carried on business for twenty-four years in company with his son. In 1901 Mr. and Mrs. Stalker celebrated their golden wedding. Mrs. Stalker and his son survive him.

The Christmas Number of "Country Life" for December 5, contains, among other articles: "Tredegar Park.—I." (illustrated); "West Highland Terriers" (illustrated); "Wild Country Life"; "The Common Tern" (illustrated), by W. Bickerton; "The Insurance of Livestock"; "Pictorial Photography of the Year" (illustrated), by Ward Muir; "Head-dress in Finistère" (illustrated), by Francis Keyzer; "Fouquier Tinville," by Rowland Strong; "In the Garden"; "To Christina and Katharine at Christmas," by Ford Madox Hueffer; "The Wild Reindeer in Scandinavia," by Rugde; "Snow on the Farm" (illustrated); "Mrs. Green.—III.: The Deceivingness of an Orned Cow," a Story, by Evelyne E. Rynd; "Horse and Hound in the Provinces" (illustrated).

* * * The Yearly Subscription to THE GARDEN is: Inland, 6s. 6d. Foreign, 8s. 9d.



WEeping ROSE
"DOROTHY PERKINS."

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

TABLE DECORATIONS FOR CHRISTMAS.

EVERYTHING should be bright at this festive season, and those who have to superintend the decoration of the dinner-table will, no doubt, wish to have it as gay as possible and probably somewhat different from last year, and, naturally, an improvement upon previous efforts will be desired.

Flowers, except those that are forced, are rather scarce at the end of the year; but a little good management and forethought will help to tide over difficulties. It is wonderful what there is to be found in the hedgerow suitable for our purpose. I am referring now to those who are so placed that they cannot obtain delicate flowers, but are able to gather from the hedges. In many parts of the country the fluffy Clematis is to be found in abundance, and also the bronze and yellow fronds of Ferns. Coupled with these are Holly berries and also the black ones of the Ivy. These may be arranged to give a delightful effect. In the taller vases the bearded Clematis may be loosely placed with a few Fern fronds, and the smaller glasses may contain a few sprigs of Holly with berries, or the Ivy.

Then, again, think out some arrangement of the Fern alone. The light brown fronds judiciously mixed with the reddish bronze ones are sufficient for the vases, and if some of the flat fronds are laid on the cloth to form stars around candlesticks and dishes, and others which are narrow placed to form a tracery on the white cloth, a very charming result is obtained.

Red Holly berries arranged in bunches on the top of the Fern fronds would do for another table. Now we come to Ivy alone. Not a single flower need be used; the vases and the cloth would be tastefully furnished by using very slender branches of Ivy in the vases, so that the ends hang over the sides gracefully and nearly touch the cloth, and equally slight branches intermixed with thicker ones on the cloth. A spray laid here and another there are most effective. Plucked off, the Ivy leaves are very suitable for placing around the bases of various dishes and ornaments, for forming into stars, tracery and different designs on the cloth.

The leaves of Brambles, Beech, Oak and other trees are useful for the same purpose. Again, how very nice a few vases of grasses gathered from the roadside look. There is a simple beauty in all these which may be presented in a pretty form.

I will now give a few hints on the arrangement of the more tender flowers and greenery. Late-

flowering Chrysanthemums are a boon to the decorator. The blooms remain fresh for quite a week after they are cut, especially if half an inch of stem be cut off twice during that time; the sap-vessels are thus kept open and water admitted. Nearly all the very large blooms are at this season gone, so that very heavy arrangements are more easily avoided. Under artificial light scarlet, carmine, pink and white show to the best advantage; therefore, when selecting the blooms in the greenhouse or shop it is well to remember this.

In a natural state large and small flowers and partially-developed buds grow together on a plant. We follow Nature by associating them also on the dinner-table; lightness is more easily secured, especially if each bloom is free of its neighbour. Lilies of the Valley and white Roman Hyacinths look splendid with a few scarlet Zonal Pelargoniums and Maidenhair Fern fronds. The two first-named come from a high temperature, but they will, however, last a long time fresh if not subjected to cold draughts.

A very pretty table decoration for Christmas consists of spikes of Calanthes (C. Veitchii) and Fern fronds, and if some of them are placed on the shelf over the fireplace the general effect is enhanced; indeed, I think it is advisable to often have the same kind of flowers on the mantel-board as are placed on the table. A completeness is thus given to the whole arrangement. The lovely tints in Vine leaves, when the latter are used for the dessert dishes, have a fine effect on a white cloth.

Palms, Crotons, Dracenas, Cyperuses, Ferns and Aspidistras placed in recesses and on the table look charming. Primulas, Cyclamens, Azaleas, Poinsettias and Begonia Gloire de Lorraine are suitable for the table and also the room generally. Avon.

PARROT TULIP SEEDLINGS.

A GENTLEMAN in New Zealand writes to say that seven years ago he was fortunate enough to save some seed from a Parrot Tulip, and that seven of the seedlings flowered last August. He describes them as being about 15 inches high and of ordinary Tulip shape. Two are crimson-pink with the lower part of the segments white, one is light yellow with a bright crimson edge, one is creamy white with a pink edge, and the others are creamy white with slight crimson markings on the divisions. This is an extremely interesting fact, for as far as I can learn it is the first authenticated case of seedlings raised from a Parrot parent. I fancy most of us would have thought some Platystigma would have appeared, but it is not so. The origin of Parrot Tulips is somewhat obscure. From my own observation and from what I can learn from others they are in all probability sports, and, moreover, any

variety may take on this peculiar form. Last April, at one of the Royal Horticultural Society's meetings, I saw a *Chrysolora* whose petals were well on the way to becoming Parrots; and at Mr. van Tubergen's grounds at Haarlem this spring I saw an *Eleanora* which had quite taken on a Parrot form. Mr. E. H. Krelage knows a lilac and yellow Parrot that originated some little time ago from a *Bybloemen Tulip* in a Haarlem nursery. The reason why they are not met with earlier in the history of the Tulip is probably that they were originally looked upon as undesirable and severely repressed. One of the first recorded is called *Le Monstre Jaune*, and in 1745 Weinmann, who pictures several, labels them "Monstrosities." As a parallel case I would refer to what has happened to the *Chrysanthemum*, the *Carnation* and the *Dahlia* in our own immediate days, when types are popular and much appreciated which a very short time ago were discarded as worthless. The experience of our New Zealand friend seems to bear out my theory. It will be of great service if, after the next flowering season, he will send a note about the behaviour of those which have yet to flower, and also what he finds the result to be of his equally interesting *Platystigma* offspring.

JOSEPH JACOB.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

* * * *The dates given below are those supplied by the respective Secretaries.*

December 11.—National Sweet Pea Society's Annual General Meeting at the Hotel Windsor, Westminster, 3 p.m.

December 22.—Royal Horticultural Society. Exhibition of Flowers, Plants, &c., 1 p.m. to 5 p.m. Royal Horticultural Hall, Vincent Square, Westminster.

November competition for our Readers.—Owing to the large number of essays submitted for this competition, we have been unable to get them judged in time to give the results in this issue; but these, together with the first-prize essay, will appear next week.

Hobbies, Limited's Exhibition.—An interesting exhibition arranged by Hobbies, Limited, was held in the Memorial Hall, Farringdon Street, London, E.C., on the 1st, 2nd and 3rd inst., this being opened on the first day by Sir George White, M.P. In addition to many beautiful examples of fretwork, wood-carving, modelling, &c., the horticultural department was well represented, bulbs, Cacti, *Chrysanthemums*, Roman Hyacinths in flower, Roses, fruit trees, seeds and other horticultural goods being attractively displayed. Such an exhibition held in the heart of the City of London should do much towards fostering a love for healthy hobbies among our workers.

Edinburgh parks and open spaces.—Mr. J. W. McHattie, the city gardener of Edinburgh, has prepared an able and exhaustive report on the parks and open spaces of the city, and this was presented to the Town Council at their last meeting. Mr. McHattie's report was warmly commended at the meeting, giving, as was stated, information the council never had before respecting the numerous parks and open spaces of Edinburgh.

Mildness of the season—flowers from Goodwood.—We have received an interesting gathering of flowers from Mr. F. Brock, The Gardens, Goodwood, Chichester. The Roses were exquisite. The following notes accompanied this welcome contribution to our table: "*Acacia nerifolia* was planted out of doors two years ago in a sheltered border when it was about 3 feet high. It is now about 6 feet in height, and has been flowering continuously since the beginning of September. *Cytisus racemosus*: This was planted with the above

shrub and on the same date. It is growing very rapidly, and has been flowering profusely for the past five weeks. *Laburnum*: Flowering for the second time this year. *Parochetus communis*, *Cheiranthus Cheiri* and *Gypsophila prostrata rosea*: From an exposed rockery." Also sent were the fragrant winter-flowering Honeysuckles *Lonicera flexuosa*, *L. halleana* and *L. brachypoda*, and the *Arbutus* from an old tree in a fairly sheltered part of the garden. *Ceanothus azureus* was gathered from a shrub on a south wall, and the *Rosemary* from an old bush in the garden. The Roses were delightful, and comprised three of the most beautiful sorts in cultivation—*Hermosa* (a fresh pink shade), *Mme. Laurette Messimy* and *Mme. Eugène Resal*.

Plants in flower at Chaddie-wood, Plympton, South Devon.

—Mrs. Soltan-Symons writes as follows: "Having noticed in THE GARDEN of November 28 a list of flowers in bloom at King's County at the beginning of that month, I send you a list of shrubs, herbaceous and alpine plants in bloom on December 1 in my garden. This list may interest your readers as showing the extraordinary mildness of the season. *Abelia rupestris*, *Abutilon vexillarium*, *A. Vitifolium*, *Andromeda cassineifolia*, *A. floribunda*, *Aralia Sieboldii*, *Berberis Darwinii*, *Caleolaria Burbidgei*, *Ceanothus Gloire de Versailles*, *Choisya ternata*, *Chrysanthemum frutescens*, *Clianthus puniceus alba*, *Cobæa scandens*, *Coronilla glauca*, *Correa ventricosa*, *Crinodendron Hookeri*, *Desfontainia spinosa*, *Erica codonodes*, *Escallonia macrantha*, *Eupatorium weinmannianum*, *Euryops Athanasia*, *Fuchsias fulgens*, *pumila* and *Ricear-tonii*, *Grevillea alpina*, *G. rosmarinifolia*, *Helianthemum* (double red), *Hydrangea Hortensia*, *H. Otaska*, *H. Thomas Hogg*, *Jasminum nudiflorum*, *J. primulinum*, *Kerria japonica fl.-pl.*, *Lonicera Periclymenum japonica*, *Lupinus arboreus*, *Magnolia grandiflora*, *Nandina domestica*, *Osmanthus ilicifolius*, *Rhododendron arboreum*, *Salvia grahamiana*, *S. fulgens*, *Spiræa prunifolia fl.-pl.*, *S. Thunbergii*, *Spartium junceum*, *Teucrium argenteum*, *Veronica* (var.), *Viburnum Tinna*, *Weigela hortensis nivea*, *Anemone coronilla*, *Borago laxa*, *Delphiniums*, *Calceolaria mexicana*, *Erigeron mucronatus*, *E. philadelphicus*, *Eryngium olivierianum*, *Geranium Endressii*, *Helleborus* (Christmas Rose) *maximus*, *Iris stylosa alba*, *Modiola geranioides*, *Narcissus Polyanthus*, *Pansies*, *Papaver cambrica*, *P. c. fl.-pl.*, *Pentstemons*, *Polyanthus*, *Potentilla crimson*, *Primulas japonica*, *denticulata* and *obconica*, *Oriental Poppies*, *Violets La France*, *Baroness de Rothschild*, *Princess of Wales*, and *Amiral Avellan*, *Roses* in variety, *Arabis albida fl.-pl.*, *A. saxatile*, *Aubrietias Dr. Mules* and *purpurea*, *Asteriscus maritimus*, *Campanula gargarica hirsuta*, *Campanula portenschlagiana*, *Corydalis lutea*, *Erysimum pulchellum*, *Iberises sempervirens*, *Little Gem* and *coriacea*, *Lithospermum prostratum*, *Linum caribonense*, *Malvastrum lateritium*, *Millias*, *Oxalis floribunda*, *Polygonum vacinifolium*, *Polygala buxifolia*, *Parochetus communis*, *Phlox setacea*, *Vincæ acutifolia* and *Veronica rupestris*."

—The following were in flower on the 1st inst. in Sir John Thornycroft's garden at Steyne, Bembridge, Isle of Wight. In an accompanying note it is mentioned that "this autumn seems to be an exceptionally mild one; even the sharp nip of frost a few weeks ago did not affect us here, as we have Dahlias growing and looking very bright with bloom, also *Heliotrope*. The list I enclose I do not think is a bad one. I may say our Rose garden looks as if it were July instead of December 1; the sorts of Roses mentioned are perfect gems for late autumn blooming. *Salvias splendens grandiflora*, *Petunias*, *Corydalis lutea*, *Cistus* in variety, *Ceanothus* in variety, alpine Strawberries in flower and fruit, *Clarkia*, *Silene pendula compacta*, *Laurustinus* (beautifully in flower), *Escallonia montevidensis*, *Romneya Coulteri*, *Fuchsia*, *Veronica*, *Matthiola bicornis*, *Lavender*, *Naarturtiums*, *Spanish Broom*, double and single *Goræ*, *Petasites fragrans*,

Heliotrope, *Armeria vulgaris* (common Thrift), *Helleborus niger maximus* (Christmas Rose), *Dahlias* (*Cactus*), *Aralia Sieboldii*, *Crane's-bill*, *Ivy-leaved Geraniums*, *Blackberries*, *Jasminum nudiflorum*, *Clematis cirrhosa*, *Solanum jasminoides*, *Arabis alpina*, *A. a. flore-pleno*, *Periwinklea*, *Hydrangea*, *Convolvulus minor*, *Yucca gloriosa* (a very large spike); a large quantity of *Roses* in variety—especially *Mme. Alfred Carrière*, *G. Nabonnand*, *Marie van Houtte*, *Champion of the World*, *Mme. Lambert*, *Cramoisi Supérieure*, *Corallina* and *General Schablikine*—are flowering very freely, *Stocks*, *Mignonette*, *Polyanthus*, *Primroses*, *Scabious*, *Limnanthea Douglasii*, *Iberis sempervirens*, *Chrysanthemums*, *Cosmeas*, *Erysimum Golden Gem*, *Wallflowers*, *Alyssum saxatile compactum*, *Nicotiana Sandera* and *affinis*, *Lithospermum prostratum*, *Valeriana officinalis*, *Sweet Violets*, *Dog Violets*, *Lupinus arborea*, *Berberis Darwinii*, *Choisya ternata*, *Begonias*, *Marguerite Carnations*, annual *Chrysanthemums*, *Coronilla glauca*, *Marguerites*, *Trollius*, *Aubrietias*, *Plumbago Larpente*, *Michaelmas Daisies*, *Gaillardias*, *Marigolds*, *Delphiniums*, *Tagetes*, *Leycesteria formosa*, *Sweet Briar* and *Koniga maritima*."

PRIZES FOR READERS. DECEMBER.

THE BEST EVERGREEN SHRUBS FOR WINTER EFFECT AND HOW TO GROW THEM.

A First Prize of FOUR GUINEAS,

A Second Prize of TWO GUINEAS,

A Third Prize of ONE GUINEA,

And a Fourth Prize of HALF-A-GUINEA

are offered for the best essays on the above subject.

The notes (restricted to 1,500 words) must be written on one side of the paper only, and be enclosed in an envelope marked "Competition," addressed to "The Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, W.C." The essays must reach this office not later than Thursday, December 31. Both amateur and professional gardeners may compete, but it is hoped that those who contribute regularly to the pages of THE GARDEN will not do so. The name and address of the competitor must be written upon the MS., and not upon a separate piece of paper. The Editor accepts no responsibility for and cannot undertake to return the MSS. of unsuccessful competitors. The Editor's decision is final.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

National Chrysanthemum Society's exhibitions.—How much longer will the above society continue to hold its exhibitions at the Crystal Palace? It is really distressing that such lovely displays of flowers should be staged there with comparatively few visitors to see them. The winter exhibition this year, held as recently as the 2nd and 3rd inst., is a case in point. Here were beautiful flowers and fruits arranged in a most attractive manner, yet the visitors were very few indeed. Possibly the cold weather may have induced some to stay away, for the Palace was and usually is notoriously cold; but this was not the case with the October and November shows, yet the number of visitors then was far from satisfactory. Can it be that the *Chrysanthemum* is losing its hold on public favour, or are there other reasons connected with the Crystal Palace that tend to keep the public away?—A VISITOR.

Bulbs in moss fibre.—The accompanying illustration is from a photograph sent to us, and represents *Narcissus* Sir Watkin growing in Mr. Robert Sydenham's moss fibre from bulbs supplied by him. They were grown by Dr. McNeill of Bridlington, some twelve to fifteen bulbs being placed in the fibre in October, 1907, and the photograph was taken in March of this year. About twenty-seven flowers were produced, thus forming the charming mass shown in the illustration and demonstrating forcibly the value of this system of cultivating bulbs for decorative purposes.

THE FRUIT GARDEN.

FRUIT TREES IN POTS.

DURING recent years the cultivation of such fruit trees as Cherries, Apples, Plums and Pears in pots has been developed to a considerable extent, hence a few notes on the system may be of value at present. It must not be supposed that trees cultivated thus are intended for a general crop, because, owing to the time and trouble expended on them, such a crop would not be profitable. Where, however, very choice fruits are needed for exhibition or dessert the system is invaluable, and it is chiefly for these purposes that the fruits are thus grown.

Another point to remember at the outset is that these trees, generally speaking, will only need the protection of a glass house for a short period of the year, outdoor treatment being the best at other times. This, of course, does not apply to cases where Cherries or Plums are needed some time in advance of the crops that ripen outdoors. The chief advantage, then, in growing trees in pots is that they can be taken into a glass house just before the flowers open and kept there until the fruit has set well, when they can be once more placed in the open. When the fruit is ripening the trees may again be placed under glass and there allowed to finish their fruits, which they will do much better than those trees growing entirely out of doors. For the North of England and Scotland, where it is rather difficult to get well-finished Apples, Pears and Plums of choice varieties, the system is especially valuable.

One point that the amateur must always bear in mind is that no coddling will be tolerated; in large establishments special houses are erected for the purpose, these being light and so constructed that an abundance of air can be given the trees at all times. Where special houses are not possible, one where plenty of light and air is available should be chosen. The amateur should, if possible, buy trees that are already established in pots, as at least a season will be gained by this means. If this is impossible, select those that possess plenty of fruit-spurs and pot them up in the autumn, using pots measuring 10 inches in diameter. Three year old trees are the best to start with, and any long, straight roots must, of course, be removed to enable the ball to go into the pot.

The best soil is very fibrous loam, with a little thoroughly decayed manure, some old mortar and a dusting of bone-meal added. Place one good-sized crock over the drainage hole, then a few half-inch bones, and over these some of the rougher compost. The soil must be well worked among the roots and rammed moderately firm. The Apples selected should be grafted on the Paradise stock and Pears on the Quince, as these stocks naturally have a dwarfing effect on the growth of the trees. After potting is done plunge the pots to their rims in ashes or Coconut fibre in the open, where they may remain all the winter.

Trees lifted from the open should not be allowed to bear a crop the first summer.

During the summer months, when growth is active, frequent applications of water will be needed, and these may be supplemented occasionally by weak solutions of artificial manure that contains a good percentage of potash and phosphate. Keep the pots plunged and adopt summer pruning, this consisting chiefly in the cutting back of lateral growths early in July to within three buds of their bases. This will tend to produce spurs and also enable the buds that are left to become well ripened during the autumn.

When trees are established they are, as stated above, taken into an airy and light house just before the flowers open so as to avoid the possibility of injury by frost. Fertilisation will usually be effected by bees, but it is as well to brush the flowers each morning with a rabbit's tail fastened to a stick. When the fruits are swelling nicely the trees can be again plunged in the open, or, if room is available, allowed to remain where they are, giving careful attention in each case to watering and feeding. As ripening time approaches those trees outdoors are brought into the house and given all the air and sun possible, this applying only to Apples,



A GOOD BOWL OF NARCISSI AS GROWN IN MR. ROBERT SYDENHAM'S MOSS FIBRE.

Pears and Plums. Cherries will always finish well outdoors.

The question of repotting is a rather vexed one. Some good growers like to replot the trees each autumn, as they are then more under control; others replot only once in three years, relying on top-dressing during the meantime. Whichever system is adopted the end is practically the same, as the main object is not to give the trees larger pots, but to provide them with new soil to replace the old. Thus in repotting a good deal of the old soil is removed from the roots without unduly disturbing them, and the tree returned to a pot the same size as the one it was previously growing in. When top-dressing is resorted to, as much as possible of the old soil is removed from the surface and replaced with good new compost. Both repotting and top-dressing should be done early in the autumn, just before or as soon as the leaves have fallen. Soil as advised for potting up new trees is suitable for these purposes. Of course, when top-dressing is being done it will be necessary to examine the drainage and see that the hole in the bottom of the pot is not blocked; if it is, the tree should be turned out of its pot and the crocks rearranged so that superfluous water has a free outlet.

THE KITCHEN GARDEN.

AUTUMN TREATMENT OF ASPARAGUS BEDS.

IF the work has not already been done, no time must be lost in clearing off all the dead tops of the Asparagus and also any weeds and other rubbish that may be present on the surface of the soil. The old tops should be cut off close to the ground, and these, together with any other rubbish removed, must be promptly burned, so that any eggs, insects or fungoid diseases that may be present will be destroyed. This removal of weeds and rubbish will, of course, mean that a certain amount of soil will be taken away, and this should be replaced with some from the alleys or pathways.

Every autumn, as regular as the season comes round, the question of autumn *versus* spring manuring presents itself, and each system certainly has its adherents. While no hard-and-fast rules can be laid down concerning this important item in Asparagus culture, much may be gained from experience coupled with observation and a knowledge of the plant's growth. For example, where the soil is of a highly porous character, manuring in the autumn will not do any harm; but whether it will do any real good is another question. It must ever be remembered that normal Asparagus plants are now resting, and in such a condition they will remain until the end of February; consequently, any manure which is in the meantime rendered available for plant food cannot be made use of by the crop for which it is intended, and it is only reasonable to assume that by the time the plants are in a condition to use this food it will have been washed far beyond their reach.

In the case of soils of a more retentive character, in which some cultivators are obliged to grow Asparagus, of course the plants are in the same latent condition, but the plant food will not be so easily washed away. Another and more serious evil, however, presents itself. A layer of manure placed on the surface of a bed at this season quickly becomes saturated with moisture and remains so all the winter; consequently it acts as a sort of sodden blanket to the bed, maintaining the soil in a very wet and cold condition and at the same time excluding air, a condition that is certainly injurious to the plants. The above points granted, it will be seen that autumn manuring in the case of light or porous soil may not do any harm, yet can do but little good, and on heavy soils is certainly capable of much mischief.

In the early spring, however, the plants will commence to grow, and consequently any food washed down to them from the manure placed on the surface can be used at once to the plant's advantage, and, in the case of heavy soils, without any fear of injury being done; consequently, manuring in the spring, with good supplies of liquid manure during summer when growth is active and new crowns are being made ready for the next spring, is undoubtedly the best method to pursue, and this has more than once been proved in actual practice. Should circumstances arise that make it absolutely imperative for manuring to be done in autumn, long, partially-decayed manure should be chosen, as this will remain lighter on the bed, take longer to decompose and thus become available for the plants. H.

THE CULTIVATION OF EDIBLE MAIZE.

ALTHOUGH varieties of the common Maize or Indian Corn have for many years been grown in this country for ornamental purposes, little attention has been given to them from a culinary standpoint; yet where warm glass structures are available during the early months of the year and plenty of space for the plants to develop in during the summer, a very welcome addition

to our vegetables may be obtained from this source. Possibly the cultivation of these plants for culinary purposes has been considerably retarded by the fact that, until quite recently, the varieties suitable for and obtainable in this country were of a very inferior quality, but this is not now the case, several excellent varieties being offered by our leading nurseries.

The end of January is not too early to sow the seeds, these being placed singly in $2\frac{1}{2}$ -inch pots filled with a good open soil, with which a little very much decayed manure has been incorporated. If these can be stood in a hot-bed frame germination will soon result, but failing such a position they must be placed in a house with an average temperature of 55° , as Maize are naturally warm-loving subjects. As soon as the plants appear, a little judicious ventilation may be given, taking care, however, to avoid cold draughts, which will, if they reach the plants, cause a severe and irreparable check to growth. When the seedlings are about 4 inches high they will have filled the small pots with roots, and they may then be moved into pots measuring 5 inches in diameter, using soil for this potting composed of two parts good fibrous loam, half a part sand and half a part thoroughly decayed manure, potting moderately firmly. After the plants are well established in these pots they may be given more air, and a light position near the glass is essential, the temperature at no time to fall below 60° , the point to aim at being free and unchecked growth of a robust character.

In a few weeks the plants will have filled the 5-inch pots with roots, and they should then be moved into others 7 inches in diameter, using the same kind of soil and making it rather more firm. In these pots the plants will remain until planting-out time, which will be the first or second week in June, abundance of air being afforded them for a few weeks previous to planting out so that their tissues have become well hardened.

In the meantime the preparation of the summer quarters must be undertaken, and this will consist of deep digging or, better still, trenching, incorporating with the soil a heavy dressing of thoroughly decayed manure, as the plants are decidedly gross feeders. The soil that suits them best is one rather inclined to be stiff and that does not dry up rapidly. The size of the plot will, of course, depend upon the number of plants to be grown. They will need a distance of at least 3 feet between the rows and a distance of 2 feet from plant to plant in the row, and for some of the stronger-growing sorts 4 feet is none too much between the rows.

When planting out make a hole large enough to sink the ball of soil and roots well into the soil and work some fine material round the ball, a good watering in completing the operation. If the position is exposed to strong winds, light stakes and ties may be necessary until the plants have become well established, but usually these are not required. During dry weather a mulching of short manure over the roots and copious supplies of water are highly beneficial.

In addition to the fact that until comparatively recently only inferior varieties were obtainable, the question of gathering and cooking the cobs has doubtless done much to give this vegetable a bad name, as, unless proper care is taken over these apparently simple points, the whole season's work may be of no use whatever. It is safe to say that the majority of growers allow the cobs to get too old before gathering them. They should never be used for culinary purposes after the Corn has begun to turn mealy inside; when a seed is opened it should be milky inside if the Corn is fit for cooking. The cobs are cooked in their jackets and care must be taken not to boil them too long, else the Corn will turn hard and mealy. A few experiments in this direction will soon enable anyone to ascertain the precise amount of boiling required. Sutton's Early Dwarf and Country Gentleman are varieties that may be relied upon.

TREES AND SHRUBS.

GOLDEN-LEAVED CONIFERS FOR WINTER DECORATION.

THE various golden-leaved conifers are useful subjects for decorative gardening and may be used for a variety of purposes. Unfortunately, some of the more delicate-constituted ones cannot be grown with success in the vicinity of large towns and cities where the atmosphere is rendered impure through smoke or chemical fumes, and even those which grow moderately well under these conditions are shorn of much of their beauty by the coating of dirt which collects on the leaves during winter. Under better conditions, however, in a purer atmosphere and away from smoke, where branches and leaves keep clean, they are most effective, and the colour keeps good for the greater part of the year.

Perhaps of the golden-leaved conifers the various Yews, varieties of *Taxus baccata*, are the most useful, for they thrive in most gardens even about towns. The leaves keep a good colour for many months and only become dull for a short period previous to new ones being formed. As a rule the brightest colour is found on the under-sides of the leaves, but, as they usually turn upwards the colour is brought prominently into notice. Some of the best are *aurea variegata*, *Barronii*, *adpressa aurea*, *elegantissima*, *Dovastonii*, *aureo-variegata*, *fastigiata aurea* and *f. Standishii*. The variety *Barronii* is specially worthy of notice on account of the rich coppery colour of the leaves, while *elegantissima* and *Dovastonii aurea* are remarkably graceful in appearance; *adpressa aurea* is of very neat habit with tiny leaves, while the *fastigiata* varieties are golden forms of the Irish Yew.

Next in importance to the Yews are the varieties of *Cupressus*. Of *C. lawsoniana* the variety *lutea* has golden foliage and is of similar habit to the type; *gracilis aurea* is remarkable for its graceful appearance, the secondary branches being pendulous. A golden variety is known of *C. nootkatensis*, while of *Cupressus* (or *Retinospora*) *obtusa* there are several varieties. *Crippsii*, a form of the last named, is a particularly rich-coloured variety of *aurea*, while *gracilis aurea* is of very dainty appearance. *C. pisifera* provides us with several good golden varieties, *plumosa aurea* and *filifera aurea* being the best. *C. macrocarpa lutea* is a vigorous-growing variety of the *Monterey Cypress*, remarkable for its rich colour during summer and autumn and its change to a greener tint during late winter and spring. It is an excellent subject, especially for gardens in the vicinity of the coast. The common American *Arbor-vitæ* (*Thuja occidentalis*) provides several golden varieties, that called *lutea* being the best. Of *Thuja plicata* there is a variety *aurea*, and another, *zebrina*; the latter has green and golden-marked shoots. The Chinese *Arbor vitæ* (*Thuja orientalis*) provides a golden variety named *aurea*, which is a neat-growing plant. *Juniperus chinensis aurea* is a pretty golden variety of the Chinese Juniper, while among Pines we get a golden variety of the common Scots Pine (*Pinus sylvestris*).

In addition to these there are numerous varieties with more or less variegated foliage, but they are inferior to those mentioned above for general work. Some of them have a diseased appearance and the golden patches die out. Those to which prominence has been given are, in almost all cases, strictly golden coloured, and the plants present a perfectly healthy appearance, being, except in colour, exact counterparts of their respective types, as easy to cultivate and growing at about the same rate. K.

NEW TREES AND SHRUBS.

The different autumn catalogues are always awaited with interest by lovers of hardy trees

and shrubs, as some promising novelties are sure to be announced. This year one catalogue in particular contains many subjects likely to reach a high position in our gardens, viz., that of Messrs. James Veitch and Sons of Chelsea.

Buddleia variabilis superba.—Yet another form of this *Buddleia*, of which the variety *veitchiana* has already become a general favourite. The variety *superba* is described as having larger epikes and more deeply coloured flowers than any of the others, and being a fortnight later in blooming than *B. variabilis* itself.

Clematis repens.—This resembles *C. montana* in growth and floriferousness, but the individual flowers are much larger, being from 2 inches to 3 inches in diameter. They are pure white in colour and at their best in August.

Cotoneaster appanata.—An exceedingly graceful species of *Cotoneaster*, which was given an award of merit by the Royal Horticultural Society last autumn. The leaves are ovate, dark green above, and covered underneath with a greyish tomentum. The berries, which are borne in great profusion, are, when ripe, of a bright scarlet colour.

Ilex Pernyii.—A dense-growing and exceedingly pretty little Holly which was given a first-class certificate by the Royal Horticultural Society as recently as September 1 this year. It has been known for some years, but its introduction we owe to Messrs. Veitch. The berries are red, like those of the common Holly.

Pinus Armandii.—This Pine, which belongs to the *Cembra* section, has been long known through the French missionaries. This is, however, the first time it has been distributed.

Rhododendron intricatum.—In the spring of last year this little *Rhododendron*, then shown under the name of *R. nigro-punctatum*, gained many admirers and was awarded a first-class certificate by the Royal Horticultural Society. It is a dwarf species of rather upright habit, with a profusion of trusses of small lavender-coloured flowers.

Rosa Moyesii.—A vigorous-growing Rose with single deep red flowers. Apart from its own intrinsic merit this species may prove of considerable value to the hybridist.

Vitis repens.—Another of the many ornamental Vines that we have received from the same source. It is a strong grower of a self-clinging nature. H. P.

THE GREENHOUSE.

CLEANSING GLASS HOUSES.

THIS is a very necessary operation, not only because the general appearance of the house is improved and more light admitted through the cleaner glass, but because many insects hibernating in corners and crevices are thereby destroyed. The materials required are a good scrubbing-brush, a syringe, small paint-brush and bottle of paraffin, soft soap (1lb. is sufficient for a small greenhouse) and two pails, one for soapy, the other for clean water. For lime-washing a fibre brush will be needed (hair or bristle quickly curl in hot lime-wash) and one gallon of unslaked lime.

Remove all plants as far to one end as possible. Vines that have lost their leaves may be pruned. Creepers covering the roof should have their branches tied in bundles, or in the case of plant climbers, such as *Lapagerias* and *Tacsonias*, they may be rolled up in rings, beginning at the points and securing them occasionally with a tie. All corners and crevices may be treated to a dose of paraffin applied with the paint-brush. Next collect all old ties and other rubbish and destroy them by burning.

Wash from the top of the roof downwards. Commence by spraying a portion with hot soapy water (half an ounce of soft soap to one gallon of water). Scrub the woodwork and glass

systematically, the framework of the light first, afterwards the sash-bars, finishing with the glass; be careful to leave no part untouched. Syringe off all the loosened dirt, &c., with clear water, using considerable force. When this is finished, place the lime at the bottom of a pail with water to just cover it, and when the lime is crumbled or slaked stir in enough water to make it the consistency of cream. Scrape or scrub any green patches on the walls and apply the lime-wash, carefully working it into all holes and crevices, and finally clean off any splashes on woodwork or pipes with a moist rag. Wash the benches and renew the shingle or shell covering them. If the lights can be opened and the house freely ventilated, so much the better; it will then be ready for the return of the plants after they, too, have been cleaned.

When it is possible to entirely remove all plants and creepers, insect pests may be exterminated by burning (in a flower-pot over hot coals) about half a pound of sulphur to every 100 cubic feet of space. No other ordinary method of killing insects is so effectual. J. COMBER.

THREE GOOD GREENHOUSE PLANTS.

LEONOTIS LEONURUS (Lion's Tail). This is a beautiful subject for autumn and winter; the colour (bright orange scarlet) is such as is appreciated by most people. The flowers appear in whorls up the stem, and sometimes there are as many as eight to ten whorls on a well-developed growth, and as many as eight or ten growths ought to be secured in an 8-inch pot. The plants must be afforded sufficient heat to keep the blooms from damping, when they will last for four or five weeks in good condition. They are easily propagated in the early spring from cuttings, and after flowering they should be cut back similar to *Salvia* and the growths made from the base used as cuttings. A few old stools grown on and planted out in the herbaceous borders look well during August and September.

Salvia leucantha is another old plant that has come into favour again, and is just now making a bold show and is much admired. It has long spikes of bluish purple flowers, which are like plush, being soft and covered with a down-like substance. These require similar treatment to the *Leonotis* mentioned above, and the flowers also last a long time.

Thysacanthus rutilans.—This is also a plant of old acquaintance which has sprung into popular favour, and when grown well is exceedingly ornamental. Its long trails of scarlet blooms are very effective, hanging down 2 feet from the apex of the plant. These, however, require stove treatment and should be propagated annually from cuttings. W. A. Cook.

SOPHRO-CATTLEYA DORIS.

BI-GENERIC hybrids are now comparatively numerous in the Orchid family, but none surpass in beauty and refinement the subject of this note. As will be seen by the illustration, the flowers are of good size and the substance is all that can be desired, while the vivid orange scarlet colour is most enhancing, and is much intensified by the exceedingly rich golden yellow which suffuses the labellum. It was shown before the Orchid committee of the Royal Horticultural Society, on the 10th ult., by J. Gurney Fowler, Esq., of Woodford, when it received a first-class certificate.

THE ROSE GARDEN.

PLANTING ROSES AGAINST TREES.

WHEN an amateur is told to plant a Rose to climb up a tree, he, as often as not, simply turns over the soil, sets out a Rose, and is afterwards surprised that it barely exists. As I have been successful in getting Roses to cover fruit and other trees, a few words on this interesting subject may be welcome.

Before filling up the hole it is a good plan to sink half a cask (with the bottom knocked out) in the ground. This will keep tree roots at bay for some years, giving the Rose time to grow strong. Try and plant away from the drip of the branches. Very often the outer branches of an old Cherry or Apple tree bend to within 5 feet or 6 feet of the ground; under these branches a Rose can be set, the growths being led up to the boughs by means of a post. Roses do well when planted in such a position, since they escape most of the roots of the trees.

When Roses are thus induced to ramble over the trunks and branches of old trees a most delightful effect is produced, and the method should be widely adopted where old trees exist and where the soil is at all suitable for Roses. Even where the natural ground is not suitable it may be rendered so by adding new as advised above.

All strong-growing Roses may be used for growing on trees, but those of a slender growth are



THE NEW SOPHRO-CATTLEYA DORIS. (Natural size.)

We must remember that the soil at the base of a tree, especially if it is an old one, is sure to contain roots and to be exhausted. Therefore a hole, quite a yard in diameter and three spits deep, should be dug about a foot distant from the tree, choosing a spot that is not likely to contain any main roots. Some turf should then be placed grass downwards at the bottom of the hole, and on this some good loam mixed with manure, wood ashes and a little bone-meal. The ground must be made firm and the Rose can be planted at once.

perhaps, the best, as rough winds will not break their subtle shoots. Thus the Ayrshire Roses (Bennett's Seedling, Dundee Rambler, Ruga, Virginian Rambler), evergreen types (Félicité Perpétue, Flora) and the wichuriana hybrids (Alberic Barbier, Dorothy Perkins, Hiawatha, Lady Gay, Rubra, &c.) are very suitable. Carmine Pillar, Mme. d'Arblay, The Garland, Blush Rambler, Crimson Rambler, Euphrosyne and Polyantha grandiflora (an enormous grower and, therefore, good for this purpose) will also succeed. E. TESCHEMACHER.

ROSES IN THE WILD GARDEN.

MANY unprofitable plots of ground are capable of being rendered attractive by naturalising rambling Roses. The wild garden is the most fitting of all spots for numbers of the single and semi-double varieties that need plenty of room to attain their fullest dimensions. No one who has ever seen the beauty of these Roses when growing unrestrained and untouched by the knife will desire to tie them in closely and cut away more than half their growth with the pruning-knife, as is too often done. Roses planted near old trees soon send their shoots among the branches until the whole head is covered with Rose growth, which droops gracefully downward on all sides and creates a lovely picture when smothered in flower.

Where Brambles show luxuriant growth Roses will usually do well, but it always pays to give them a good start by providing them with a rich and deep bed, when they will at once commence to make vigorous shoots. So many Roses are suitable for the wild garden that it is difficult at

first to know which sorts to select. When a large space is at the disposal of the planter, almost all the rambling varieties may be utilised; but in a small garden only a few of the most attractive should be planted.

Many of these Roses cover an immense space when perfectly developed, and should, therefore, be fully 20 feet apart. All climbing Roses should be on their own roots, as in the wild garden constant supervision is impossible, and it is disappointing to find a plant smothered in a mass of Dog Rose or Manetti suckers which are choking and impoverishing it. The greater number of Roses suitable for the wild garden are summer-flowering varieties, but some there are that have the advantage of bearing autumnal blooms. Of the sempervirens race *Félicité Perpétue*, *Myrianthes Renoncule* and *Flora* are among the best; while of the Ayrshires the shell pink *Virginian Rambler*, the white *Dundee Rambler* and the blush pink *Ruga* are beautiful. The *Dawson Rose*, with its dense mass of fragrant pink flowers; *Carmine Pillar*, a remarkably strong grower with rich crimson single blooms; *Dorothy Perkins*, a charming Rose with shell pink blooms which are often produced well into the autumn; and *Lady Gay*, very similar, are all eminently adapted to the wild garden, as is *Crimson Rambler*, but its crude colouring renders it undesirable.

Most of these will become huge bushes in a short time. The *wichuraiana* Roses are specially useful for covering banks, which they clothe with a veil of glossy foliage spangled with blooms at flowering time. *Jersey Beauty* is probably the most rampant grower of all Roses and will spread rapidly in all directions. *Rosa multiflora simplex* is a lovely sight if trained to a post 12 feet or so in height, when its long shoots arch over gracefully and fall almost to the ground on all sides, the plant presenting a beautiful picture when it is transformed to a sheet of white in summer. The *Austrian Yellow* and *Austrian Copper*, with their wondrous colouring, must on no account be omitted, but the Roses named are but a tithe of those that might be employed to beautify the wild garden. S. W. FITZHERBERT.

THE FLOWER GARDEN.

VIOLAS FOR EXHIBITION AND HOW TO GROW THEM.

THE ever-increasing popularity of the Viola or Tufted Pansy, either for bedding or exhibition purposes, is a source of gratification to those who have done much to improve these beautiful flowers; but it is to be regretted that too little attention is given to its cultivation by the gardening journals—at least, from an exhibitor's point of view—and it is from the standpoint of an exhibitor that these few notes are penned. Violas are pre-eminent for bedding purposes, blooming as they do from early spring until late autumn. With ordinary care and cultivation they are a mass of colour, while for table decoration they are equally as good as many better-known flowers. No garden can be complete without its bed or border of Violas, and, perhaps, to the amateur a few cultural hints may be of service.

It is often stated that the Viola thrives equally in a sunny position or in the shade; but my experience is that a cool spot shaded from the heat of the noonday sun and free from exposure to the wind is an ideal situation for the plants, exposure to the full heat of the sun having a detrimental effect upon them, the blooms rarely approaching the size obtainable from plants placed in the shade.

In the autumn or early winter ground should be well dug and left to the influence of the frost, and in January a good dressing of lime applied to the soil is advisable, for after a top-dressing of lime Violas have to me yielded better results in the following summer. In March manure is trenched into the soil 1 foot below the surface and well trodden down. In April the plants are removed to their permanent quarters, and here the gardener will find that a little extra trouble will repay him. A compost comprising loam and leaf-mould in equal parts, with the addition of half the quantity of sand, should be procured. A hole should be made with a trowel

and the plants deposited. Care must be taken to ensure deep planting. Afterwards the surface of the bed should be kept open by means of a hoe or fork.

The Viola is a gross feeder and may be well dosed with liquid manure after the usual watering; but the application of nitrates so often recommended should not be countenanced, inasmuch as these produce straggling plants, while the bloom soon loses its lustre, and when cut and placed in water is quickly dead. In July a top-dressing of leaf-mould or old and well-broken stable manure can be given, though liquid manure given once a week is preferable. From time to time the old growths may with advantage be removed, though it is not advisable to so deplete the plant as to leave only tender shoots, which take time to mature and bloom.

For those preparing blooms for exhibition it is the practice to remove practically every flower before it reaches maturity, and in the gardens of some exhibitors I have seen hundreds of plants and not a single bloom. The flowers are carefully removed until a short time prior to a show, and then the plants are allowed to bloom. This may be a good practice; but personally I have found better results to be obtained by ceasing to feed with liquid manure until a month before a show, and then to allow the blooms to develop. The recommendation to disbud up to ten or fourteen days from a given date has often resulted in few blooms to select from.

It is essential in preparing flowers for exhibition that they should be sheltered from exposure to wind and rain, and for this purpose sashes or garden lights should be placed at the height of 18 inches over the bed. If sashes are not procurable, strips of calico or muslin fastened to Bamboo rods will answer the purpose, though care must be taken not to allow the cover to fall inwards and so touch the blooms.

In September or October cuttings can be removed from the plants and inserted in sandy soil under the shelter of a hedge or wall, and in a sandy soil it will be found that there will be little difficulty in rearing as many plants as may be desired. Of course, the shelter given by a garden frame is a safeguard against the loss of cuttings, but the average English winter is not too severe for the Viola, and it must not be forgotten that the best plants are those that have withstood the frosts.

In the selection of suitable varieties to grow, the amateur should be careful to procure the best plants and to ignore the cheap rubbish dumped on the market, which, when seeded a second time, revert back to the wild variety. Plants in named varieties can now be procured so cheaply that it is not worth the candle to obtain inferior stocks. Care should also be taken not to procure the varieties which throw up thin papery blooms, but rather those with clean-cut petals and bold, distinct eyes. The following list of varieties may be of assistance:

Whites.—*Mrs. H. Pearce*, rayless, with yellow eye; *Bethea*, lightly rayed, huge size, and for all-round purposes easily the best white; and *Duchess of York*, similar to *Bethea*, but not the same vigorous habit.

Yellows.—*Isolde* is pre-eminent among the yellows, a strong grower and a perfect flower; *General Baden-Powell*, a deeper yellow of immense size, but liable to "wrinkle"; *William Lockwood*, another grand yellow, but needs careful cultivation to reach perfection; and *Rose Noble*, a deep orange



A BEAUTIFUL MASS OF ROSES IN A WILD GARDEN IN DEVONSHIRE.

yellow, but does not attain the size of the first-named yellow.

Creams.—Lady Knox, undoubtedly the finest self Viola ever raised, is perhaps the most refined flower extant, and the raiser's description is not overdrawn; Mrs. V. W. Bertram, another cream, rayed, a massive bloom; and Mary Burnie, a huge creamy white Viola, tipped with heliotrope.

Purples.—Sir James Knox, the best of its class; Malcolm Carmichael, a striking colour, though hardly a self, still a pretty bloom; Bailie Watt, deep colour, shading somewhat lighter towards the top petals; Hugh Reid, another grand flower and should be in every collection; and Crossie Robertson, for colour and form one of the finest Violas in cultivation.

Crimsons.—Crimson Beauty, a large flower of perfect habit and a constant bloomer; Mrs. S. Mitchell, rich colour, top and bottom petals streaked magenta; and Henry Almond, another fine flower, perhaps the largest of its class.

White Grounds.—Mrs. George Paterson, a magnificent flower of great beauty, makes a fine spray; Jeannie Peattie, a fine variety with dark border; Effie, a fancy, makes a delightful spray; and Neidpath Castle, heavily rayed, but otherwise a perfect flower.

There are numerous older varieties which have yet to be improved upon, viz., Duke of Argyll, the best all-round Viola in existence; Ethel, fawn, an improvement on the older J. C. Erskine; Lady Grant, slightly rayed white, edged bluish purple, has sported badly this season; Minnie J. Ollar, described correctly as one of the old champions and still is hard to beat; Mrs. C. M'Phail, rosy heliotrope, a constant bloomer but of straggling habit; Kate Houston, white ground, belted with mauve; Mrs. Chichester, white, flaked with purple; Mrs. J. H. Rowlands, rose, poor habit; Ada Jane, marbled lavender, comes in poor form in the spring but is indispensable for exhibition; Maggie Currie, another rose ground; James Pilling, white ground, edged lavender, a leading variety; Kate Cochrane, crimson purple; and Mrs. T. Allardyce, light mauve, a flower of great size and beauty.

From the above list the amateur should be able to procure a good selection; but as the best dozen varieties I would give Lady Knox, Duke of Argyll, Mrs. H. Pearce, Sir James Knox, Mrs. George Paterson, Jeannie Peattie, Isalde, Ethel, Effie, Minnie J. Ollar, Mrs. M'Phail and Malcolm Carmichael.

W. C.

THE BEST FIFTY HERBACEOUS PLANTS.

As a lover of herbaceous plants, the writer has often wondered what he would grow if his border capacity would accommodate, say, only fifty varieties or patches, which must be the case in many small gardens. At this period of the year, when attention is turned to the making and renovating of herbaceous borders, it may be of interest and a help to those intending to devote space to this most delightful phase of gardening, and who have not the room for a large collection but are desirous of having the aristocrats of the hardy plant kingdom, to see the list that was, after much thought, decided on. In its

compilation the points that have been taken into consideration are beauty and duration of both bloom and foliage, diversity of habit and ease of cultivation. An effort has been made to avoid a predominance of any one colour, and at the same time to have the various shades fairly represented.

It will be noticed that in the case of *Lychnis coronaria* Walkeri, *Papaver nudicaule* and *Verbascum olympicum* three species are included which cannot truly be classed as perennials, but owing to their habit of freely reproducing themselves they may, for garden purposes, be so dubbed. If *Glaucium flavum tricolor* did the same, as is the case with its near relative of the same name less the tricolor, it would be included in my list, but beyond experiencing its remarkable beauty for practically a whole summer I have had no experience of it. With us

best fifty perennials, as with the quantity so limited many really fine things must perforce be left out; but the formation of a list might be a source of interest to devotees of hardy plants during the long winter evenings when the flowers are no longer with us.

The following are my selections: *Anchusa italica* Dropmore variety, *Alstroemeria chilensis*, *Aconitum Napellus* Spark's variety, *Achillea Ptarmica* The Pearl, *Anemone japonica* Queen Charlotte, *Anthemis tinctoria*, *Aquilegia* hybrids, *Astilbe Davidii*, *Bocconia cordata*, *Campanula celtidifolia elegans*, *C. turbinata* Isabel, *Centranthus coccineus*, *Chrysanthemum maximum* Robinsonii, *Coronilla varia*, *Cimicifuga americana*, *Delphinium* hybrids, *Echinops Ritro*, *Erigeron macranthus*, *Eryngium amethystinum*, *Gaillardia grandiflora*, *Galega Hartlandii*, *Geum coccineum* flore-pleno, *Gypsophila paniculata* flore-pleno, *Helenium pumilum* magnificentum, *Helianthus* Miss Mellish, *Hemerocallis* Kwanso foliis variegatis, *Heuchera* bri-zoides gracillima, *Iris germanica* Purple King, *Kniphofia corallina*, *Lilium croceum*, *L. candidum*, *Linaria repens* alba, *Linum narbonense*, *Lupinus polyphyllus* bicolor, *Lychnis coronaria* Walkeri, *Lythrum Salicaria* roseum superbum, *Monarda didyma* Cambridge Scarlet, *Oenothera missouriensis*, *Peony* double white Chinese, *Papaver orientale*, *P. nudicaule*, *Phlox* Sylphide, *Pyrethrum* hybrids, *Salvia Sclarea*, *Scabiosa caucasica*, *Sedum spectabile* atrorubrum, *Senecio Clivorum*, *Spiraea ulmaria* aurea, *Statice latifolia* and *Verbascum olympicum*.

J. REYNOLDS HOLE.

Balderton, Newark.

IRIS STYLOSA.

ALTHOUGH this plant is quite hardy its flowers are so delicate, and, blooming as it does in mid-winter, some means should be devised to throw off heavy rains and snow. The flowers are generally hidden in its large, grassy foliage, so much so as to escape the notice of those who are not familiar with its habits. Its flowers are a lovely sky blue and fragrant, equal to some of the stove Orchids. This Iris is happiest planted in a single row quite at the foot of a south wall. The low walls of vineries afford a capital position for it. The border should be slightly raised above the surrounding level, the soil light and well drained. Give no manure. Endeavour to encourage a dwarf, well-ripened growth, conditions that tend to its profuse flowering. In such a position as described, a few short lights over the plants will afford the necessary protection, and good flowers may be picked at intervals for some weeks.

LIMNANTHES DOUGLASII AS AN EDGING PLANT.

If a bold edging is wanted to a long border, this showy annual should certainly be used. The plants in the accompanying illustration were set out quite 18 inches apart in the autumn, and during June made a fine display. *L. Douglasii* is, perhaps, the hardiest of all garden annuals. Frosts and wet never kill it, even when it is moved in midwinter. It reproduces itself freely from self-sown seed and will do well anywhere, being a good subject for slug-infested gardens, since these pests do not touch it.

E. TESCHEMACHER.



A BEAUTIFUL EDGING OF AN EASILY-GROWN HARDY ANNUAL (LIMNANTHES DOUGLASII).

Verbascum olympicum is rather variable, the great flower-spikes being sometimes of a rather straggling nature, but a really well-shaped specimen is second to nothing. *Spiraea ulmaria* aurea does not appear to be at all generally grown, but a group of it on a border at Messrs. Backhouse's York nursery was a striking sight early in June, the foliage being of the most brilliant yellow. If the soil were too light and the position too hot for *Astilbe Davidii* to succeed, *Aster Amellus* Riverslea Beauty might be substituted for it; but before eliminating such a grand thing every effort should be made, and in Mr. Prichard's nurseries at Riverslea it succeeds admirably on the open border.

By dividing *Lythrum roseum superbum* into small pieces each autumn we get excellent results, the difference between plants so treated and others left for two years being quite marked. Probably no two gardeners would agree as to the

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

THE FRUIT GARDEN.—Grape Vines under glass should be pruned now, beginning with the earliest. Cut back the lateral growths to a good plump eye near to their base. Shoots that have not borne well should be cut back to about 4 inches to 6 inches, securing these to the main stem by drawing them to the side of the latter. Brown scale or American blight is a source of trouble to many hardy fruit trees. An excellent remedy is to apply a strong solution of soft soap or Sunlight soap, using 3oz. of either substance in a gallon of water. Later on, when the buds begin to move, apply the same solution but at half the previous strength. A free dusting of slaked lime in the early morning is another remedy for the same pests.

The Vegetable Garden.—I am lifting for winter supplies healthy roots of Mint. These are being placed in rather shallow boxes and covered with soil. Subsequently they are placed on the greenhouse bench, where the more genial atmospheric conditions promote quick growth and ensure supplies from January onwards. Collect and put in heaps all vegetable refuse, such as weeds, haulm, leaves and similar accumulations. There is no better time than the present for doing this work. Add to this matter, to the extent of one-third of its bulk, quicklime, turning over the heap to ensure an even distribution of the constituents. Materials that will burn, such as old Pea-sticks, Cabbage-stalks, tree-prunings, &c., should be burnt and the ashes stored for future use.

The Hardy Flower Garden.—The beauty of Christmas Roses may be preserved by affording the plants some protection. There are several means of doing this. Old frame-lights, window-sashes, bell-glasses and sheets of glass held in position by any device that may suggest itself to the grower may be utilised for protecting the flowers from rain and smuts at this period. The last of the outdoor Chrysanthemums are long past their best, and should therefore be cut down forthwith. Give the roots a mulching with thoroughly well-rotted manure, as this protects the old stools through the winter.

The Greenhouse and Conservatory.—To assist in making a pleasing appearance in these struc-

tures, I am potting up successional batches of Lilies of the Valley. The stately Spiræas, too, should receive similar attention, as their early display is always much valued. The beautiful *Deutzia gracilis*, so easily grown, together with a few *Azalea mollis* will soon yield a welcome display of blooms if placed under glass where the temperature can be maintained at anything between 55° and 60°. Cyclamens are always a welcome feature in midwinter and rather later, but need careful culture just now. Rap the pot with the knuckles to ascertain whether the soil is dry or not; do not be deceived by appearances.

The Window Garden.—The use of tepid water for watering the plants at this period is essential to their well-being. Foliage plants should be periodically sponged to remove dust from the leaves and thus improve their health and appearance. Bulbs that have made a fair amount of growth may now be removed from the plunging material and stood in the window. For some years past I have used pretty little bush Ivies for the window-box; they are very hardy and always interesting.

The Cold Frames.—My concern for the moment is the careful overlooking of Carnations and Auriculas. When maintained in conditions that are somewhat close there is always a tendency for green fly to infest the plants. For this reason watering and free ventilation are items of culture that are carefully observed. On fine days, too, Violets will derive much benefit from an abundant air-giving. In anticipation of severe weather, I always have in readiness a supply of mats and long litter with up the frames.

EASY METHODS OF FORCING SEAKALE.

This is one of the choicer vegetables that few beginners ever think of trying to deal with. Many possibly regard it as a subject quite outside the region of their own skill, but such an idea should never be allowed to prevail. For this reason the notes in the present instance are written in the hope that wrong impressions may be removed, and, by a series of photographic illustrations, the culture of this excellent vegetable may be made quite clear.

In the present instance we propose to deal with Seakale for forcing, pure and simple. There are several methods in which this forcing may be done, and we will deal with those that are of the simplest and that with ordinary application and care a beginner may succeed with. In an earlier issue we gave instructions how to prepare Mushroom-beds outdoors, from which it will be gathered

temperature of the material is an all-important item. It is equally important with Seakale at this early period. To have Seakale at Christmas it will be necessary to give the roots rather more heat than Mushrooms during the forcing period. Those who have Seakale in their gardens may lift their own roots for forcing purposes. It is usual to lift one year old roots that have been specially grown for this purpose, placing these thickly in boxes or large pots, with the crowns just level with the surface soil, which should be just below the edges of the boxes or pots. Those who do not possess roots must perforce purchase what they require from their nurseryman. These supplies are always available, and special measures are taken to raise suitable roots for the purpose. The roots are not at all expensive, and a dozen strong and sturdy-looking specimens may be obtained for the sum of 2s. or thereabouts. We have reproduced in



2.—THREE ROOTS PLANTED IN A LARGE POT READY FOR FORCING.



1.—SEAKALE ROOTS WHICH HAVE BEEN LIFTED FROM BEDS IN THE OPEN AND HAD THEIR THONO-LIKE ROOTS REMOVED.

which to cover
D. B. C.

Fig. 1 three typical Seakale roots such as may be purchased for forcing. From their appearance it will be quite apparent that the long, thong-like roots peculiar to this subject have been removed. They have been detached with a sharp knife from the main root and retained for the purpose of making a new plantation outdoors. What is to be done with the large roots is a question that naturally arises from the beginner. We would suggest that care be observed in the first case, and that culture be of an experimental kind. Raise a few plants in large pots or deep boxes in the first instance and see how the plan succeeds. Pots 10 inches in diameter and others of lesser dimensions may be utilised. In these receptacles there may be placed three, four or five roots. For the purpose of illustration we have reproduced in Fig. 2 three roots adjusted in position in a large pot. Here it will be observed the crowns are just level with the surface soil and the latter just below the rim of the pot. When completed water in and cover with a pot of the same size, placed in an inverted position over the other. Those who have a greenhouse may place the pots under the staging, where a genial temperature can be maintained. Readers not possessing a glass structure may with almost equal success stand the pots in a warm cellar, where they must be kept perfectly dark.

Those who desire to raise a larger quantity of Seakale at this period may accomplish this very successfully by utilising deep boxes and planting thickly in these. The boxes must be deep, fully 9 inches to 10 inches being essential if the roots



3.—SEAKALE ROOTS PLANTED IN A LARGE, DEEP BOX READY FOR FORCING.

are to do well. Arrange the roots in a manner somewhat similar to that seen in Fig. 3. Here we have planted two rows to show the method of arrangement, which should be done so that the roots alternate in the rows. In this way the plants do better and ample space is allowed for the development of the growths. Another box of similar dimensions should be acquired, and after the one containing the roots has been placed near to or over the hot-water pipes running under the greenhouse staging this second box should be placed over the other as a covering. Seakale to be forced satisfactorily must be kept in the dark, and this should be seen to from the first. Water in the roots in the first instance, and inspect the boxes, &c., from time to time, always maintaining the soil in a moistened condition. In Fig. 4 we give an illustration of how to force Seakale in the open ground. Here there are three crowns growing in the open which may be forced with the greatest ease. The flower-pot in the photograph is used to cover the crowns, which it does adequately and well. This in turn is covered with manure litter and leaves, which will maintain a suitable temperature to force the roots into growth. As far as possible maintain an even temperature of from 55° to 60°. This is not difficult, as a fresh covering with manure litter invariably accomplishes this end. Special Seakale pots are made with movable tops for inspection purposes, but tubs, barrels, boxes and pots may be made to answer the same purpose.

WINTER WORK IN THE OUTDOOR GARDEN.

DURING the short, dull days of winter the amateur, and occasionally the gardener, are apt to let work in the outdoor department slide or even overlook it altogether, with the result that when the busy days of early spring rapidly approach, as they are wont to do, many tasks are found undone which might with advantage have been carried out during the slack winter period. In a well-regulated garden there will always be plenty to do in connexion with the outdoor department during the winter, and a reminder of a few tasks may be of assistance to readers. Where shrubberies have not been tidied these may be attended to during open weather. Any shrubs which have overgrown their bounds may have some of their longest and oldest branches entirely removed (except those which flower in the spring on wood of the previous year's growth, which should, of course, be pruned immediately after flowering), and in the case of commonplace subjects it may be found advisable to entirely remove them so as to make room for the choicer plants. All dead wood will also need removing. After this all leaves and annual weeds may be raked or hoed into the more open

spaces and there buried, throwing some of the clean soil taken from the trenches made for this purpose over the roots of the shrubs. Where a specimen has not made satisfactory growth during the past season, it may be as well to give the soil over its roots a 6-inch-thick coating of well-decayed manure.

In the kitchen garden digging and trenching operations will be in full swing, and both here and in the fruit garden advantage should be taken of frosty weather to wheel manure into the desired positions so that it will be ready for use immediately the weather breaks. When the soil is so wet that it is inadvisable to tread upon it, the work of renewing or revivifying labels may well be attended to, and stakes also should be thoroughly overhauled and any old ones that need it, as well as new ones, given a good coat of green paint. Tools also may be given attention, such as hoes, shears and other simple cutting implements usually requiring grinding or sharpening in some other way.

Draining plots which are too wet is another eminently winter operation in the outdoor garden, and one which is easily capable of producing very good results if properly carried out. Undoubtedly pipe-drains are much the best, and these should be laid at least 18 inches, or, better still, 2 feet below the surface, so that there is no fear of their being disturbed by digging or trenching operations. Of course, a suitable outlet for the drain must be chosen before the work is commenced, and this should, if possible, be at the lowest portion of the plot which it is intended to drain.

Carriage drives and walks of all sorts may be formed or old ones renovated during the winter, but it is well to defer giving the final coating of fine gravel until March, as then it will last clean and bright all through the summer. Boundary hedges, too, will possibly need attention, and any trimming or stopping of gaps needed should be attended to without delay. Then Pea and Runner Bean stakes may well be trimmed and sharpened and tied into bundles of various lengths, so that when they are required they can be obtained at a moment's notice. Nothing is more annoying than having to stop and trim Pea-stakes when they are required, as work is always very pressing at that particular period in all gardens.



4.—FORCING SEAKALE OUTDOORS. THE POT IS PLACED OVER THE THREE CROWNS SHOWN AND THEN COVERED THICKLY WITH LEAVES OR MANURE.

THE TOWN GARDEN.

PLANTING HEDGES.—Where, as is unfortunately the case in vast numbers of town streets, the houses have only small forecourts in front of them, it is obviously impossible to do anything in the way of forming and planting beds, and if it were possible, it is more than likely that the flowers and plants would be stolen. There is, however, usually sufficient space for the accommodation of a hedge, and such should always be planted, for it will improve the appearance of the house and the road to a very great extent. I am familiar with several London streets in which all the householders strive in friendly rivalry to have the best hedge, and it is surprising how excellent an impression is created in one's mind as one passes along.

Taking all things into consideration, ordinary Privet is the best plant to choose; the golden form is bright and attractive in summer, but it has a dull, dirty aspect in the winter which is never apparent in the green. *Euonymus* is sometimes utilised, and as long as the small Ermine moth caterpillar keeps away all is well; but when this pest descends in hordes upon the plants one may say farewell to brightness and beauty for some time, for the stems will be quite defoliated. Of course, the pest can be destroyed, but it is certainly much easier to say it than to do it.

Whatever is chosen must be prepared for in the same thorough manner. In practically all instances planting will have to be done beneath the shelter of the front wall, and it is certain that the soil will be poor; therefore, let it be dug to a depth of at least 2 feet, and with the lower soil mix a heavy dressing of rotted manure, while with the top soil should be incorporated some refuse manure, such as that from a hot bed. In planting, the mould must be made very firm about the roots, and, as soon as they are in, water should be applied in large quantities and must be given again at frequent subsequent intervals, for the bricks will suck much of it from the ground, and the plants will not flourish as soon as it becomes quite dry. In the spring the applications of water may be supplemented with a little weak liquid manure, but this must be used with care, as it is not desirable to encourage too gross a habit of growth in the plants.

HOEING BORDERS.—The surface soil of all the borders in the garden should be kept hoed over frequently during the winter months, provided, of course, that the soil is not frozen hard. It is not that weeds grow in this season; even they have to take a rest sometimes, but the persistent loosening does a substantial amount of good by admitting unlimited supplies of fresh air, thus keeping the ground far sweeter than it otherwise would be.

INDIAN AZALEAS.—These are among the most delightful of all plants for the room, conservatory and greenhouse during the early months of the year, and they are neither difficult nor expensive to procure. It is true that the plants are not such as one would recommend the town gardener to grow on from the young state, as they demand pure air and a considerable amount of care in management; but thousands are annually imported from Holland and Belgium upon which the buds are already set, and it is these that the amateur should purchase. They are almost invariably grown on short legs and their compact heads will be set with hundreds of buds. As soon as they arrive they should be placed in pots only slightly larger than those previously occupied, and the ball must be surrounded with a compost of loam, peat and sharp sand; this must be made very firm, or the water given will run through it instead of passing through the inner ball and roots. The utmost care should be exercised in watering at all times, as either too much or too little will be followed by the casting of many of the buds. HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

NOW that Chrysanthemums are on the wane, other flowers will be needed to keep up the gay aspect of the conservatory. If my notes have been followed, there will be a good show now of Begonias Gloire de Lorraine, Gloire de Sceaux, Mrs. Heal, &c., and Primulas in quantity. These should be kept in light positions and in fairly dry quarters, when they will continue to flower for a long time.

Lily of the Valley, *Spireas*, Roman Hyacinths and Narcissi will be making a good show now, and in warm houses the Poinsettia and Plumbago rosea are at their best. In addition to these there should be plenty of Calanthes, Cypripediums and Zonal Pelargoniums. Great care is needed to keep these free from aphides, and if a plant is allowed to become too dry it will soon develop some pests; therefore it is necessary to look over them very carefully every day and water those plants well that require it, leaving nothing to chance.

Freesias.—A good batch of these should be introduced into heat now if they have filled their pots with roots. They will respond to a temperature of 55° to 60°, and the flowers should be supported with neat stakes.

Lilium Harrisii may be put into heat as soon as the buds are showing, but it is not advisable to put them in too high a temperature, as the flowers do not develop so thoroughly.

KITCHEN GARDEN.

Some ground should be trenched and a fresh supply of Horseradish planted. This vegetable is in request in most establishments as a condiment for roast beef and ought to be grown more than it is; as a rule, it is grown in an out-of-the-way place where it struggles for existence. Choose a piece of ground in the open, trench it 2 feet 6 inches deep and put plenty of manure at the bottom; then select some thin, straight roots 8 inches to 1 foot long, and see that these have only a single crown. Plant them 9 inches apart in the rows and 15 inches between the rows. If this system is followed up, fine roots will result.

Artichokes.—These are also most useful vegetables. The whole crop of the Jerusalem type may be taken up and stored in sand or ashes outside, and the ground dug or trenched at the earliest opportunity. During this process take out every root and small tuber, or these will come up where they are not wanted. Globe Artichokes should now have another layer of ashes around the base as a protection from frost, and if hard frost prevails, some light litter may be placed over the foliage.

Cauliflowers and Broccoli.—Take up all the heads as they open and store them in deep frames or sheds. If they are dug up with the stems, they will last several weeks without any harm if placed on a damp bottom.

HARDY FRUIT GARDEN.

Continue to prune Apple and Pear trees as fast as possible. Where trees have been summer pruned there will not be so much to do. The experienced pruner will see at a glance what to cut away, as the buds are already plumping up for a fine show of bloom next season. The work of root-pruning may still be accomplished in open weather and ground got ready by trenching for further or improved plantations, but all planting should be done as soon as possible now. In wet weather see that a good supply of stakes is prepared, tools sharpened and cleaned.

W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardlee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

ORCHIDS.—The work is now chiefly of a routine character, and consists in keeping the temperatures regular, damping judiciously but not abundantly, and giving as much air as possible without unduly lowering the temperature. With regard to watering at the roots, everything depends upon the kind and the state of growth. Cattleyas of all sorts will need greatly diminished supplies, small plants, of course, requiring more attention than those of a larger size and having a greater body of compost about them.

Deciduous Ferns.—Among the stove and greenhouse Ferns few lose their fronds entirely at any period of the year, yet among those which do so there are some desirable species. It not infrequently happens that these get lost during the dormant period, sometimes through improper treatment. In the culture of all the deciduous Ferns it is desirable to give them such treatment as will induce them to go to rest in the autumn; they will then have more strength to start early in the year.

FLOWER GARDEN.

With the approach of winter and the possibility of the commencement at any time of a spell of protracted frost, any of the plants in the flower garden above ground or beneath the same in the shape of bulb, corm or tuber that may require protection should at once receive attention. Individual plants of *Yucca filamentosa* (which makes a charming bed in summer) should be staked and tied up, or frost and wet will rot the heart of the plant. The same remark applies to *Arundo conspicua*, not nearly so hardy as the true Pampas Grass.

KITCHEN GARDEN.

The Protection of Celery.—I find the best plan, if the weather should become unduly severe and there is no covering of snow, is to lay some dry litter or Bracken Fern along the sides of the rows and then to shake a little of the very lightest and driest loosely along the top. If a heavy covering be put on and snow were to follow directly afterwards, when a thaw set in it would become a wet and sodden mass, and the Celery would suffer accordingly.

CHRYSANTHEMUMS.

Care will now be necessary in supplying the old stools with water; too much is injurious, as it creates a paleness in the young leaves which is objectionable. When the leaves are rendered so pale in colour, a long period often elapses before they regain their wonted vigour. It is surprising how little water is needed to induce growth to be made from the base after the plants are cut down. Where the roots are bare on the surface they should be covered with a portion of sandy compost. In stubborn cases, where growth refuses to move at the base, it is necessary sometimes to rectify the drainage if this has got out of order, and even plunge the pots in a gentle bottom-heat and syringe the stems several times daily.

HARDY FRUIT.

Gooseberries.—The pruning of these bushes is often delayed as long as possible in consequence of the loss of buds by birds. The bullfinch and others will soon be on the alert and do much mischief. I do not advise delaying pruning, but take measures to keep these pests away. I am not an advocate of the severe pruning often practised. Of course, it is necessary to well spur back the plants trained on walls, but the close cropping over is not advisable. I advise the thinning of shoots, shortening loose or straggling branches, cutting back to a well-placed inner shoot and removing any sucker growths, shortening any branches that press down towards the soil. It is not necessary to thin severely.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

BOOKS.

Holly, Yew and Box.*—At the present time, when everyone is thinking of Christmas decorations, the volume now under notice provides pleasant and, at the same time, most instructive reading. The author, who has charge of the splendid arboretum at Kew is, of course, thoroughly at home with his subject, and the information given is, as one would expect, thoroughly reliable and up-to-date. The descriptions of the varieties of the common Holly (*Ilex Aquifolium*) are those of Moore, which appeared many years ago in the *Gardeners' Chronicle*, as also are some of the excellent leaf illustrations. In addition to these descriptions cultural details and the uses of the plants are given, and many legends and superstitions connected with them are quoted. Besides Hollies, Yews and Boxes, chapters on other evergreens (conifers excluded) are added, hardy Heaths, Bamboos and their allies, Rhododendrons, Evergreen Oaks and Ixies, Laurels, Daphnes, Elæagnuses and Escallonias coming under this heading, and these chapters certainly add considerably to the value of the book. The many illustrations in black and white are beautifully executed and serve the purpose of instruction in a decided manner, and both author and artist are to be congratulated on the excellence of their work. A slight error in the titles to the group of Yews facing page 191 will probably be rectified in the next edition. The initial letter "I" is there given to indicate Taxus, and this may possibly be confusing to the uninitiated.

Le Chrysanthème dans l'ornementation des jardins et la décoration de la maison.—M. Albert Maumené, a well-known French writer on the art of floral decoration, has recently issued in pamphlet form the text of the paper he read at the Toulouse Conference of the French National Chrysanthemum Society last year, and for which a silver-gilt medal was awarded him. It runs into sixteen pages octavo, and will interest those of our readers whose tastes are æsthetic in Chrysanthemum matters.—C. H. P.

My Garden.†—This slim volume is somewhat a new departure in the domain of garden literature, being written entirely in verse. There is no settled scheme or arrangement in the book; the author has simply jotted down verse on such congenial subjects as "The Borders," "Flowers," "The Rose Garden" and "The Sun-dial." The illustrations are very good, and we congratulate the author on being the possessor of such a delightful retreat; it is rather impossible to particularise any one more than another, as they are unnamed, but that facing the Prologue is one of the most charming.

Studies in Gardening.‡—This may be described as a splendid shilling's worth, even in these days of cheap garden books. Printed in excellent style and neatly bound, the book consists of a series of articles on the theory and practice of gardening, originally published in *The Times*. They are on a variety of popular and interesting subjects, and are well written by one who is indeed no 'prentice hand. There is a capital introduction, followed by articles, the names of only a few of which we can give, viz., "Campanulas," "Pinks," "The Improvement of Garden Flowers," "Common Sense in Gardening," "Lilies," "The Theory of Garden Design," "English Ideals of Gardening," "Gardeners," "The House and the Garden," "Raising Perennials from Seed," "Saxifrages," "The Fifty Best Hardy Perennials," "The Fifty Best Rock Plants," &c.

* "Holly, Yew and Box, with chapters on other Evergreens," by W. Dallimore, 7s. 6d. Mr. John Lane, The Bodley Head, London.

† "My Garden," by J. T. Prior. Published by Elkin Mathews, Vigo Street, W.

‡ "Studies in Gardening." Price 1s. *The Times* Office, Printing House Square, London.

The Flowers and Gardens of Japan.*—A delightful book, uniform with the "Italian Lakes," published by the same firm a short time ago and painted by the same artist. The book, which is very nicely got up, is illustrated with fifty of the most dainty little pictures of views in Japanese gardens. The Wistaria, Chrysanthemum, Plum blossom, Cherry blossom, Iris and numerous other favourite flowers of the Far East are most attractively presented, and the letterpress is none the less interesting. From an artistic, legendary and historical point of view the book will furnish many an opportunity for pleasant reading, and is certainly the most agreeable book on the subject we have seen for a long time. Briefly stated, the contents include chapters of descriptive matter on landscape, nursery and temple gardens; on the Plum, Cherry and Peach blossoms; on the Wistaria, the Pæony, the Azalea, the Lotus, the Chrysanthemum and many other floral favourites. No one can peruse these chapters without realising to a fuller extent than before how largely the love of flowers enters into the minds of the Japanese people, who have their special *fêtes* and shows on certain days for their greatest favourites. Some of the stories and legends are quaint and interesting, and the book is certainly a valuable addition to modern horticultural literature.

LEGAL POINT.

Prize cup (Orchid).—"A gardener under a verbal promise from his employer that 'whatever he won he should have' enters for a prize competition and wins for a certain number of years. Finally, the cup becomes the property of the winner after various successive triumphs, according to the rules of the show, and the employer now claims it from his servant. Has he any right to it?" The answer depends partly on the elements of contract and the doctrine of possession. If the contract as between master and servant had been executory and the cup had passed into the master's possession on the award, it would be necessary for the servant, in addition to proving the express or implied request to enter the competition to give some evidence of "consideration," or else he might fail in an action to recover the cup or damages. It is possible also to imagine that some bother might arise as to whether the master did or did not intend to enter into legal liability and contractual relationship. In the case before us there appears to have been sufficient "consideration" to support even an executory promise, as the servant after accepting the promise put himself to certain expense in connexion with the show, which he paid out of his own pocket. But whatever doubts there might be if the contract was executory and the cup had after the award passed into the possession of the master, there can be none if the cup is in the possession of the servant under the circumstances above mentioned, and in my opinion the servant can keep it.—BARRISTER.

OBITUARY.

HENRY NEVARD.

THERE has recently passed away, at the age of seventy-seven, one of the most successful cultivators of the Rose of bygone days. I refer to Henry Nevard, who was for some forty-six years head Rose-grower to the well-known firm of Messrs. B. R. Cant and Sons of Colchester.

Mr. Nevard was a born rosarian, and few could stage a seventy-two more deftly than he. How

he loved the Rose, especially those superb sorts such as Souvenir d'Elise Vardon, Niphotos, &c., now so rarely seen! The present-day somewhat flimsy varieties would not have found an admirer in Mr. Nevard. I believe I am right in saying that Henry Nevard took part in the first exhibition of the National Rose Society, which was held in St. James's Rooms in or about the year 1857, and from that day to the time he retired to enjoy his well-earned rest he was a force to be reckoned with. Only this season Mr. Alexander Dickson said of him that when they saw Ben Cant and Nevard come along they knew there was going to be a hot contest.

Many a Rose-grower will recall the cheery face of our departed friend, and will miss him equally as much as they missed the stately presence of Dean Hole or the sweet countenance of the Rev. H. D'ombrain. It is to be hoped that Messrs. Dickson or some other raiser will perpetuate his memory by giving his name to a real good sterling



THE LATE HENRY NEVARD.

novelty, one that is likely to live for a long time. Mr. Nevard was buried in Myland Churchyard, Colchester, on October 23 last. P.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Annuals and perennials under trees (I. Heap).—It will depend entirely upon the density and continuity of the shade as to what plants will grow, and possibly a few experiments will be best. You give us no idea of the extent of the intended area for planting. We therefore advise you to sow seeds of Poppies, Snapdragons, Evening Primrose, Foxgloves,

Primroses, Marigolds, Cornflowers and the like, and note results. For perennials you might plant a very liberal assortment of Day Lilies, many hardy Ferns, Lenten Roses, Megaseas, Primulas of sorts, Woodruff, Acanthus, Michaelmas Daisies, London Pride, Saxifraga peltata, Hepaticas and others, while of bulbous plants you might select Lilies, Daffodils, Scillas, Winter Aconites, Dog-tooth Violets, Lily of the Valley, Muscaris and a host besides. You could only obtain a display of annuals in September and October by a special late sowing of seeds. The chief of the bulbous plants flowering at this period are Lilies, Colchicums and autumn Crocus. Of perennials the Sunflowers and Michaelmas Daisies are the chief things.

Anchusa leaves dying (A. St. L.).—The leaves of the Anchusa are not attacked by any fungus or insect pest, but are dying off for the autumn. The plant is quite deciduous, and the leaves always in dying turn the peculiar colour shown by the specimens sent.

Polygonum for a summer-house (Aline C.). The Polygonum you require for your summer-house is *P. baldschuanicum*. It is of rapid growth and flowers well in a young state. When well grown it forms one of the handsomest of all climbers. *Alyssum maritimum compactum* is a useful subject for carpeting Rose beds. It is very dwarf and does not interfere seriously with the Roses. When all is said, however, Roses without a carpet thrive most satisfactorily. Surface plants always rob the ground to some extent, while it is difficult to give the Roses stimulants with a carpet of other plants, and a little food material during summer is highly appreciated by Roses.

Aquilegias and Hollyhocks (E. M. L. H.).—If we understand your letter aright, you sowed seeds of the former group in July in the open. If this is so and the seedlings are not unduly crowded, let them remain till the end of February next and replant them in good soil. These plants are adverse to frequent removal, and you could at the time stated transfer the larger plants to permanent positions. The smaller plants should be ready to plant out by the middle of May. You might with advantage plant the strong seedling Hollyhocks into their permanent places without delay. To pot them and keep them in a cool greenhouse for the winter would probably do greater harm than the exposure in the open border. It is important that the seedlings be firmly planted in good and deep soil. We do not remember seeing a plant from you; please send again.

THE GREENHOUSE.

Dividing Agapanthus umbellatus (Electrical).—When it is intended to divide the blue African Lily (*Agapanthus umbellatus*) it should be done early in the spring just before the plants start into growth. At the same time we wish to point out that the *Agapanthus* never flowers so freely as when thoroughly established in large pots or tubs, and thus forming large masses or clumps. Such being the case, if you divide your plants next spring you must make up your mind for a lessened amount of flower for a year or two. *Agapanthus* may be readily kept throughout the winter in an ordinary greenhouse, the main point being to see that they do not get frozen. They may be wintered in such places as stables, coach-houses, &c., provided they get a certain amount of light and are quite safe from frost. During the winter they may be kept quite dry at the roots, or watered two or three times during that period. This will depend upon the situation the plants occupy.

Treatment of Amaryllis (J. Watts).—As your *Amaryllis* are in 8½-inch pots we naturally conclude that the bulbs are large, and, if so, they may be kept quite dry without risk for a longer period than smaller ones. If they are lying on the ground underneath the stage and away from the hot-water pipes, they should not take any harm if kept dry till the new year. Then they may be stood on the stage and watered. Of course, this must not be done should the weather be very cold, as in this case it is far better to wait for a mild period. The month of February will be quite early enough to water them regularly, and even then only just enough should be given to keep the soil slightly moist till the leaves commence to push up. You will understand that throughout the winter a temperature of 50° to 55° is necessary for the *Amaryllis*, though the thermometer may sometimes fall to 45° without injury, providing the soil is quite dry. Any whose roots are in bad condition may be repotted in February, but annual repotting of the whole of the bulbs, which was formerly considered necessary, is not now regarded in that light. Established, well-rooted bulbs may, after the flowering season and when growth is taking place, be supplied with occasional doses of liquid manure instead of repotting.

* "The Flowers and Gardens of Japan," painted by Ella du Cane, described by Florence du Cane, A. and C. Black, Soho Square, London.

TREES AND SHRUBS.

Planting a Laurel hedge (A. B. C.).

You can certainly plant a Laurel hedge this autumn; indeed, October is about the best month for doing so. The best time to trim the hedge is in June, as the short growth made after that time quickly takes off the cropped appearance. Laurel hedges should be cut with a knife and not shears, as in using these last the large leaves are likely to be cut in two and thus spoil the appearance of the hedge. This last sentence will also apply to all large-leaved subjects used for hedges. The spring is the best time to trim Ivy, as the young leaves are then immediately pushed out and quickly hide the bare shoots.

Information about Butcher's Broom (H. Jones).—In some instances male and female flowers are borne on the same plant in the case of the Butcher's Broom, but more frequently male and female flowers are borne on different plants. In some places it appears to be a shy fruiter. If you examine your plants next year when in flower, you will be able to ascertain whether you have the two sexes or not. If you have, try hand pollination.

FRUIT GARDEN.

Pear tree unfruitful (N. G. T.).

Undoubtedly the tree is making too much growth, and probably has a tap-root which has gone down into the subsoil. You cannot do better than root-prune the tree at once. Make a trench about 3 feet from the stem of the tree in a half-circle this year, and complete the circle next year. If you make a fairly deep trench you will soon find out if there are any tap-roots; if so, just sever them with an axe or spade. Give the tree a mulching next spring with well-rotted manure, mixed with an equal quantity of soil and a little bone-dust added. This will encourage surface roots, which is what the tree wants.

Grape Vines diseased (C. E. Westgate).—If you will send us some of the leaves or wood of the Vine affected we will do our best to tell you the nature of the disease and the best way of getting rid of it. Also please send your name and address.

Standard Plum trees not bearing (R. R.).—This seems to us a clear case for the application of the knife to the roots of the trees. Trees not bearing fruit are naturally more vigorous and free-growing than are those which bear fruit. Root-pruning was fully described in our issue for September 12, which please see.

Peach, Plum and Cherry trees to plant within a netted enclosure (J. Romanes).—Pears: Williams's Bon Chrétien Louise Bonne of Jersey, Emile d'Heyst and Doyenné du Comice, all on Quince stocks. Plums: Rivers's Early Prolific, Green Gage, Dumelow's Superb Gage and Kirke's Cherries; Frogmore Early Bigarreau, White Heart, Governor Wood and The Noble.

Sludge from cesspit for orchard fruit trees (A. W. M.).—It depends on what the nature of the sludge is. If it is the drainage from a farm or stable-yard, then the application of the quantity you mention would do much good if applied in early winter and again at the end of January. But if the sludge only contains the ordinary drainage of roads, &c., its application to fruit trees would be worse than useless.

The best six Peaches and three Nectarines to grow under glass to ripen in succession (Peach House).—The earliest varieties to ripen are Alexander, Waterloo, Early Beatrice and Early Louise, but we do not advocate the planting of either of these in so limited a collection on account of the tendency most of them have to cast their buds in winter or spring, and also because of the comparatively small size they attain. In case you decide to include one on account of its earliness, Waterloo is the best, and is ripe about ten days earlier than the next we shall mention, namely, Amsden June. The next in succession are Dymond, Crimson Galande, Royal George, Noblesse or Violette Hâtive. Noblesse is, no doubt, the finest flavoured of all our Peaches and is large in size, but it is not a heavy cropper; on the other hand, Violette Hâtive is one of the best in all ways. Walburton Admirable and Princess of Wales.—The former is a fortnight later than the latter, but does not crop so heavy, neither is it so handsome as Princess of Wales. Of Nectarines, Cardinal is about ten days earlier than any other variety and good in every respect. Lord Napier and Spenser.—The latter is one of the latest, largest and best.

MISCELLANEOUS.

Canker in Parsnips (Kent).—The root sent shows traces of gnawing by one or other of the ground animals that are so often omnivorous in their habits. Possibly the pest in this case is one of the surface caterpillars, the grub of the Cabbage moth or an ally, but there is nothing to show what the exact culprit is. These

caterpillars may be found just at the surface of the soil around the roots of the plants which they attack. Vaporite should be applied.

Feeding gold-fish (Rita).—Gold-fish can be kept in good condition for some years by feeding them on ants' eggs, with a few breadcrumbs at long intervals and a tiny sprig of Watercress occasionally during the summer months.

Plants to cover north wall (H. E. G.).—We presume that you do not wish to confine yourself entirely to plants of a true climbing habit, as that would deprive you of several subjects which would be of use, while it would narrow the selection considerably. *Camellia japonica* proves an excellent covering for a north wall; it certainly requires training, but is always beautiful and green. It will flower during May and June. *Crataegus Pyracantha* may also be planted. It flowers before July, but fruits profusely in autumn. *Cotoneaster microphylla* is another evergreen of neat appearance which fruits freely. Under favourable circumstances it attains a height of 20 feet. *Jasminum nudiflorum* grows freely and blooms well during winter, while *Escallonia xoniensis* bears white flowers freely during July, and *Hydrangea atissima* forms a very neat covering, which has the advantage of being self-clinging. When you first plant these things be careful to work the ground well, and if it is poor add good material. Good loam, with the addition of a little peat for the *Camellia*, will be found suitable.

Names of fruit.—*J. W. Tandy.*—Gascoyne's Scarlet. —*A. Rogers.*—1, Pickering's Seedling; 2, Gravenstein; 3, Lemon Pippin; 4, Northern Greening; 5, Dartmouth Crab. —*Subscriber.*—Grape Lady Downe's Seedling and Apple Sissy Apple, a variety found in Monmouthshire. —*G. Johnson.*—1, Cellini Pippin; 2, Hollandbury; 3, Allen's Everlasting; 4, Melon Apple; 5, Tower of Glamis; 6, Reinette du Canada; 7, Josephine de Malines; 8, Brown Beurré. —*D. Mc J.*—Pear Beurré d'Anjou. Apples: 2, Bramley's Seedling; 3, Wyken Pippin; 4, Lamb Abby Pearmain; 5, Sugarloaf; 6, rotten; 7, Baumann's Red Winter Reinette; 8, Rosemary Russet. —*F. S. P.*—1, Hollandbury; 2, Golden Noble. —*Askham.*—1, Ribston Pippin; 2, Stoke Edith Pippin; 3, Margil; 4, Tower of Glamis; 5, Hall Door; 6, Yorkshire Beauty; 7, Beurré Diel. —*W. Young.*—Adam's Pearmain.

SOCIETIES.

NATIONAL CHRYSANTHEMUM SOCIETY.

THE winter exhibition arranged under the auspices of the above society was held in the Crystal Palace on the 2nd and 3rd inst., when a good display of single, decorative and large-flowered Chrysanthemums was made. Unfortunately, visitors were very scarce, although the exhibition was well worth going a good distance to see. Mr. R. M. Witty and his committee had made excellent arrangements and deserve better support from the public.

DIVISION I.—OPEN CLASSES, CUT BLOOMS.

There were six competitors in the class for eighteen Japanese, not less than twelve varieties, the first prize being won in good style by Mr. G. Hunt, gardener to Pantia Ralli, Esq., Ashstead Park, Epsom. His flowers were superb for so late a date, and comprised good examples of Mrs. J. C. Neill, Miss Miriam Hankey, Mme. R. Cadbury and John Peed. Mr. H. Humphrey, gardener to Lord Ludlow, Lampport, Northampton, was second, and the third prize went to Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead.

In a similar class for twelve blooms there were also six entries, the first-prize lot being again staged by Mr. Hunt. We specially noticed good blooms of John Peed and Mme. P. Radaelli in this exhibit. Second and third prizes were won respectively by Mr. W. Mease and Mr. J. Preece, gardener to Miss Willmott, Warley Place, Essex, both of whom staged good flowers.

For twelve incurved, not less than six varieties, four competitors tried conclusions, Mr. G. Hunt once again proving the champion. His flowers were a grand lot, especially Mlle. L. Faure and W. Wainwright. Mr. J. Preece and Mr. W. Mease followed in the order named.

In the class for nine vases of large Japanese blooms, not less than six varieties and not less than three blooms in a vase, there were only two competitors, Mr. G. Hunt again appropriating the first prize with a very beautiful collection, in which John Peed, Algernon Davis, Mrs. J. C. Neill and Mme. R. Cadbury figured conspicuously. The second-prize collection, staged by Mr. A. C. Horton, Tonbridge, was very inferior.

For twelve vases of single varieties, distinct, set up for effect with own foliage only on a table of stated dimensions, four exhibits were staged, the premier award going once again to Mr. G. Hunt for a beautifully-arranged table of good flowers. Annie Farrant, Doreen and Lady Winsor were specially attractive. Second and third prizes were well won by Mr. W. Newton, gardener to Mrs. Nathan, Little Heath Wood, Potter's Bar, and Mr. F. Brazier, Catterham, respectively.

For six vases of Japanese, distinct, three blooms of one variety in each vase, there were only two entries, Mr. W. Newton being first with good blooms, Algernon Davis and Mme. P. Radaelli being the best. Mr. M. Rayment, gardener to W. Beech, Esq., North Ockenden, Romford, was second.

In a similar class for spidery, thread-petalled or plumed Chrysanthemums two competitors entered, first honours being awarded to Mr. C. B. Gabriel, Eastdale, Horsell, Surrey; Sam Caswell was the best variety. Mr. J. A.

Humphries, Maisey Hampton, Gloucestershire, was awarded second prize.

For six vases of small Pompons, first and second prizes were won respectively by Mr. J. A. Humphries and Mr. C. B. Gabriel. In the class for a large vase of exhibition Japanese and incurved blooms, with any foliage, there were eight entries, the first prize being well won by Mr. R. B. Leech, gardener to J. C. Ern, Esq., Wood Hall, Dulwich, with a beautiful arrangement of golden blooms, green Fern-fronds and red-tinted sprays of *Berberis Darwinii*. Mr. J. Simon, gardener to W. W. Mann, Esq., Bexley, Kent, was second with excellent golden and white blooms arranged with *Asparagus Sprengeri*, and the third prize went to Mr. W. Mease.

In a similar class for single, spidery, thread-petalled or plumed varieties, seven vases were staged, the first prize going to Miss C. B. Cole, The Vineyard, Feltham, for a very beautiful, artistically-arranged vase. Second honours fell to Mr. H. J. Hedges, Kirkdale Nursery, Sydenham, and Mr. R. B. Leech of Dulwich was placed third.

In a similar class for Pompons there were four entries, the first prize vase again coming from Miss Cole; Mr. J. W. Harrison, Sydenham, and Mr. W. Webb, Sydenham, following in the order named.

For a hand-basket of Chrysanthemums with any foliage the entries numbered five, the first prize being won in good style by Miss Cole, who pinned her faith on yellow flowers with just a few crimson interspersed, with *Asparagus Sprengeri* and *A. plumosus* for garnishing. Miss E. H. Elkins, Rushden, St. Albans, and Mr. F. Brazier, Catterham, followed in the order named.

Nine tables were arranged in the class for a table decoration of Chrysanthemums and suitable foliage, first prize going to Mr. T. W. Stevens, gardener to W. H. Stone, Esq., Donnington, Laurie Park Gardens, S.E., for a beautiful arrangement of yellow and crimson flowers with foliage of the same hue and also some green sprays. The second and third prizes went respectively to Mrs. A. Robinson, Carshalton, and Mr. A. W. Trossell, Beckenham.

MISCELLANEOUS PLANTS.

For a group of Chrysanthemums and other plants arranged on the floor, the first prize went to Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham Common, for a beautiful group, in which single yellow and white Chrysanthemums were largely used, some *Begonias Gloire de Lorraine* and *Poinsettias* providing welcome colouring. Mr. T. W. Stevens, Sydenham, was second.

For a collection of flowering, berried and foliage plants arranged in a circle on the floor, Mr. Howe was again first, his group including well-grown *Liliums*, *Poinsettias*, *Cypripediums*, *Begonias*, *Primula obconica* and *Lily of the Valley*. Second honours went to Mr. H. J. Hedges for a group in which *Begonia Gloire de Lorraine* was the chief constituent.

AMATEURS' CLASSES.

For twelve Japanese, not less than six varieties, five exhibits were staged, Mr. W. Walters, Burton-on-Trent, winning first prize with moderately good blooms. The second and third prizes were won respectively by Mr. W. G. Prudden-Clark, Hitchin, and Mr. T. W. Stevens, Sydenham.

There were six entries for six Japanese, not less than four varieties, the prizes being awarded respectively to Mr. W. Rigby, Beckenham; Mr. H. Baker, Sydenham; and Miss E. H. Elkins, St. Albans.

For six vases of any varieties, three blooms of one variety only in a vase, first and second prizes went respectively to Mr. W. G. Prudden-Clark, Hitchin, and Mr. G. Moorman, Hampton Court, these being the only exhibitors.

For one large vase of any Chrysanthemums with suitable foliage, the prizes were won in the order named by Mr. W. Webb, Laurie Park Road, Sydenham; Miss E. H. Elkins; Mr. W. Gooding, Edenbridge; and Mr. E. Houlton, Dulwich.

MISCELLANEOUS GROUPS.

Mr. H. J. Jones, Ryecroft Nurseries, Lewisham, S.E., was showing in his usual high-class style, the arrangement of his large group being superb. A new single named Cloth of Gold looked very promising, its old gold colour being particularly attractive. True Gold, very rich yellow; Mrs. Wakefield, glowing crimson, yellow centre; Rose Queen, an old rose single; and Kathleen May, an Anemone decorative of beautiful rich crimson, were others that we specially noticed. Gold medal.

Messrs. H. Cannell and Sons, Swanley, Kent, were showing their famous *Pelargoniums* in their many glorious hues, together with a large number of single Chrysanthemums, among which we noticed Cannell's White, a very large pure white with lovely twisted petals, and undoubtedly an excellent late sort. Large silver medal.

Mr. Philip Ladds, Swanley Junction, Kent, arranged a beautiful circular group of market varieties on the floor, these being in splendid condition, interspersed with *Ericas*, *Palms*, *Ferns*, &c. Mr. Ladds also had a beautiful lot of cut blooms arranged on a large table edged with *Ferns* in small pots. Gold medal.

Mr. G. W. Riley, Herne Hill, exhibited his well-known rustic summer-houses, garden seats and tables, green-houses, frames and heating apparatus. Silver medal.

Messrs. John Peed and Son had a table filled with small Cacti, and also numerous rock and alpine plants. Messrs. W. Wells and Co., Merstham, staged a grand lot of Chrysanthemums, among which were many singles of great merit, including the beautiful new Merstham Jewel. Large silver medal.

Mr. Norman Davis, Framfield, Sussex, staged a very beautiful and extensive exhibit of single Chrysanthemums, these being most tastefully arranged in vases and baskets of various heights on a dark green ground colour, and a few Maidenhair *Ferns* stood between. The effect was decidedly pleasing, and, as the flowers were all good, the judges properly awarded him a gold medal.

THE GARDEN

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles, and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

THE NATIONAL ROSE SOCIETY.

A MEMORABLE MEETING.

THURSDAY in last week must be regarded as a red-letter day in the history of the National Rose Society. The annual meeting, a report of which will be found on another page, was of intense interest, and testified to the vitality not only of the society, but of horticulture itself. The meeting was attended by the greatest Rose-growers in the world, amateurs and the trade mingling together to instil, if it were possible, into the hearts of all who love their gardens a greater interest in the Queen of Flowers.

The meeting was largely attended, and the chair was occupied by the outgoing president, Mr. E. B. Lindsell, whose successes in the great tournaments of Roses that take place during the summer months are proverbial. Gathered round him were such men, whose names we cherish, as Mr. Edward Mawley, the hon. secretary, Mr. E. Molyneux, the late hon. treasurer, and the former president, Mr. C. E. Shea.

We predicted not long ago that the list of members would be 5,000, but doubts were cast upon this prophecy. The following, however, from the annual report, will show the tremendous strides that have been made: "During the past year 785 new members have joined the society, or 200 more than in any previous year. Allowing for the losses by death and resignation, the total number of members is now 3,150. Taking the year as a whole, two new members a day have, on an average, been added to the list of membership."

Few societies offer such privileges to its members as the National Rose, and we point them out here with the object of still further swelling the roll. Members subscribing £1 1s. will be entitled to six 5s. tickets and subscribers of 10s. 6d. to three 5s. tickets of admission to the society's metropolitan exhibition; or, if preferred, any of those tickets may be used instead for the society's provincial show, which will be held next year at Luton. In addition to this, each member will receive, in proportion to his subscription, either four or two tickets for the society's autumn Rose show, to be held in the Royal Horticultural Hall, Vincent Square, Westminster. New members will, on joining the society, receive copies of the following publications: "The Enemies of the Rose," issued in April last, the "Official Catalogue of Roses," the "Hints on Planting Roses," and the "Report on the Constitution of Rose Soils." Also, in February next, the new and revised

edition of the "Handbook on Pruning Roses" and the "Rose Annual for 1909" will be sent to all the members.

The publications of the society are of great value, and have been compiled by a committee of experts. Such manuals as these have not only helped forward this excellent institution, but spread far and wide an increasing love of the Rose. Another pleasant feature of the report is the success of the autumn exhibition, and the fifth took place last September. Quoting from the report, it is mentioned "that this exhibition was not quite so large as that of the previous year, but the general quality of the blooms was surprisingly good, considering the trying character of the season. Now that this exhibition is becoming generally known it is attended by the members in largely-increasing numbers."

With regard to the society's financial position, nothing can be sounder, and it was with the greatest satisfaction that the meeting was enabled to grant an honorarium (the sum of £100) to Mr. Mawley for his splendid work—a work of love—for the society since its foundation.

It will interest those members who were not present at the meeting to know that, owing to the great increase in membership, it has been necessary not only to give the secretary and the treasurer greater assistance, but to engage the services of a paid chartered accountant, and this step is accentuated by the excellent motive of relieving the society's principal workers of a considerable burden.

And may we now pay a tribute to those who have worked so unselfishly, without any desire for financial reward, to bring the society to its present proud position? Mr. E. Molyneux, after four years' devoted service as the hon. treasurer, has felt compelled to relinquish his task; and we can well understand that such an organisation, with a membership of over 3,000, must entail a large amount of arduous work. Mr. G. W. Cook, whose portrait we give in the present issue, has undertaken to continue the great services that have been rendered by Mr. Molyneux in the past.

Mr. Lindaell, under the rules of the society, which do not permit a president occupying that office for more than two years, has retired, and the Rev. F. Page-Roberts, Rector of Strathfieldsaye, occupies this position, and a worthier choice could not have been made by the annual meeting.

The usual annual dinner followed, and the new president delivered a delightful speech. The whole proceedings suggested that this was no ordinary meeting, but a reunion of rosarians who love the Rose and are delighted to meet at their annual gathering those who are imbued with the same enthusiasm. Among those present as guests were Sir Daniel Morris and Sir George Watt.

NATIONAL SWEET PEA SOCIETY.

THE annual general meeting of this flourishing floricultural society was held at the Hotel Windsor, Victoria Street, Westminster, on the 11th inst., Mr. W. Cuthbertson presiding and fifty-six members being present. Among the members attending were Messrs. A. Watkins, G. Unwin, Robert Sydenham, William Deal, A. J. Stark, G. S. Brunton, G. F. Drayson, G. A. Bunting, T. W. Turner, J. M. Bridgford, E. Teschemacher, H. J. Jones, C. Foster, Horace J. Wright, S. B. Dicks, A. Dean, T. W. Stevenson, C. W. Breadmore and E. W. King.

The annual report for 1908 and the balance sheet for the year ending November 30 were presented and unanimously adopted. In the report many items of an interesting and instructive character are to be found, and it is pleasing to note that growers and raisers have every confidence in the conduct of the society's trials at Reading under the supervision of Mr. Charles Foster, than whom we think a better and more independent supervisor could not be found.

In future the committee proposes to receive new varieties only from the raiser or introducer for the purpose of these trials, but it is arranged that a further set of trials will be held at Reading next year, under the committee's direction, for the sole purpose of testing the correctness and purity of stocks of Sweet Peas that may be sent by seedsmen. For the special trials of new Sweet Peas the committee proposes to make a charge of 2s. 6d. per variety, while for testing stocks of older varieties a charge of 5s. per stock will be made. In each case the sender will receive official notification of the merit of the variety or stock sent.

It is pleasing also to note an increased membership, the total number of members up to date being 786 and affiliated societies 51. The financial position of the society is thoroughly sound, and the balance sheet shows a balance in hand of £44 0s. 1d., less outstanding amounts totalling £11 11s. 2d. This is nearly double the amount in hand at the end of the financial year 1907, and the committee may, therefore, be congratulated on the prosperity of the society.

Mr. N. N. Sherwood was re-elected treasurer and Mr. Edward Sherwood as acting treasurer, many remarks appreciating the good work done by these gentlemen being made. The president for 1909 is Sir Randolph Baker, Bart., who is an enthusiastic lover of the Sweet Pea, and who will, we feel sure, prove an admirable president. Mr. Horace J. Wright was elected chairman for the coming year in the place of Mr. Edwards, who retires by rotation, and who has done much excellent work for the society during the past. In thanking the society for the honour conferred on him, Mr. Wright said he would be pleased to offer a silver cup, value 21 guineas, to be competed for by small growers.

Mr. C. H. Curtis was heartily thanked for his past services and unanimously re-elected hon. secretary, an honorarium of 25 guineas being also unanimously accorded him in appreciation of services rendered during the past year. The following new members were elected to the general committee: Messrs. H. G. Bartleet, W. J. Stevens, W. Lumley, E. H. Christy, R. F. Felton, William Deal, H. C. Till, H. D. Tigwell, H. Shane and Silas Cole.

Rule 3 was altered so as to read that subscriptions become due on January 1 each year, instead of February 1 as hitherto; but a motion to alter Rule 6 so as to make those members of the general committee who do not attend a committee meeting during the year ineligible for election the following year was withdrawn.

The London exhibition for 1909 is fixed for July 23, at the Royal Horticultural Hall, Vincent Square, Westminster, and the provincial show, on July 13, at Saltaire, Yorkshire, under the auspices of the Saltaire Rose and

Horticultural Society. All lovers of the Sweet Pea who are not already members should make a point of joining this society, which is doing so much to foster the culture of this beautiful and fragrant flower by all classes.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

December 22.—Royal Horticultural Society. Exhibition of Flowers, Plants, &c., 1 p.m. to 5 p.m. Royal Horticultural Hall, Vincent Square, Westminster.

Plants in flower at Wimbledon.—"J. R." writes from The Gardens, Alyn Bank, Wimbledon, S.W., as follows: "As a constant reader of THE GARDEN, I often see notes of interest on flowers sent from country gardens. Thinking it may be of some interest to other readers, I append a list of flowers gathered in the open garden here on December 5: *Arabis albidiflora* flore-pleno (the double white *Arabis*), *Aster alpinus*, *Centaureas* in variety, *Calceolaria* *Burbidgei*, *Delphinium*, *Erigeron alpinus* *Lowii*, *Gazania grandiflora*, Christmas Rose (*Helleborus niger*), *Helleborus olympicus*, *Lithospermum prostratum*, *Linum narbonense* (blue) and the white form *L. n. alba*, *Pyrus japonicus* *albus*, *P. j. sanguinea*, Pansies, blue and yellow *Primroses*, *Polyanthuses*, Hybrid Tea and Hybrid China Roses, *Scabiosa caucasica*, *Schizostylis coccinea*, Sweet *Alyssum*, *Veronica spicata* *variegata*, *Verbenas*, Wallflowers, some of the *Aubrietias*, *Campanula turbinata* and *C. muralis* major. The above-named flowers were gathered in good condition, and are evidence of the mildness of the season." Also sent were fruits of the alpine Strawberry.

Holly berries.—The nearness of the annual Christmas festival has led to the discovery—one of special concern to decorative florists—that berries are very scarce, and, indeed, in many localities where these fruits are commonly plentiful none is now to be seen. That circumstance may be due to two or three successive crops having exhausted the creative forces of the bushes or to some other cause not easily explained. Certainly, remembering what a good edible fruit crop we have had, it seems unlikely that the spring weather sufficed to kill the bloom, and it is much more probable that bloom was absent or was infertile. It will be learnt with profound regret by all that Holly berries are so scarce. It hardly seems as if the festive season of Christmas can be duly honoured without their abundant presence.—A.

Apples and Pears at Christmas. Planters should, when selecting trees, think of their supply for the Christmas festivities, for often at this period when the supplies are most appreciated they begin to fall short. Pears in season then are *Passe Colmar*, *Thompson's*, *Glou Morceau*, *Charles Ernest* and *Hacon's* *Incomparable*; and *Catillac* for stewing. Apples: *Adam's Pearmain*, *Cox's Orange Pippin*, *Blenheim Orange*, *Scarlet Nonpareil* and *Melon Apple*; and for cooking and baking, *Blenheim Orange*, *Sandringham*, *Lane's Prince Albert* and *Lady Henniker*. These are all most delicious. In addition, a good dish of *Medlars* is greatly appreciated, and at Christmas these are just ready. A good supply of *British Cobs* and *Walnuts* should be retained for this season.—W. A. Cook.

Garden Dahlias.—We learn that at the Royal Horticultural Gardens, Wisley, where trials of *Cactus Dahlias* have taken place during the past two years to determine the fitness of certain recently-raised varieties for garden decoration, *Cactus* varieties next year will be excluded from the trials. This will enable the merit of *Pompons* and *singles*, with some ordinary decorative forms, to be tested for such purposes. It is well known that many of the *singles*, if the decayed flowers be often gathered,

give very beautiful effects in the garden. At the first exhibition of the newly-formed National *Dahlia* Society, it is, we learn, proposed to have a class for three varieties of garden *Cactus Dahlias*, to be shown in vases of three bunches or trusses of each. The object of this class is to enable *Cactus Dahlias* grown for garden decoration to be shown without wires or disbudging and to display their floriferousness. At *Dahlia* shows, so far, disbudded flowers alone seem to have found favour.

PRIZES FOR READERS.

NOVEMBER COMPETITION AWARDS.

In this competition prizes were offered for the best essays on "Flowers for a Small Greenhouse in Winter," and proved to be a very popular competition, a large number of essays being sent in. The prizes were awarded as follows:

First prize of four guineas to Mr. Arthur J. Cobb, The Gardens, Duffryn, near Cardiff.

Second prize of two guineas to Miss S. Randolph, Chartham Rectory, Canterbury.

Third prize of one guinea to Mr. Alfred Eames, Heanton Satchville, Dolton, North Devon.

Fourth prize of half-a-guinea to Mr. John Botley, Scarlett's Park, Twyford, Berks.

The essays from the following are very highly commended: C. W. Caulfield, F. G. L. Moir, T. Whysall, M. C. Aldiss, A. F. Groombridge, C. Comfort, E. D. Smith, W. H. Morton, Mrs. Macalister, Mrs. C. W. Earle, D. Lewis, B. Duncan Thomson, James Rawlings, Mrs. J. Traherne and W. McDermott. Many otherwise good essays failed to reach the winning circle because plants were named which would require a stove temperature to grow them in, and many essayists omitted the winter or perpetual-flowering *Carnations*.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Spring bedding.—I have read with interest two prize essays which have lately appeared in THE GARDEN on the subject of "Spring Flower-beds," the writers of which apparently have been in the way of carrying out their schemes of spring gardening without regard to expense. There is, as we know, no disputing about tastes, and therefore I feel free to say that if I possessed the millions of which I have such a plentiful lack I would not desire the spring gardens of mosaics recommended by your essayists, were they ever so cunningly executed. *Keizerkroon Tulips* dotted 1½ feet apart over a carpet of mixed *Polyanthus* may be the last word in "up-to-date" gardening; but we had been taught to think that THE GARDEN, rightly or wrongly, set its face against the easy and commonplace style of tricking out a garden in mosaic patterns. I think if you search among the back volumes you will find various eloquent protests against the employment of unlimited numbers of flowers of the same kind and colour to produce carpet designs in gardens. And what else but carpet bedding are your prize essayists advising? It is not easy to see why designs worked out in blue *Myosotis* and yellow or scarlet *Tulips* should be right, when designs in *Lobelias*, *Geraniums* and *Calceolarias* are wrong. And if this "up-to-date" gardening is desirable, surely a little more resource and inventiveness might be expected from the gardeners of large establishments. *Tulips*, *Hyacinths*, *Pansies*, *Narcissi* and *Anemones*, with a few low-growing things like *Arabis* and *Aubrietia*, pretty well exhaust the material used by these "up-to-date" gardeners. Not a word about the exquisite flowering shrubs—*Forsythias*, *Flowering Currants*, *Cydonias*, *Daphnes* and others—which alone or in combination give such a charm to spring



AN OLD POTATO TUBER PRODUCING NEW ONES.

flower-beds. If you were to offer a prize for an essay on "Attractive Features in Spring Gardening," excluding the use of Hyacinths, Tulips, Narcissi and garden Anemones, and rigorously barring the use of the words "carpet" and "dot plants," you might get something of another kind, but something still worth reading. At any rate, you would set spring gardeners thinking. Deprived of his bags of assorted colours from Holland, the spring-garden artist would no doubt at first feel himself aggrieved; but he would find abundance of material left if he only knew where to look for it.—A. W. [The question you raise is, as you yourself suggest, a matter of taste, and to deal with your letter fully would require several columns. There always will be two great schools of garden designers—the natural and the artificial—and we can only say that, as in almost every case, there must be to some extent a combination of the two, so we think we are doing a useful work in offering prizes for suggestions for dealing with the more or less formal beds that are to be found in most gardens. In an enclosed square, on a formal terrace, or on the edges of a wide expanse of lawn abutting on the grey walls of some old mansion such beds are most appropriate, and probably nothing would look half so well as the bright colouring which you despise. It is difficult to see how you would deal with such parts of the garden if you excluded Tulips, Hyacinths, Narcissi, Anemones, or, as you term them, "the bags of assorted colours from Holland." Of course, if you have no such positions to fill, then it is a different matter altogether, and there would be no need for any "dot plants" or "carpets"; but even then a spring garden without any spring-flowering bulbs would be very much the same to most people as the play of "Hamlet" without Hamlet. If you would send us a short essay on "Attractive Features in Spring Gardening, excluding the use of Hyacinths, Tulips, Narcissi and garden Anemones, rigorously barring the use of the words carpet and dot plants," we will gladly give it space.—Ed.]

A Potato tuber producing new ones.—I enclose a photograph of a curiosity which you may think of sufficient interest to figure in your interesting paper. The Potato in question is one of last year's crop which had been stored in a dry cellar for several months and was about to be thrown out to make room for other things. In its efforts to produce after its kind in untoward circumstances, it seems to have developed from the slit on its upper side not only foliated shoots, as shown at the top, but also several tubers, as seen on another shoot issuing from the inside. On the heel also are a few tubercles with all the appearance of eyes as on a mature specimen. My difficulty is to

explain the source of nourishment that enabled it to make such a brave effort at self-propagation, as the skin remained as dry and perfect as any of the others which showed no such propensity. It is regarded by men acquainted with the habits of the Potato as a most unusual development, and I shall be very glad to have your opinion regarding the probable cause of its productiveness.—(Rev.) J. J. MARSHALL L. AIKEN, *Berwickshire Naturalists' Club*. [It is not unusual for old Potatoes to produce new ones in this way, and the fact that they will do so is frequently turned to practical use. If our correspondent will turn to pages 472-3 of our issue for September 26 last, he will find an illustrated article on the subject.—Eo.]

Squirrels in London.—It is not often that Londoners have an opportunity of watching the antics of these interesting little creatures; therefore I think some of your readers may be glad to know that there are a few to be seen occasionally in the vicinity of what I hope Mr. Gardiner will forgive me for dubbing the "Broomstick Avenue," the pathway running from the Tea-house in Kensington Gardens to the misplaced—because here so undesirable—statue of "Physical Energy." They are also not unknown in Regent's Park.—E. CURGWIN.

Pampas Grass in Scotland.—The accompanying illustration of Pampas Grass is from a photograph sent to us by Mr. John Kyle, Carthay, Forries, Elginshire, N.B., and represents a fine specimen of *Cortaderia argentea*. The specimen is now twenty-one years old, and has occupied its present position for eighteen years. No protection is given it in winter beyond that furnished by its own leaves except a mulch of decaying leaves, which is spread on the soil over its roots and forked in in the spring.

RIVIERA NOTES.

COSMOS SULPHUREUS.—What a delightful addition to autumn flowers this little-known annual has proved to be! Although not absolutely new, it is, I think, but little known on account of its flowering so late that seed is scarce. This will not, however, be the case on this coast, and everyone should make a note of its charm. Its name, sulphureus, is misleading, as its colour is the richest possible shade of orange, which glows in the sunshine like burnished copper. Unlike the well-known lilac or white Cosmos, which are tall, slender and rather straggly in habit, this newer variety is of excellently neat habit, branching freely and flowering most abundantly at the axils of each leaf. Its fresh green foliage is much less finely divided than those we are so familiar with, and it makes a round, spreading bush of less than 2 feet high, covered with foliage and flower down to the ground. Its period of flowering promises to be very prolonged, and altogether it is an annual much to be recommended, even for English gardens if an early start is made and a few seedling plants kept in pots plunged in the soil so that they can be put into a greenhouse in case of autumn frosts. Its foliage and pretty growth alone would make it desirable.

Impatiens Holstii also has shown itself a very desirable plant for the autumn garden here, while *I. Oliveri* is rather disappointing, as it grows too big and flowers so sparingly—at least, as a young plant. If in another season it should prove more floriferous, it is a bold-growing shrub for a somewhat shaded border or shrubbery, and I note that there are a few seedlings of much brighter and deeper pink than the type, so that there may be some development in that way. With hybridisation it will be possible, I hope, to intensify its colouring and preserve its hardiness, which is considerably greater than that of other Balsams.

Lavendula abrotanoides is a little-known Lavender that is of some merit for its winter-blooming qualities. Its neat, finely-pinnate foliage is a good foundation for the bold, branching spikes of bright lavender flowers which make a cloud of misty blue in the distance above its foliage.

Tritoma primulina, or *longicollis*, has been flowering freely and its lemon-coloured spikes of flower are very attractive when well grown. It is rather difficult to manage here as it cannot stand the heat of the sun in summer, and only one little group has survived out of three that I made last winter. It would be interesting to know the conditions under which it grows in its own country, as it would be extremely attractive in a good bold mass.

Nerine tardiflora, on the other hand, is in robust health and vigour, throwing up many spikes of flower with its fresh young leaves and making offsets freely. It seems so near *N. Mansellii* that it must, I think, really be a hybrid; whether of garden origin or not I do not know. But its bright heads of rose carmine are very lasting and, as the heads of flower-buds are considerable, it is a very decorative bulb for a suitable corner or grouped with *Cypridium insigne*, which flowers at the same time. It is always a regret that

Dahlia imperialis cannot show its beauty under glass or grown in a pot. This year it has been unusually magnificent, owing, I think, to the rains of last August and the very genial November sunshine. If only it were possible to induce it to flower at another season, I can imagine nothing more superb for a public park or any place where it can have enough room to show off its stature and grace of flower. It is curiously constant in its season of flowering. Almost to a day it opens on November 1 and does not do more than last in flower for the month, but for that time it is unapproachable, so long as no rough wind has ruffled its pendent bells. This season the

Winter-flowering *Roses* are not as promising as they were last year. The rains in August came too early and spoil their rest, and the late heats in October and early November have made the shoots too long and thin, so that the first flowers are by no means as good as they might have been. Rain is much needed before the ground chills down with the long nights or the snow on the mountains has cooled the air. As in other years, the neat habit and late-flowering qualities of



A FINE PLANT OF PAMPAS GRASS GROWING IN A SCOTTISH GARDEN.

Chrysanthemum Seedlings deserve notice. The trade in seed is as yet little developed, but the strain is improving yearly, so that I hope in a few years many gardeners will grow and enjoy a good batch of seedling *Chrysanthemums* for winter bloom. As pot plants they are wonderfully neat and compact compared to their growth another year. EDWARD H. WOODALL

THE GREENHOUSE.

FLOWERS FOR A SMALL GREENHOUSE IN WINTER.

(First Prize Essay.)

SUITABLE subjects for providing a supply of bloom throughout the winter for a small greenhouse are legion, and what to grow and what not to grow will depend largely on the possessor's taste. To an enthusiastic amateur the cultivation of many sorts would, perhaps, most appeal as being more interesting, but it is not certain that this process would give the best results as far as a supply of bloom is concerned. However, in whichever direction tastes or circumstances lie, the main point to be observed will be to grow only such as are suitable, for it must be remembered that the one temperature will have to suffice for all once they are placed in the greenhouse, and here it may be mentioned that a frame or two will be an absolute necessity. Further, as a high temperature would only tend to hasten the fading of the blooms, only such as require strictly greenhouse treatment must be attempted. General neatness, too, should be taken into consideration, and, as far as possible, plants grown which after flowering are not unsightly when left in the greenhouse; but many can either be placed elsewhere or thrown away.

A span-roofed structure will be found most convenient, fitted with centre and side stages and a neat shelf or two suspended from the roof. In such a house, with the plants judiciously arranged at will, according to their requirements, much success may be obtained. For the purposes of this article, the term "winter" may be taken as applying from October to the end of March, or practically from the time outdoor flowers are over until they commence again in spring. The subjects mentioned in the following notes are considered easy of culture, and may be relied upon to give a display of bloom commencing with those flowering in

October. This month presents no difficulty in maintaining a bright appearance in the greenhouse, for we can have the popular *Chrysanthemums*, *Salvia splendens grandiflora*, *Zonal Pelargoniums*, *Love-lies-bleeding* *Sutton's Giant* and *Begonias*. The latter, from bulbs started late in spring, will continue well into this month and can, after flowering, be laid on their sides under the stages. *Chrysanthemums* will form a principal feature from now until well into January if care is taken in the selection of suitable varieties for forming a succession. A mistake often made is to have a big blaze all at once, and by Christmas, or long before, *Chrysanthemums* are a thing of the past. Exactly what sorts to grow and the style in which they are to be grown will here again depend on individual taste, some preferring large blooms, others small and suitable for room decoration. Personally, and especially for a small greenhouse, I think the bush system, supplying a moderate number of medium-sized flowers, and a selection of the charming single varieties far preferable to the large blooms. A few varieties suitable for this purpose and to give a succession of blooms are as follows: Single-flowered.—*Stella*, Miss Mary Anderson and *Eureka*, white; *Ladyemith* and *Mary Richardson*, pink; *Kitty Bourne* and *Sir George Bullough*, yellow; *Merstham Jewel*,

bronzy red; and *Doris Stevens*, crimson scarlet. Japanese, for bush or decoration.—*Lady Selborne*, Mme. R. Oberthelm, *Alice Byron*, *Niveus*, *Princess Victoria* and *Ethel*, white; *Vivian Morel*, Mrs. *Barkley* and *Framfield* Pink, pink; *Source d'Or*, *Mabel Morgan*, *King of Plumes* and *Thompson*, bronze and shades of yellow. A good batch of the pretty *Pompon Sœur Melaine*, should also be included. *Salvia splendens grandiflora* is to be particularly recommended. Few things, if any, can surpass the dazzling effect produced by the long racemes of bright, fiery scarlet flowers; they are readily propagated from seeds or cuttings, and when growing strongly are greatly benefited by a few applications of manure water. *Zonal Pelargoniums* from spring-struck cuttings and grown outdoors through the summer, pinching out any flower-spikes as they appear until September, when they must be placed in the greenhouse, will flower freely this and next month and again early in spring. *F. V. Raspail* (double scarlet) is a good



MR. G. W. COOK, THE NEW HON. TREASURER OF THE NATIONAL ROSE SOCIETY.

(See page 617.)

variety and bright for winter decoration. A plant not generally known for pot culture, but which makes a good acquisition for the greenhouse, is *Love-lies-bleeding* *Sutton's Giant*, and is almost as effective as *Acalypha sanderiana*, which requires a stove temperature. Its usual position is in the sub-tropical garden or for the centre of large beds, where it makes a handsome plant. A few plants left over from this purpose were potted up, and the limited root-space has had the effect of inducing it to throw its long tails of flowers, with less foliage, and is now very effective and somewhat of a novelty in the greenhouse dotted among other plants. Most of the above-mentioned plants will continue to bloom through

November, and their list may be added to by the addition of *Carnations* (*Tree* and *Marguerite*), *Primulas*, double *Violets* and *Marguerites*. The first named are universal favourites, and amply repay the attention necessary for success. They can be grown from seeds or cuttings, the latter being the usual method of propagation and

imperative if named sorts and large blooms are desired; but seedlings, I think, give less trouble with more flowers, though, naturally, they are not so fine and, of course, a small percentage will be single, but these, too, are pretty. A good light position near the glass must be given them and they will continue to bloom throughout the winter. *Primulas* of the *stellata* and Chinese varieties are, when well grown, very beautiful with various coloured flowers of great richness. The seeds must be sown in April and May for flowering now. An ideal place for them in the greenhouse when brought from the cold frame in September will be on a shelf near the glass, removing to stages when in bloom. *Marguerites* can easily be had in bloom this month and continued so for a long time by striking cuttings in autumn or spring and growing them on as for bedding. About the end of June cut back and rest the plants for a time; when growth recommences shake out and repot. A few *Violets* are always appreciated, and can be taken up from the open ground and potted in September. With the advent of

December flowers are not usually so plentiful; a lot of the *Chrysanthemums* are over and the bright *Salvias* finished, but the *Arum Lily* will make a valuable asset, and can be assisted by *Mignonette*, *Sutton's Christmas Pink Stock* and *Cyclamen*. *Roman Hyacinths* and *Paper-white Narcissi* will also readily force for Christmas, and their delicious fragrance will be welcomed. *Cyclamens* to bloom in December will require fourteen months from the time of sowing seeds. *Mignonette* is sown thinly in 5-inch pots (in which it will flower) during August and the *Stock* in May. *Arums* to flower early are best rested during summer in their pots, and at the approach of new growth, usually the end of July, they should be shook out and repotted, or a top-dressing may be found sufficient. When making rapid growth and throwing up their spikes, assist them with manure water; they will repay it by continuing to bloom until May.

January often brings with it the severest weather of the year, and when the outside is in the grip of frost, flowers are more highly appreciated. We can have, in addition to many previously named, *Genista fragrans*, which, as its name implies, is scented, and another deliciously perfumed favourite is found in *Freesias*. To get the latter in flower now the bulbs must have been well ripened and potted early. From now onwards the days will gradually lengthen, with a corresponding increase of sunshine, and during

February and *March* many of the greenhouse occupants will flower freely, especially the *Geraniums*, *Carnations* and *Cyclamens*; these can also be supplemented by *Cinerarias* brought into the greenhouse from frames when the *Chrysanthemums* are over; needless to say they would have been kept secure from frost. Any of the early-flowering bulbs will be ready now, especially *Crocus*, *Muscari* and early *Tulips*, also the pretty little *Iris reticulata*. *Wallflowers*, too, are well worth a place if only for their perfume; some varieties, such as *Blood Red*, *Harbinger* and *Sutton's Earliest of All* come into bloom early.

In addition to all the subjects enumerated, there are the retarded bulbs and plants, which are quite easy of management, such as *Lily of the Valley*, *Spiraeas* in several varieties, *Liliums* and *Lilacs*, their time of flowering relying on when received; all can be had in flower before Christmas, but with only greenhouse temperature additional time to that usually credited to bring them to perfection will be necessary. If space can be found for a few climbers, nothing is better than *Roses*, *Maréchal Niel*, *Anna Ollivier* and *Niphetos* being among the best, and *Ivy-leaved Pelargoniums* *Souvenir de Charles Turner* and *Mme. Crousse*. One final word of warning must be given with regard to watering. Do this in the mornings and only when really necessary, always avoiding undue moisture.

ARTHUR J. COBB.

The Gardens, Duffryn, near Cardiff.

THE ROSE GARDEN.

SOME NEW ROSES.

THESE are a few of the most reliable of the new Roses meriting general cultivation, and are all strong and free flowering:

Dorothy Page - Roberts (Hybrid Tea).—A unique shade of coppery pink, perfect in shape; a thin Rose. In a hot summer the colour and shape make up for this, and in the autumn it is magnificent.

Elizabeth Barnes (Hybrid Tea).—One of the best Roses sent out by the famous Newtownards firm last autumn. It is in shape very like Mme. Abel Chatenay; the colouring is perfect, a delicate rose beautifully blended with fawn and yellow. The greatest connoisseur in the Rose world will be pleased with this.

G. C. Waud (Hybrid Tea) is of excellent habit and flowers freely; the blooms are of good shape and substance, and light vermilion in colour. It is charming in every way.

General Macarthur (Hybrid Tea).—A pretty shade of bright crimson, really good in the autumn, fair size and has a delicious perfume.

Grace Molyneux (Hybrid Tea). This is worthy of the fair lady whose name it bears. It is a Rose of great beauty, flowers freely and is of a creamy white shade, with faint pink and apricot shadings in the centre of the bloom.

Harry Kirk (Tea).—Of very robust growth, delightful yellow shade, good shape, flowering freely. We shall hear more of this in the future, as it is quite one of the best.

Lady Helen Vincent (Hybrid Tea).—A delicate shade of pink, excellent shape, with a high-pointed centre; a Rose everyone should possess.

Lyon Rose (pernetiana).—A very vigorous Rose with good-shaped blooms of a magnificent salmon blended with red and yellow. It is already making its way to the front.

Mrs. Aaron Ward (Hybrid Tea) is a colour we want, viz., apricot and peach. The blooms vary in colour, flowers of both shades being produced on the same plant; very good shape.

Mme. Melanie Soupert (Hybrid Tea).—Yellow with carmine shading, large, good-shaped blooms with huge, deep petals. It is becoming a favourite.

Mme. Maurice de Luze (Hybrid Tea) has already made its way. It is a large, high-centred bloom, excellent in every way and of a brilliant carmine pink. It is very vigorous.

Mme. Segond Weber (Hybrid Tea).—This is a perfect Rose in every way, delicate pink with flesh and salmon shadings and very large petals. It has a delicious scent.

Marquise de Siney (Hybrid Tea).—Yellow beautifully blended with peach, a glorious colour, large blooms but rather thin; owing to the size and substance of the petals it is exquisite.

Rhea Reid (Hybrid Tea).—A real crimson, vigorous and of excellent shape. It will be in great demand because of its lovely colour.

René Wilmar Urban (Hybrid Tea).—This is a delightful shade of salmon pink, of excellent shape and one of the best of the

newer Roses. It is vigorous and lasts well in a cut state.

Senateur Saint Romme (Hybrid Tea).—A lovely shade of rosy salmon blended with yellow, splendid shape and really good in every way.

Souvenir de Maria de Zayas (Hybrid Tea).—A very pleasing shade of bright carmine, exquisite shape, with a high centre and of fair size.

Souvenir of Stella Gray is a Tea most beautiful in shape, scent and colouring, red and cream delightfully blended and veined with apricot; a delightful Rose.

We all know those two famous Roses Dean Hole and William Shean. Others that are good are Countess of Annesley, Countess of Gosford,

still, it thrives and is seen in many gardens as vigorous as ever. It is worthy of note that in some trade lists this is classed as a Hybrid Perpetual, while in others as a Hybrid Tea. To many this classifying is confusing.

Those who have had to grow a collection of Roses on various soils know how they thrive beautifully in one place and refuse to grow in another. This is how I have found La France. When residing in the West of England, in a low situation and strong soil this refused to grow, and after trying it as standards and dwarfs and in various positions I gave it up as a failure. Previous to going West I was most successful with it on a light soil, and at that time I grew upwards of 100 sorts, and this was one of the most reliable.

In my present garden, which is greatly exposed, with a light sandy soil, this season on dwarfs on the seedling Briar stock it has been glorious, and at the end of August was giving a splendid second crop of flowers. When it thrives in this way it is certainly one of the most desirable Roses to grow. Many amateurs about here have found its reliability, judging from the number grown.

I am convinced many Roses thrive better in a somewhat light soil, and I have come to regard very heavy soils as being overpraised for many varieties.

Camberley.

J. C.



THE REV. F. PAGE-ROBERTS, RECTOR OF STRATHFIELDSAYE, THE NEW PRESIDENT OF THE NATIONAL ROSE SOCIETY. (See page 617.)

Earl of Warwick, Joseph Hill, La Tosca, Les Rosati, Lena, Le Progrès, Mrs. David McKee, Mrs. Myles Kennedy, Mrs. Harold Brocklebank, Mrs. Peter Blair, M. Paul Ledé, Mme. Charles Monnier, Mme. Jules Gravereaux, Mme. Leon Pain, Mme. Wagram, Comtesse de Turenne, Pharisæer, Souvenir de M. Frederic Vercellone and, last but not least, the latest of the Irish singles, the lovely apricot-tinted orange and crimson Irish Elegance. E. E. J.

ROSE LA FRANCE ON LIGHT SOIL.

Some old Roses are surpassed by new ones, while others outlive the majority of new introductions. The variety above named cannot be termed new;

made in wood or wire, and covered with variegated Holly bearing plenty of berries, serve well for special positions, and last a very considerable time. A square room may be made effective by using four long festoons, one from each corner, bringing them to the centre and fastening the four ends together with a bunch of Mistletoe, in the centre of which may be used the light Pampas Grass plumes and old decaying Fern fronds with good effect. A good bowl of Holly, with its scarlet berries, should be used on Christmas Day on the dinner-table, and this may be livened up with Lily of the Valley sprays. These decorations do much to suggest to the minds of all those concerned the idea of peace and godwill to mankind. W. A. Cook.

CHRISTMAS DECORATIONS.

BRIGHTLY decorated rooms form an extra charm to parties, both large and small, and even in the humblest homes a little decoration is usually carried out for the festive season. When making wreaths, or festoons for throwing across a large room or to grace pillars, fasten a string to some support at each end, leaving enough to make the tie firm, then cut up pieces of common Laurel, Portugal Laurel, Retinospora, Holly, Box and Ivy from 7 inches to 10 inches long. Begin at one end of the string and mix the material thoroughly as the work proceeds, tying all firmly with green string. Festoons can thus be made thick or thin, according to the work that is to be done.

Coloured paper can be used with much effect. Flowers of all colours and large and small can be made quite nicely with it, and these dotted about among the evergreen are very showy. Designs

THE FLOWER GARDEN.

IRIS OCHROLEUCA.

THIS Iris, tall and stately in its growth, with white flowers marked with yellow blotches, has been thought to be the origin of the heraldic device called the *fleur-de-lis*. While this is by no means certain, the idea is borne out by the following remarks in the "Encyclopædia Britannica" on the *fleur-de-lis*: "According to an old tradition it was first employed as an armorial bearing by Clovis I., and represents the Lily presented by an angel to that monarch at his baptism, the three *fleurs-de-lis* of his shield being the sign of the Trinity. Newton considers it to be the figure of a Reed or Flag in blossom, used instead of a sceptre at the proclamation of the Frankish kings." But there are other, quite different, theories as to the origin of this device, and as, among other places, it has been found in the design of the head-dresses of Egyptian sphinxes, its connexion with *I. ochroleuca* does not seem very definite. The photograph reproduced was taken from a plant just as it grew, no arrangement of the flowers being made. There is another variety of it called *gigantea*, which, as its name implies, is larger.

F. H. HUTTON.

Vicar's Court, Lincoln.

NOTES ON MULE PINKS.

No low-growing hardy plant is more beautiful than the Pink named Napoleon III. Some people think it difficult to cultivate, but this is not so when good treatment is afforded. In my garden, on a dry sandy soil, this year it has bloomed for months, and good flowers were open the first week in October. In the spring I had six good plants, and from these I have raised five dozen nice young ones. I gave them liberal culture with plenty of moisture. So many fail with this Pink through starving it. If the plants are weak, they should not be allowed to flower till they have gained strength. Nothing roots more freely under hand-lights or in pots in a close frame; but they must be removed to the open as soon as they are rooted, or they will suffer in constitution.

Another beautiful Pink is multiflora splendens. This is an improvement on the normal type, having larger and more highly-coloured flowers. Both this and Napoleon III. have good robust habits. *Striatiflorus*, with its evenly-striped flowers, is charming and a change, besides being vigorous. Beautiful as these are, the white Marie Pare is more so. In many gardens this is prone to die off suddenly. I have had trouble in this way, and until this summer I was under the impression that it was not reliable. When visiting Crosby Hill, Camberley (where I found one of the best and choicest collections of hardy plants I have ever seen), I saw this and the other varieties named growing most freely, in large masses 2 feet to 4 feet across in separate colours, in a border in the full sun, and evidently they had been there many years. I was told that the white variety gave no trouble. I still

have a love for Anne Boleyn, Ascot, Lord Lyons, Hugh Clere and many of this class, remembering the fine masses of these in gardens thirty years ago. J. C. F. C.

SOME BEDDING ARRANGEMENTS.

[In reply to several correspondents.]

DURING the past few weeks we have received communications from several of our readers asking for suggestions for summer bedding for the year 1909, and we believe we shall be serving the best interests of a large number if we at

excessive richness of the soil in which the plants are hedged out. In such a case the remedy is twofold, and strong-growing plants should either be bedded out in their pots—those of 5 inches diameter being most suitable—or the richer soil of the bed replaced by some of much poorer quality. Obviously the easier way would be to bed the plants out in their pots, and in the case of Pelargoniums, whether of the Zonal or Ivy-leaved section, this is frequently done, the result being a sturdier growth and larger quantity of flowers; indeed, the giant trussess of bloom which on these plants are the rule in most of the London

parks and gardens are produced in this way and with comparatively poor soil. On the other hand, the amateur whose one desire is to excel in such matters as summer bedding will not infrequently give his plants "something to grow in," to use a common phrase. And in this at least they do not fail; but the huge leaves and fat and gouty stems are not calculated to produce good flowers.

Another way of ensuring against leaf-growth is to provide either a poor soil or make the soil about the plants quite firm by treading or beating. While speaking of errors in the bedding-out system, we would point to the lack of original ideas in not a few gardens; and in some of the letters before us it is obvious that the summer bedding arrangements of certain gardens are still confined to *Lobelia*, *Calceolaria* and the so-called *Geranium*, the owners being unable to get away from the monotonous rings or circles of plants which, we are not surprised to hear, do not even satisfy those who were responsible for them. It is in these circumstances to be hoped that the suggestions appended below will be of service. Not a few of our readers are anxious to obtain masses of blue for beds, and some of the more serviceable subjects are blue *Viola*, *Agathæa cœlestis* (a charming subject rarely, if ever, used and a perpetual bloomer), the double blue *Lobelia*, *Salvia patens*, *Delphinium Belladonna* and *Anchusa italica* Dropmore variety. For large beds where blue-flowered plants are in request, we cannot too strongly recommend *Plumbago capensis* and *Verbena Lovely Blue*. We saw a large, circular bed of the latter a year ago with some 5,000 plants in it, and for colour or fragrance it surpasses anything we have seen.

In those instances where the large beds are oblong or square and on the turf, we would suggest an imposing central pyramid of *Campanula pyramidalis*, with smaller pyramids of *Plumbago capensis* at each corner; and in the oblong bed a further group on the long side, the groundwork to be filled with the *Verbena* above named. In such cases the *Plumbagos* should be set out, five in a group, the plants 2½ feet high and in pots. Lightly trained for a time and then allowed more freedom, these will give one of the most delightful beds conceivable, the plants flowering for many weeks in succession. In the same colour range, though a little distant from true blues, we have the richly-scented *Heliotrope*, and this treated in the first instance as tall pyramids, as in the former case, with a groundwork of *Verbena venosa*, provides



A BEAUTIFUL IRIS (*I. OCHROLEUCA*) IN A LINCOLNSHIRE GARDEN.

once comply with these requests and endeavour to furnish our readers with good, if not novel, ideas, such at least as are likely to give satisfaction if carried into effect. The general trend of the letters before us refer unmistakably to the unsatisfactory behaviour of certain plants during the present year, a condition of things largely, if not wholly, due to the weather; and such a condition of things may occur again.

Failures in greater or lesser degree we must expect in any year. Some of these are avoidable; others the reverse. For example, a by no means infrequent cause of partial failure is the

a permanent and fragrant summer bed. In the case of a large bed the Heliotrope plants may be five or seven in a group and not less than 5 feet high when planted. If need be, such a bed may have a groundwork of a similar colour tone, or even the same variety of plant. Where such an arrangement is decided upon, the principal plants should be more freely disposed over the entire surface of the bed, the groups alternating with each other. The purplish-flowered Lantanas and Verbena venosa also make a good self-coloured bed, the former either in pyramids or standards; indeed, diversity of form in such instances adds much to the beauty of the whole, while assisting to destroy any idea of sameness or monotony.

WHITE BEDS.

These may be had by using white Violas, white Alyssum, white Bouvardias, Campanula pyramidalis alba, Galtonia candicans and Plumbago capensis alba. In such a case white-leaved plants, such as Leucophytos Brownii, Centaurea candidissima or Gnaphalium microfolium could be planted with advantage. In the case of very large beds, where one colour alone is desired, a rather distinct effect may be secured from white or grey-leaved plants alone. For example, take Gnaphalium microfolium as dwarf and tall pyramids, solitary dot plants of either Centaurea candidissima or Dactylis glomerata aurea longissima—the variegated “Ribbon Grass” is not a bad substitute for this plant—the ground surface to be covered with Leucophyton Brownii, or even Cerastium if not allowed to flower. The whiter tone of the two last named will throw into greater relief the silver grey tones of the other plants named. Where very large beds of white-flowered plants are desired, Campanula pyramidalis alba would form an imposing centre, the white Plumbago capensis as pyramids taking the corners and sides at intervals of about 4 feet, the white Peach-leaved Bellflower Moerheimii freely grouped between, and the surface carpeted with white Viola Purity or any other good white-flowered sort. Should the size of the bed admit of its use, Galtonia candicans may appear, and where possible the white Bouvardia jasminoides or the larger-flowered B. Humboldtii corymbiflora could replace any failing plants. From our experience white-flowered beds require greater study and closer attention than the rest. In other instances the white Lilliums, as candidum, longiflorum and Krætzleri, could be employed. White Antirrhiums should not be forgotten.

(To be continued.)

BOYD'S CASSABA SNOWDROP.

(GALANTHUS ELWESII CASSABA BOYDII.)

SINCE the death of the late Mr. James Allen, whose articles in THE GARDEN brought home to many a knowledge of the varieties which exist in the Snowdrop and the possibilities of improvement possessed by our “harbinger of spring,” little has been done in the way of selection and seedling-raising. Many of Mr. Allen's best flowers are, however, still in cultivation, and there are a few gardens in which a considerable variety of Snowdrops is to be found.

Mr. William B. Boyd of Faldonside, Melrose, still happily with us, has done more than any other in the United Kingdom to search out and preserve distinct varieties of this flower, and that figured in the accompanying illustration, from a photograph taken in my own garden, shows to some extent his keen discernment in selecting flowers of much beauty or distinctness. The variety of Elwes's Snowdrop called Cassaba has long been recognised as one of the finest forms of the species, and the one illustrated and selected by Mr. Boyd is the largest and finest of all, while it has a peculiarity, not constant, but frequently existent, in the presence of a green marking on the outer petals near the extremity. The tube of the flowers is also almost entirely

green, and the resulting contrast between the dark green and the pure white is as effective as anything of similar colouring in the floral world. In form Boyd's Cassaba Snowdrop is excellent, while its size, though great in comparison with most other Snowdrops, in no way becomes ungainly. I have had it in my garden for a few years, and it is prized as one of the finest of my collection.

Dumfries.

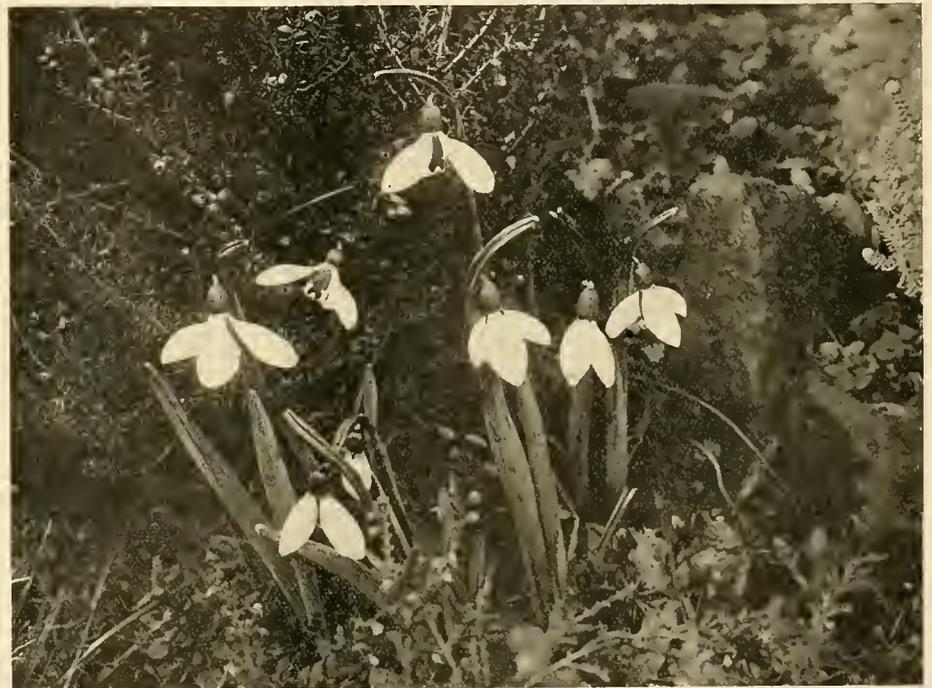
S. ARNOTT.

COLOURED PLATE.

PLATE 1363.

A BEAUTIFUL NEW CALCEOLARIA.

ONE of the most beautiful novelties raised of recent years is the Calceolaria Golden Glory represented in the coloured plate. We noticed it flowering superbly last summer in the garden of Mr. Leopold de Rothschild at Gunnersbury House, Acton, and



A RARE SNOWDROP (GALANTHUS ELWESII CASSABA BOYDII).

were astonished when Mr. Hudson told us it is quite hardy. This is a revolution in the flower world, and should lead to the plant enjoying in the near future a lasting popularity. Not only is this Calceolaria hardy, but the colour of the flowers is a peculiarly beautiful golden yellow. The plant is smothered with this “Golden Glory” for months. Its origin is interesting. C. plantaginea was crossed with a variety of the herbaceous Calceolarias, and Golden Glory is the result. We anticipate that it will be the forerunner of an interesting and beautiful race. Messrs. Robert Veitch and Son of Exeter are to be heartily congratulated on their success.

Their description is as follows: “As a greenhouse plant it will be invaluable, but as a hardy herbaceous plant it will take a high position for its glorious colouring and for the length of time it remains in bloom. Not only has it stood out-of-doors in Devonshire, but the plants which were grown in the Royal Horticultural Society's Gardens at Wisley withstood over 20° of frost.”

SWEET PEA NOTES.

THE CROSSING OF SWEET PEAS FIFTY YEARS AGO.

I HAVE come across a seed list of my uncle's of fifty years since, which is most interesting, and in which the offering of seeds of Sweet Peas is headed thus: “Purple, purple; Painted Lady, various; Scarlet, scarlet; White, white; finest mixed, various.” The puzzle now to me is that, prior to what Mr. Eckford did for Sweet Peas, the bees or insects of the past must have been all drones and not proper workers, else why have not all the John Ingrams of the period interfered with and not allowed the modern workers of both bees and men such credit? How is it that, with all our advancement of science, the insects and bees are such a great help now in the crossing of Sweet Peas, and that in the days that are passed we never reached beyond three or four colours? I might say of five, because shortly after the period mentioned we

got Invincible Scarlet and, I think, Invincible Purple.

At the time of which I speak we had no seedmen's printers and purveyors of the modern day seed packets; so much so that, when I was a lad, it was in a packet such as I send, put up in “brown-paper” fashion. But Sweet Peas were a bother to put up, as, for instance, when you had them all ready to handle and put up, in would come a countryman saying he wanted a “stone of Clover, some Italian Rye Grass,” &c., to whom you would have to attend. Meantime the cat (whoever saw a seed warehouse without one?) would come and bring her kittens to play hockey with the seed, or probably the farmer would spread himself over the counter and upset them all. Yes, it was a great bother the putting up of garden seeds fifty years since.

In conclusion, may I repeat: Why did not the bees help us all fifty years since and give us at that time all this botheration over our John Ingrams and Spencers?

WILLIAM BAYLOR HARTLAND.

Ard-Cairn, Cork.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

GREENHOUSE AND CONSERVATORY.—The most should now be made of Cyclamens, Primulas and Cinerarias. When well grown they last quite a long time, but to be maintained in this satisfactory condition they must be given a light and airy



1.—A TYPICAL CROWN OF LILY OF THE VALLEY AND SUITABLE FOR FORCING.

position. *Azalea mollis*, *Deutzia gracilis* and *Spiræa japonica*, if placed in a glass structure where the temperature is from 45° to 50°, will quickly commence to make growth. Later on, when the buds begin to show colour, the plants should be accorded a warmer temperature, say 55° to 60°. Seedling plants of the decorative *Asparagus* in its various types may be raised quite easily, and the present period may be chosen for this purpose. *A. plumosus* and *A. Sprengeri* are two most useful varieties.

Hardy Fruit Garden.—Even at this protracted period it is not too late to plant many of the more popular hardy fruit trees. The grower should, however, take the precaution of only planting these when the ground is free from frost. Overcrowded branches of old orchard trees should be subjected to a thinning-out at this period. Give special attention to overcrowded branches in the centre of the tree, so that light and air may get in among the branches, thus ensuring better growths in the future. Moss or lichen is a constant source of anxiety in most orchards, and trunks of trees that are suffering in this respect should be drastically treated at the present time. It is our practice to wash the affected parts with lime in solution, which is prepared by dissolving lime in water until it is of a creamy nature. Slaked lime may also be dusted on plants infested with these same troubles.

Hardy Flower Garden.—We are still planting creepers and climbing plants to cover unsightly corners of the garden and for many other uses,

making an exception, however, in the case of Clematises, which should be planted in February next. Those who have delayed the planting of the double *Arabis* may even now utilise side growths of this hardy plant for the purpose of making edgings round their beds and borders, and it may also be grouped in colonies in the border, where the effect in the spring season is exceedingly attractive. The golden *Privet*, which the public are beginning to appreciate better than the green kind, should be planted for the purpose of making a neat hedge or as a screen in the garden. This is a very easy subject to root; growths of recent development from which the lower leaves have been removed make excellent cuttings, and may be inserted in sandy soil with the sure prospect of their rooting. Take advantage of the present time to top-dress the lawn, using finely-sifted manure together with loam and good garden soil. Grass treated in this fashion invariably responds with vigorous growth later on. Those possessing lawns will have the satisfaction of seeing a more delightful appearance in the succeeding spring.

Cold Frames.—*Chrysanthemums* that have been cut back after flowering should be placed in the cold frames without delay. If allowed to remain here for some time, new shoots will evolve, from which cuttings may be procured for next season's supply of plants. Care should be taken, however, to mat up the frames in frosty weather. On fine, sunny days it is a good plan to remove the frame-lights for a time, taking care to cover them again at night in case of cold weather ensuing. *Picotees*, *Auriculas*, *Pansies* and *Carnations* will require careful attention at this period; but by giving an abundance of light and air as opportunity offers, damping of the foliage and the collars of the plants will be avoided.

Orchids.—Cool *Orchids* that are grown in glass houses with a minimum of heat will require much care and attention at this season. It is very easy to give the plants too much water in such circumstances, so that before supplying them with water first ascertain whether they really need it. Plants that are resting must have only very little water occasionally, just sufficient, in fact, to prevent them shrivelling.

Trees and Shrubs.—Trees and shrubs may be planted at the present time, provided the soil is not wet or frozen. Deciduous shrubs require attention at this period. Dead wood should be cut out of them so that live growths may have a better chance of doing well. D. B. C.

FORCING LILY OF THE VALLEY.

FOR forcing purposes we should be able to procure the necessary crowns from our own bed of *Lily of the Valley*; but it may be that the reader of these notes has no such resources to draw upon. For this reason he must have recourse to the nurseryman for the necessary supplies. The best possible crowns should be procured. The system now so popular with nurserymen of retarding the crowns enables the would-be grower of *Lily of the Valley* to procure the necessary material for forcing at almost any period of the year. When the crowns are procured they should be dealt with at once.

It is our invariable practice when they look rather dry to soak them for an hour or two in slightly tepid water, as they become plump and better for this simple treatment, and their prospects are also brightened thereby. Fig. 1 is a fairly good illustration of a crown of *Lily of the Valley*, and unless the majority of those that we may have purchased are quite equal to this one in appearance we should hardly be content. For the information of those who do not know, we wish to point out that when crowns of this subject are planted outdoors it is usual to grade them into three sizes—large, medium and small—planting the different grades in rows or in quarters by themselves. The forcing of *Lily of the Valley* may be done in pots, boxes and other equally suitable receptacles. For small quantities pots measuring 5 inches or 6 inches in diameter answer the purpose splendidly. Some growers place as many as twelve to fifteen crowns in a 5-inch pot; but we fear it would be impossible to arrange that number in a pot of this size were crowns of the kind depicted in the illustration Fig. 1 potted up. We are satisfied with a lesser number. Ten good crowns potted up equidistant in a 6-inch pot will serve the best interests of this plant. Those who prefer to use 5-inch pots may, of course, do so. The vigorous roots are not easy to adjust in so small a compass, and to arrange each crown satisfactorily needs just a little care. Compost of a somewhat light character is best, that made up of leaf-mould and loam in equal quantities and sifted being suitable. If to the foregoing ingredients there be added a fair sprinkling of silver sand and the whole well mixed, we have an ideal compost. Shake it well down between the roots as they are adjusted in the pots, so that the crowns when the operation is completed are just visible above the soil. Fig. 2 serves to illustrate this point. In the picture the crowns are just a trifle too far out of the soil, but this was done for the purpose of illustration.

Those who have no pots available for this purpose, or whose demands are rather heavier



2.—TEN CROWNS POTTED IN A 6-INCH POT.

than most others, should utilise the services of boxes some 4 inches or 5 inches deep. By these means forcing may be readily accomplished, and quite a large number of crowns may be arranged in a box measuring 15 inches by 12 inches. Fig. 3 serves to show the method of arrangement of the crowns. When adjusted about 2 inches, more or less, apart the plants do well. The box in the present instance is only partially planted, in order to show how the work is proceeded with.

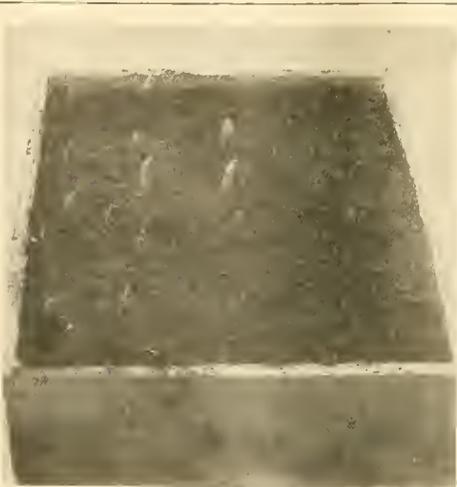
When the pots or boxes are all filled, they should either be arranged in a cold frame or else stood outdoors on a thick bed of ashes. First of all, however, the crowns should be well watered in, as this will avoid the necessity for a further watering for some time to come. Arrange the pots, &c., in regular order on the bed of ashes, covering them with a good layer of moss, taking the precaution at the time to overlook the latter for slugs and other insects, as these would quickly demolish the crowns. Those who have the convenience would find it an advantage to spread out the moss on the ground, watering this all over with hot or boiling water, in this way destroying lurking insect pests. When the pots are properly adjusted in position and covered as we have suggested with a layer of moss, they should present the appearance as represented in Fig. 4. The exposed sides of the pots would, of course, be covered up as seen at the end of the row. In about three weeks the first pots should be withdrawn and placed in a gentle heat for forcing. On no account give the pots of plants too much heat in their early stages, otherwise you will be courting failure. Bottom-heat is essential, but this should be of a fairly genial nature. Deep boxes (sufficient to embed the pots) should have holes cut in the bottoms of them and then be filled with Coconut fibre refuse, plunging the pots in this material. Place the boxes over the hot-water pipes or on a hot-bed and maintain them in a moistened condition at all times. A damping overhead is also highly beneficial. As soon as the buds begin to show white, but not earlier, remove the pots from the plunging material and gradually inure the plants to a lower temperature. Draughts must be avoided at all costs, otherwise failure will soon have to be recorded. Moist, genial conditions are what should be striven after, and ultimately the plants may be stood on shelves and side benches of the greenhouse and conservatory. At intervals of a fortnight bring in other batches, and in this way maintain the supply throughout the winter and early spring.

THE WINTER TREATMENT OF CACTI AND SUCCULENTS.

AMATEURS usually experience some difficulty in wintering successfully some or all of the many plants which may be regarded as coming under the above heading, yet they are tolerably easy to manage providing a few well-defined points in their culture are properly attended to. Undoubtedly their worst enemy is dampness, and the cultivator must earnestly endeavour to maintain the atmosphere of the house or frame in which the plants are growing in a comparatively dry and buoyant condition. The greatest trouble is that the mischief resulting from over-watering or moist atmosphere is frequently unobservable until it is too late to adopt remedial measures, many a healthy-looking plant resting for weeks on a decayed base, and the centre also may be decayed without being noticed.

A brief study of the character of these plants will convince the veriest tyro that very little water will be required during the dull days of winter. All possess very thick skins and few stomata, as the breathing pores are called, and as it is through these pores that moisture escapes it is obvious that the plants cannot use much water.

But even where proper care is taken in the watering of succulent plants some will rot off level with the soil, owing to a little moisture collecting there, and to prevent this must be the aim of the grower. An excellent plan is to scoope out about 1 inch of the ordinary potting soil and replace it with coarse but clean sand, or even



3.—CROWNS PLACED IN A BOX READY FOR FORCING.

some sifted mortar rubble will do. This ensures the base of the plant, which is the most vulnerable part, being kept dry and safe over the winter. Should decay be noticed when it has just started, it may frequently be stopped by paring out the affected portion quite clean, then dusting the wound well over with finely-powdered charcoal and standing the plant in the warmest and driest place in the house. Where a plant has rotted right through at its base its life may possibly still be saved, but drastic cases need drastic measures. The best thing to do with such a specimen is to cut away all the decayed tissue and dust the wound with powdered charcoal as advised above, then lay the plant up on a dry shelf until the spring, when it may be potted up in some very porous soil mixture. That such dry treatment will not harm but rather benefit many of these tough-skinned inhabitants of our greenhouses the writer has proved over and over again, and he well remembers a section of an *Opuntia* which had accidentally been left hanging in the pocket of an old overcoat in the potting-shed for about three months; this when found had emitted several roots from its base. H.

THE TOWN GARDEN.

FROST AND SOIL.—There is not at this period of the year a great amount of work which the amateur can do in the garden, and he, therefore, devotes the major portion of his time to the occupants of the greenhouse or conservatory



4.—METHOD OF ARRANGING POTS FILLED WITH LILY OF THE VALLEY CROWNS.

and the plants growing in the rooms. It is, however, possible to do really sound work whenever the weather is favourable, especially in relation to the soil. Any ground that is vacant or that lies between plants and can be dug should be well loosened to a depth of about 8 inches or 10 inches, and the top ought to be left rough. This condition will facilitate the admission of water and air, and if we get frosts later the water will be frozen and thus the soil will be mechanically considerably improved, for in the spring when we want to put out plants or sow seeds it will be extremely simple to secure the indispensable fine tilth by merely forking down. At the same time as this is proceeding the soil will be securing and holding stores of plant food, and when the roots of the plants reassume activity in the spring the nutrient matters at their disposal will be very quickly appropriated.

WEEDS.—As a general rule, we take it that all plant-life in the garden goes to rest during the winter, and even weeds do not then make material progress, but if they do show themselves they should be immediately destroyed. With a little mild weather seedling weeds are practically certain to push through, and the Dutch hoe run lightly through the surface will at once account for them. Or if it is considered better and the conditions of planting and weather are favourable, the soil can be turned over, burying the weeds some inches beneath the surface, where in rotting down they will yield a certain amount of food of which the legitimate crops will assuredly take advantage in due course.

SLUGS AND SNAILS.—In certain circumstances these may fairly be regarded as the friends of gardeners—for example, few amateurs can persuade themselves to thin out their seedlings sufficiently and the slimy visitors do it for them, and the effect is that the grower secures finer results. This, however, must not be taken as suggesting that they should be preserved; on the contrary, the good cultivator wages persistent warfare against them and does his level best to completely exterminate them from the garden. This is quite as it should be, for if they do a certain amount of good in the direction already indicated, it is perfectly sure that they do a vast amount of harm. At this, as at other seasons of the year, the gardener should destroy every enemy that he can find, and he should make as much time as possible to go out and seek for them. Slugs and snails alike can be picked up and put into a bucket or other vessel containing salt, being transferred thence when dead to the rubbish-heap. Or the slugs can have a coating of salt put upon them on the ground and subsequently be pricked into the soil, while the snails can have their shells broken and left for the weather to waste them into the soil. These are sure means of destruction and will bring their reward next season, in that fewer cherished plants will be lost by the depredations of these insidious enemies. In seeking for them do not forget heaps of rubbish, stone edgings or plants that afford shelter by the sides of paths.

BULBS FOR CHRISTMAS.—In just one week from now Christmas will be with us—may I take the opportunity of mentioning it to wish all my readers a most happy and festive season and a prosperous and happy New Year?—and it will then be necessary to have as many flowers as possible in perfection. At first glance it may seem useless to call attention to it now, but it is not actually so, for flowers that are in a fairly forward condition may be brought to perfection at the required moment by placing them in a closer, moister atmosphere, where the temperature is several degrees higher than that in which they have been previously growing. It is surprising what can be done in six days. HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

KITCHEN GARDEN.

PLANS should now be made for the cropping next season, and this is easily done by marking out on a sheet of paper the quarters or divisions of the garden. This very much simplifies matters when the actual sowing and planting takes place. The plots can be manured and treated exactly as their requirements demand, and in the long winter evenings this is a good form of amusement to the man who is fond of his garden. A kitchen garden can be made both productive and smart, be it either small or large, by some thought and perseverance. It is not the man who has the best garden that always wins prizes, but the one who studies his crops from start to finish. There are plenty of good growers who could win prizes, but, on account of neatness and love of method, they do not like interfering with their crops, which they must do if they exhibit.

Forcing House.—Keep up a good supply of Chicory, Dandelion, Rhubarb and Seakale. Fresh lots should be placed in heat every week. See that the Mushroom-bed does not become dry, or it will quickly cease bearing. Prepare more manure for subsequent beds. Lilacs may be forced quite well.

Asparagus Frame.—In planting the second lot a pinch of early Radish seed may be sown on the soil; this will come in useful. Keep the frame covered in severe weather.

FRUITS UNDER GLASS.

Vinerias.—The early house, which was closed at the beginning of the month, should now have a little fire-heat turned on to keep the temperature up to 50°. Syringe the rods twice daily in sunny weather.

Peaches and Nectarines.—The earliest house must now be closed and the trees sprayed or syringed daily. Plants in successional houses should be pruned and tied, and see that every old tie is cut, or in it may form the foundation of some pest, which will develop as soon as heat is applied.

PLANTS UNDER GLASS.

Chrysanthemums.—As these pass out of bloom they should be cut down and placed in cold frames, when cuttings can be taken as they become fit.

Freesias.—A good batch should now be got into warmer quarters. I find it best to keep these in cold frames till wanted, when they respond readily to a temperature of 50° to 55°.

Lilium Harrisii.—These may be top-dressed and have a neat stake put to them. Give them a temperature of 60°, and they will make fine decorative plants for the conservatory and mansion.

Violets should be grown as hardy as possible. Draw the lights off on mild days and tilt them at night when the weather admits of so doing. Keep all the decaying leaves picked off and dust between with soot and a little bone-meal; this will be found to help the plants very considerably.

FLOWER GARDEN AND PLEASURE GROUND.

Keep this department neat and tidy. Take care of the leaves that have been collected, as these are always useful, and a good heap of leaf-soil is a fine thing for any part of the garden, it being in constant request. Climbers on walls, pergolas and tripods may now be cleaned, pruned and tied, and any alterations that are necessary on lawns, borders and walks should be proceeded with at once. W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardslee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

SHOW PELARGONIUMS.—These ought now to be well rooted in their first pots and ready for a shift into those in which they are to flower. Only a moderate shift should be given, as the plants do as well and are far more useful when the pots used are comparatively small in proportion to the size of the plant itself, provided that they are given good soil, and they are also more easily fed when the flowering time approaches. Previous to potting the plants should be carefully looked over and those that are on the dry side watered, so that the balls are in a fairly moist, but not wet, state when turned out. The new soil, too, should be in the same condition—moist enough to be rammed without becoming springy, and not wet enough to become pasty under the rammer.

FRUIT UNDER GLASS.

Fig Trees that are grown in cool houses and do not ripen their second crop of fruit are often weakened by the latter being allowed to remain on the trees until autumn. Some people have an idea that these late-formed fruits will ripen early next year if allowed to remain on; but this is not usually the case, for isolated fruits only mature occasionally, the majority falling off as soon as the sap commences to rise in the spring. Unless the trees are extra vigorous and need checking, all the Figs formed too late in the season for ripening should be removed as soon as they are large enough to handle.

HARDY FRUITS.

Pruning Apricots.—Many growers advise leaving the Apricots till early in the year before pruning, but I do not. In many cases there is little to prune if summer stopping has been attended to; the chief work is the extension of terminals, giving more room and equalising the space between the new wood. By allowing the trees to grow freely there is less canker and gumming. The Apricot being the first to open its flowers, it is well to attend to it first. Remove poor surface soil down to the fibrous roots and top-dress with good loam, decayed manure and bone-meal.

SHRUBBERIES.

These should now have attention. Where the occupants are thick and becoming overgrown, some of the commoner shrubs, such as Laurels, should be cut out and grubbed up to make room for the remainder. Overgrown masses of the common Rhododendron may be reduced to something like order by cutting out many of the tall, naked growths and pegging down others to cover the vacant spots. The old stools will then break away and form good growths with all the appearances of plants in their prime.

FLOWER GARDEN.

If notes were taken from time to time of any specially useful flowers, now is the time to plant; and even if no great amount of space is available, there are few gardens where room cannot be found for at least a few things that are in their respective seasons either of great interest in the open air or valuable for cut flowers. An instance of specialities may be cited in those white varieties of different species that are always in great request; those flowers that stand exceptionally well in water; and those, again, that can be produced easily in quantity and can, therefore, be recommended for special seasons of the year. In planting the work should be well done, and in the case of gross-feeding plants, as Pæonies, or those that once planted may be looked upon as fixtures in their respective situations, the ground should be thoroughly and deeply worked, and a liberal proportion of good manure added as the work progresses.

T. B. FIELD.

(Gardener to the Baroness Berners.)
Ashwellthorpe, Norwich.

NEW PLANTS.

BRASSO-CATTLEYA CLIFTONII.—This is a very beautiful addition to this charming bi-generic family, and shows a rare and delicate colour combination with exquisite form. The flower is of Cattleya shape and measures 7 inches in diameter. The sepals and petals are of a very delicate mauve hue, the large, moderately-fringed labellum being of a still paler mauve ground colour, with a carmine blotch at the apex and the base of the throat, the remainder of the throat being very rich yellow. Shown by Messrs. Charlesworth and Co., Hayward's Heath. First-class certificate.

Dendrobium Celogyne striatum variety.—This may be regarded more as a curiosity than beautiful; but it is of garden interest notwithstanding. The narrow petals and sepals are of a very pale primrose ground colour, heavily blotched with dull crimson, the large and curiously-shaped labellum being almost black and looking very much like a protruding tongue. Shown by Mr. H. A. Tracey, Twickenham. Award of merit.

Cypripedium Armstrongii.—A beautiful addition to the Lady's Slippers and one of a most pleasing character. As usual, the dorsal sepal is the most conspicuous feature, this being very large and somewhat hooded. Except at the base it is pure white, with a deep carmine stripe running down the centre. The petals are very narrow and much crimped at the edges, the greenish yellow ground colour being somewhat obscured with dull crimson. The lip is of medium size and glossy brown in colour. Shown by Messrs. Armstrong and Co. Award of merit.

Cypripedium Troilus Lord Nelson.—This is a large and bright-looking flower with very regular and pleasing markings. The huge dorsal sepal has a large zone of greenish yellow ground colour, heavily dotted with large, circular dots of dull brownish crimson, the edge being a broad band of pure white. The sepals and lip are of the usual shape, the latter being extra large and standing well out, the colour of both being a glossy brownish crimson. Shown by Messrs. Sander and Son, St. Albans. Award of merit.

Chrysanthemum Ball of Gold.—A moderately large Japanese incurved variety of a yellow shade of colour that approximates to the once popular yellow-flowered variety W. H. Lincoln Improved. As recently exhibited this late-flowering variety appeared to possess many of the attributes of a good market Chrysanthemum; that is to say, the build of the flower, the firm stem and stout, short peduncle were noticeable, quite apart from the texture of the petal and the compact form of the flower as a whole. Exhibited by Messrs. R. H. Bath, Limited, Wisbech. Award of merit.

All the above were shown before the Royal Horticultural Society on the 8th inst., when the awards were made.

THE EDITOR'S TABLE.

WE invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower, so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, Orchid, or hardy flower, and they should be addressed to The Editor, 20, Tavistock Street, Covent Garden, London, W.C.

PRECOCIOUS LEUCOJUM ÆSTIVUM.

I have on two occasions previously forwarded you notes, which you have published, on a form of the Summer Snowflake which flowers with

me in midwinter. My first communication mentioned that they were in flower in the month of February, and the second, a year later, that they were in bloom in January. This year they are in flower even earlier, being expanded in the first week of December. I send you two flower-spikes that you may judge for yourself. There is no doubt that they are the Summer Snowflake and not the Spring Snowflake, as their stems are nearly 18 inches in length. These Snowflakes, when I grew them in my garden at Torquay, proved flowerless for several years. I had some correspondence with Mr. Arnott about them, and he kindly sent me some bulbs which flowered well. On leaving Torquay I sent some of each lot of bulbs to a neighbouring garden, and on visiting it in February, 1902, found that my hitherto flowerless Leucojums were in bloom. A year later I brought them down to Kingswear, where they have flowered annually in the depth of winter. Though these Snowflakes are in full bloom, there being over twenty flower-scapes, Mr. Arnott's bulbs, which are growing alongside them, have not as yet shown even a leaf-tip above the soil. It is curious that, after a period of flowerlessness that extended over some years, these Leucojums should have developed such a precocious habit, for December and January is certainly an abnormal time for the flowering of the Summer Snowflake.—S. W. FITZHERBERT.

CYPRIPEDIUM INSIGNE FROM NORWICH.

Mr. T. B. Field, Ashwellthorpe, Norwich, sends excellent flowers of the Lady's Slipper Orchid (*Cypripedium insigne*). He writes: "I am sending for your table flowers of *Cypripedium insigne*. It is doubtful if, for general usefulness, this old plant in its best forms is surpassed by many of the more recent novelties. The length of time the flowers remain fresh, either on or off the plants, is remarkable, while its easy culture readily commends it to all."

BANKSIAN ROSES IN DECEMBER.

Miss E. M. Boghurst, Ingeneuk, Copdock, sends us several flowering sprays of the yellow Banksian Rose, which, although rather small, are quite fresh and well opened. In an accompanying letter, Miss Boghurst mentions that the plant is growing on a south wall and that it is covered with buds.

ST. BRIGID ANEMONES.

We have received from Messrs. J. T. Gilbert and Son, Anemone Nurseries, Dyke, Bourne, Lincolnshire, flowers of the beautiful St. Brigid Anemones, which are so welcome at this season of the year. They were gathered from a bed of seedlings sown last March, and the plants have been in bloom since the end of August. If the present mild weather continues there will be blooms for Christmas, as there are hundreds of half-expanded buds.

LEGAL POINTS.

Mistress and servant (H. B. T.).—A lady, when a servant was engaged, promised him half a pig in the autumn. Autumn, in the popular sense of the phrase, is passed and gone, but "no pig is forthcoming." The fact that the promise is in the lady's handwriting is of some importance from the evidential point of view, but it does not really affect legal liability because it was not under seal; in fact, we doubt the legal liability of this hountiful lady. If held out as part of the servant's forthcoming wages, it is a trifle vague as to the kind of pig, although it does not at first sight appear impossible for a reasonable county court judge or twelve reasonable men fairly acquainted with the pig and bacon trade to estimate what an average autumn pig is worth. Liability is more doubtful still if,

after stating the wages in cash, it was thrown out as a statement of mere future intention, similar to the case of the parent who states over his glass of wine that he would give £1,000 to the man who married his daughter, and his friend, taking a mental note of the remark, married her, but did not recover that £1,000. If the cheerful remark was made after the servant was already engaged the lady is certainly not liable, as there is no consideration for the promise. We are rather afraid that she has been too much for you. Morally she is liable; but then women, as a rule, are not affected by rules of this sort unless implicated with religious sanctions.

Liability for injury (H. B. T.).—A servant has the misfortune of straining his back while cleaning out a well and is laid up for seven-teen days. His mistress promises to make up his wages, but is again oblivious of her promise. As incapacity was not permanent, justifying instant dismissal at common law with wages up to date, the relationship of master and servant subsists and wages run on as usual till the expiration of the usual week's (or month's) notice of dismissal. The only magnanimity here (if any) was shown in not giving the usual notice. The promise to make up the wages was quite superfluous, as he was entitled to them by law already. It is easy to be liberal with promises, which cost but little. BARRISTER.

ANSWERS TO CORRESPONDENTS

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Water Lilies for pond (E. M. L. B.).

For the more important groups you cannot do better than secure some of the *Marliæ* hybrid Water Lilies, and of these the finer things are *Nymphaea Marliæacea* albida, *N. M. carnea* and *N. M. chromatella*. The *Laydekeri* group of these *Nymphaeas* also contains some brilliantly-coloured flowers, and of these *N. L. fulgens*, *N. L. lucida* and *N. Robinsonii* are among the richest coloured. In addition, you might include *N. tuberosa*, very hardy and free-flowering, and *N. alba candidissima*, a large pure white free-flowering variety of our native kind. These would be best irregularly disposed, arranging the three first-named so that they occupy the more central positions and the deepest water. If more are needed, you will not err in getting any of the good varieties of *N. odorata*. If your pond is a natural one, and, as is most usual in a depression, with grassy bank or slope dipping into the water, you might further beautify the surroundings by planting groups of *Bulrushes*, the *Water Flag*, *Iris Pseud-acorus*, *Ranunculus Lingua grandiflora* and the double or single-flowered *Arrowheads* (*Sagittaria*), all of which prefer shallow water. In planting and arranging, avoid over-grouping and make no attempt to hide the water's surface, an error which is far too common even to-day. If your pond has a natural or mud bottom, you could plant all the *Nymphaeas* in wicker baskets, with a bushel of rich and rather clayey loam and cow manure, fixing the rhizome

or root so that it would not float. If the pond is an artificial one, in which little or no mud deposit exists, you had better introduce some soil also, otherwise the growth and flowering will be minimised. The planting may be done at any time between now and the end of March.

Carnations mildewed (J. Pike).—You may dust your Carnation cuttings with sulphur the same as you treat the Rose. At the same time, too much atmospheric moisture may be the cause of the mildew increasing so rapidly, and if you have been keeping the frame quite close, it will probably help matters if you give a little air for an hour or two each morning.

Information about *Anemone japonica* (M. M.).—This plant is so easily established in ordinary garden soils, whether light or heavy in their nature, that we feel sure there must be some peculiarity either of the plants or the situation. It sometimes happens when the ground plants have been roughly handled that they do not so readily take to their fresh quarters, and very old plants often resent removal. Try planting in a light, well-drained soil, not shady or dry, and purchase strong ground roots. The *Mecooopsis*, as you probably are aware, is a biennial and would die after flowering. The second plant is much more likely to produce a better flowering. You might erect a large sheet of glass over it, or the top portion of a handlight, at a foot from the earth to throw off the winter rains, but do not encompass the lower portion, leaving this to admit a free passage of air.

TREES AND SHRUBS.

Pruning Austrian Pines (A. L.)

The best time to remove living branches from Austrian Pines is in summer. It is almost impossible to stop bleeding, but there is less bleeding in summer than at other times. Cut the branches close in to the trunk and dress the wounds with tar as soon as the work is done. If you wish to remove dead wood only, that may be done now, as there will be little or no bleeding from the wounds made by the removal of dead wood. Wounds in this instance ought, however, to be also dressed with tar.

Screen hedge near Scotch Pines (Susan).

If you wish for an informal hedge and *Rhododendrons* thrive in your neighbourhood, *Rhododendron ponticum* will prove an excellent subject; if, however, *Rhododendrons* will not thrive, and you prefer a hedge that can be kept trim and narrow, plant a mixture of *Thorn* or *Quickset* and *Holly*, five plants of the former being used to one of the latter. Well work the ground previous to planting, and if poor, manure well, taking care to so place the manure that it will not come in contact with the roots at planting time. A little good soil placed about the roots will assist the plants to become established. When planting *Rhododendrons* do not use manure, but give a little peat or leaf-mould during the progress of the work.

Information about *Abutilon vitifolium* (E. S. K.).

Abutilon vitifolium is really a semi-tender plant, which thrives best in the warmer parts of the country. In Cornwall and other places with a similar climate it thrives in the open ground, where it forms a bush 8 feet or 9 feet high and as far through. In Berkshire you may succeed in growing it at the foot of a warm wall with a south aspect or planted out in a sunny greenhouse. It likes light loamy soil and plenty of sun. When young it grows rapidly and makes soft wood, which often winters badly; as it advances in age, however, growth is shorter and firmer. You may succeed with it by growing it in a large pot or tub placed indoors during winter and outdoors from May until frost comes. Plants two to three years old often flower well.

ROSE GARDEN.

Ulrich Brunner pegged down (E. S. H., Clapham).

The growths that have been tied down and have flowered may now be cut away, and this will considerably aid the development of this year's growths ready for next season. As regards the bulbs of *Lilium lancifolium* (*speciosum*) *rubrum*, we advise you to lift them, put them into pots of dry soil and keep them in a frost-proof pit or shed where they escape moisture. They should be preserved in much the same way as *Dahlia* tubers. Boxes of dry sandy soil would do as well as the pots.

Moving standard Roses (A. E. C.).—If you mean that the standard Roses have been several years in their present position, there will, of course, be a risk in moving them. You can, however, move them now.

Basic slag for Rose beds and borders (C. Martineau).—This excellent fertiliser should be applied at once at the rate of 3oz. to 6oz. per square yard. It supplies not only lime but phosphoric acid, and is most useful in the stimulating of Roses and fruit trees, but being very slow in its action it is best to apply it in autumn or winter.

Zinc labels for Roses (*N. G. I.*).—Any seedsman would supply you with Yeats's zinc labels, and they answer fairly well, but they are not nearly so good as Yeats's Acme labels. These have raised letters in white with a black background, and are very durable and neat-looking.

Yellow and orange-tinted Roses (*Daisy*).—Your selection is a very good one with the exception of Betty and Countess of Gosford. These two are practically pink and salmon-tinted varieties. A very beautiful sort would be Mme. Paul Varin-Bernier and another is Perle des Jaunes.

Conrad F. Meyer with diseased foliage (*L. Johnston*).—The foliage sent is badly affected with red rust, the black sooty appearance on the under-side of the foliage being the winter stage of this fungus. We do not believe this disease to be the cause of the death of some of your plants, although it sadly disfigures the Roses it attacks and the foliage falls prematurely. You should collect and burn every diseased leaf, and remove a little of the surface soil and burn this also. In the spring spray the young shoots with a sulphide of potassium solution and persevere with the spraying during the summer, using a very fine sprayer.

Grass on Teplitz with spotted foliage (*Mrs. N.*).—Your plant is attacked by the black spot. Probably the position is rather a damp one or the roots are not healthy. As the plant is only three years old you could very well replant it, and if you decide to do this make the border suitable by taking out the old soil to a depth of 3 feet each way if possible and 3 feet deep. Put about 6 inches of broken bricks in the bottom, then return the soil after mixing with it about 5lb. or 6lb. of bone-meal and a little well-decayed manure. In the spring cut down to the ground one of the old growths, and those remaining train in a zig-zag fashion on the wall. This will induce them to send out new growths near the base.

Rose-growing in Scotland (*F. M. B.*).—You will find a very useful little book in "Roses and Rose Culture," by William Paul, which we think will supply such information as you need. If you watch our columns also, you will gather many cultural hints as the time for the various work comes round. We gave some useful pruning hints in our issues of March 7 and 14 last. To check the exuberant growth it may be well to transplant the Roses next month, replanting in the same positions. In the spring do not prune very much. Leave the strong growths from 2 feet to 3 feet in length, and the others in proportion. You might check the extra vigour of the Sweet Peas, &c., by planting them in pots and plunging them in the soil over their rims. The large plant of *Lilium auratum* could be transferred to a larger pot or small tub without disturbing the bulbs, of course giving some new soil to the bottom and around the roots. As a rule, Lilies pay for repotting after the second year. When the roots show on top, some pieces of dried cow manure should be laid on, upon which the roots may feed. For convenience of applying manure in this way, some gardeners place the bulbs half-way down the pot and fill up as growth advances with good compost.

Roses in lean-to greenhouse (*Frau Karl Druschki*).—It is very possible that the trouble you have had with mildew arises from the roots of the Roses growing outdoors being in uncongenial soil; but there are so many causes that would bring about mildew that we are unable to say definitely unless we saw the house and the plants. We have usually found a good spraying with a solution of Lifebuoy carbolic soap to keep the mildew down if it is applied before the fungus obtains a firm hold. The usual strength is half a bar to three gallons of soft water. There is another good preparation called Mo-Efic, which you should try. Some of the worst mildewed parts must be cut off the climbers at once and burnt. At pruning time cut in the lateral growths fairly hard, but any long roots made this year should only be moderately pruned. Perhaps you could renew the soil about the roots of the two climbers, giving them some good compost consisting of loam two parts, well-rotted manure one part, and about 3lb. of bone-meal to a barrowful of the compost. This could be done during November. As regards your straggling pot plants, possibly it may be best to plant these out in your garden and procure some fresh ones, as they seem to be somewhat worn-out. We have seen such plants make wonderful growth after being planted out. Procure some prepared plants in 8-inch pots. These will be ready for pruning and starting into growth at any time. Some good Roses for pot culture are Caroline Testout, Frau Karl Druschki, La France, Anna Ollivier, Lady Roberts, Niphotos, Liberty, Mme. Abel Chatenay, Lady Battersea, Antoine Rivoire, Joseph Hill, Mme. Hoste, Mrs. Aaron Ward, Richmond and Hugh Dickson. A few good Chrysanthemums are Bonnie Dundee, Carrie, Dorothy Seaward, E. P. Barlow, G. J. Warren, Horace Martlu, La Grande Dragon, Lord Cromer, Rayonnante, William Seaward and White Quintus.

FRUIT GARDEN.

Cooking and cider Apples (*W. G. Watson*).—The following are among the largest and best cooking Apples: Lord Grosvenor, August and September; Grenadier and Golden Spire, September and October; Lord Derby and Tower of Glamis, October and November; Warner's King, November; Bismark, November and December; Lane's Prince Albert, Blenheim Orange, Wellington, Newton Wonder, and

Bramley's Seedling. The last five are in season from December to March. Cider Apples: Bennett, Devonshire Red Streak, Forest Styre, Foxley, Golden Harvey, Golden Pippin, Herefordshire Red Streak, Downton Pippin, New Woodcock and Siberian Harvey.

Fumigant for mealy bug on Vines (*A. B. C.*).—Fumigation by means of hydrocyanic acid gas has been recommended for the purpose, but it is so deadly a nature that extreme care is needed. Full details as to its use may be found in the "Book of Garden Pests," by R. Hooper Pearson. You will find an instructive article on "Freeing Vines from Mealy Bug" in THE GARDEN for February 15 last (page 75).

Grubs on a Quince tree (*X. M. D.*).—The leaves of your Quince tree are attacked by the grubs of the Pear saw-fly (*Eriocarpa atra*). The grubs are generally known by the name of the Pear slug-worm. They become chrysalids in the soil under the trees, and if, during the winter, you removed the surface soil to the depth of 3 inches and burnt or buried it deeply you should be free from this pest next season; but, of course, your tree may be visited by the saw-flies from a neighbouring garden. Spraying the leaves with an arsenate of lead wash would kill the grubs by poisoning their food.—G. S. S.

Nectarine tree unsatisfactory (*J. Heap*).—Probably our correspondent is right in his diagnosis of the cause of damage to his Nectarine tree leaves, and also in suggesting that the same fungus (*Cercospora Persica*) may be responsible for the damage to the fruit also. The best antidote to apply against the recurrence of another attack is the application of some well-known effective fungicide, such as Mo-Efic, which, when applied as directed by the makers, is most effective in the destruction of mildew. The "Fruiter" or any other powerfully stimulating artificial manures are excellent when used sparingly, but we have seen disastrous results following their too liberal application and manifesting itself very much in the same way as your tree is affected.

Sowing seeds of Pears, Apples and Plums (*J. W. Griffiths*).—You may sow seeds of Plums, Apples and Pears in beds out of doors in ordinary kitchen garden soil, covering them with about their own depth of soil. Do not add fresh manure to the ground previous to sowing, but select a patch that was manured last spring and from which a crop has been taken. It is advisable to sow the seeds as soon as ripe, and previous to sowing roll them in red lead, which will keep them safe from mice. By raising trees from seeds in this way you may be fortunate enough to obtain, occasionally, a good variety worth placing on the market. If you secure one really first-rate variety from 10,000 plants you will be fortunate. Should you only use plants for your own use, by all means obtain grafted plants of standard varieties. You will find these far more suitable than plants raised from seeds.

Melon plants failing to set fruit (*G. H. T. L.*).—You seem to have treated your Melon plants very well with one important exception, viz., you have failed to supply warmth. During such a season as the past, when of late there has been little sunshine, with heavy rains, strong winds and a low temperature, no Melon plants would thrive and set or carry fruits unless aided by artificial heat. This for these plants should not fall below 60° at night and reach fully 75° in the day. In Melon houses the temperature is often higher. In such case moisture in the form of vapour is generally supplied. You might have induced Cucumbers to grow under the conditions furnished, but those would probably have been unshapely. It is quite possible also the soil was too much enriched with manure, and especially with liquid manure. Your other queries are essentially agricultural and require the attention of some practical farmer.

KITCHEN GARDEN.

Clubbing in Cabbages and Turnips (*Desperate*).—To plant Cabbages or Turnips in soil that is infected with club-root is to court failure. The only thing that has been found really effective is to dress the soil with quicklime at the rate of seventy-five bushels to the acre. This dressing should be put on in the autumn, and if not quite successful in the first year a lighter dressing should be put on in the next. Cabbages should not be grown in the same soil two succeeding years, nor should weeds belonging to the same family be allowed to establish themselves. Diseased Cabbages or Turnips must be burned, not dug in or thrown upon the rubbish heap or given to pigs. It should be remembered that the dressing of quicklime for a gravelly soil is a very heavy one, and one that may have a bad effect on the other crops that are to follow, especially in the absence of abundant organic matter. Great attention should be paid to growing the seedlings in soil that is known to be free from the disease.

Mushroom for naming (*W. A. G.*).—The fungus was in a rather bad condition when it arrived, but it appears to be *Agaricus arvensis*. This species is somewhat similar to the common Mushroom, but has a nearly smooth cap

and the stem is less solid than in the ordinary Mushroom, the smell is strong instead of slight, and not pleasant as in the common Mushroom. The flesh stains yellow and the gills are at first almost white. It is often eaten and used in the preparation of catsup.

Destroying old Horseradish bed (*E. M.*).—Assuming that your object in destroying the Horseradish in your old bed is to use the ground for other purposes, there is no better course to take than to open a trench 2 feet wide and deep at one end of the bed, then have the entire bed trenched gradually in that way, getting out every portion of the roots. If you wanted to grow better Horseradish in a fresh bed, trench and well manure a plot of ground and replant the best and straightest of your roots, with or without crows, at least 12 inches apart, and you will have fine roots for sale next year. If you do not care to trench the old bed as advised, then keep its surface constantly boed or pared over with a spade, doing it every week during the summer. By thus destroying leaf-growth there will be no further root-growth, and the root will in time die away.

Globe Artichokes a failure (*W. G. B.*).—The ground on which the Artichoke is to be grown next year should be deeply trenched and heavily manured this autumn, leaving the surface of the soil rough for exposure to frost during winter. The best variety we know is Sutton's Selected Large Green. Young plants of this should be obtained and planted the first week in April 4 feet apart each way. They should be planted rather deeply and the soil pressed firmly against the roots. As soon as the plants have done flowering cut down all the old flower-stems, and as winter approaches protect the plants by placing a cone of ashes round the stem about 7 inches high and 12 inches in diameter at the base. This should be removed in spring and a top-dressing of rich farmyard manure placed 3 inches deep over the roots. You will find they will flower much earlier the second year, and continue to do so until the autumn.

MISCELLANEOUS.

Gardening books (*A. B. M.*).—A list of gardening books suitable for a lending library would be a very long one, as books are very numerous and written on every conceivable aspect of gardening. You do not say whether your library is for lending purposes or for reference. If the former, some number of the books with special mention of the particular aspects of gardening and possible cost should be mentioned. If you want books for reference, then costly and substantial books should be purchased, as these usually include the experience of the most practical writers. If you would kindly further intimate what you desire it would enable us to answer your query all the more easily. Books that are fairly useful for young readers range from 1s. to 20s., and high standard books, well illustrated, cost as much as from 40s. to 60s. each, though some are in two, three or more volumes.

Staging in a greenhouse (*Auricula*).—For the staging it is preferable to use an open instead of a close stage. Battens 3 inches by 1 inch make a very desirable stage if they are given a coat of priming and two good coats of paint. In fixing them they should be so arranged that there is a space of three-quarters of an inch to 1 inch between each batten. We have had no experience of the boiler named by you, and can, therefore, say nothing as to its qualities. The Loughborough boiler, advertised weekly in THE GARDEN has, to our knowledge, given great satisfaction in many cases. Glass for the roof cut in the shape indicated cannot be readily obtained, as though once thought highly of, its use now is practically discontinued, as it did not prove generally effective. A groove in the sash-bars is a great preventive of drip. There is no particular advantage in using 26oz glass for the roof, as the 21oz. is stout enough for all reasonable purposes.

Are Roses greenhouse plants? (*Rex*).—A correspondent wants to know whether climbing Roses are greenhouse plants. It appears that at a country exhibition last summer a class was provided in the schedule for a collection of stove and greenhouse plants grouped together for effect, Orchids admissible. The first-prize group contained plants of Dorothy Perkins and other Roses in bloom, the point it is desired to clear up being whether the judges were justified in giving a prize at all to a group so constituted in the face of the wording of the class in the schedule. There is generally a great deal of what may be termed "artist's licence" allowed in the formation of these popular and beautiful groups at exhibitions; but, strictly speaking, we think that Roses were inadmissible in a class so worded, being a hardy plant. Greenhouse plants, in the strict term of the word, are only half or semi-hardy, hence requiring the protection of a greenhouse to grow in.

Names of fruit.—*Barn Rocks*.—Grapes all smashed to pulp. Apples: 1, Lady Henniker; 2, Peasgood's Non-such.—*R. Windsor Rickard*.—Apple Old Hawthornden and Pear Marie Guise.

Names of plants.—*A. L. Ford*.—*Cedrus atlantica glauca*.—*Miss J. M. N.*.—*Clematis cirrhosa*.—*T. H. O. Pease*.—1, *Salvia rutilans*; 2, *S. angustifolia*; 3, *Aceua sanguisorba*.—*Lancastrian*.—1, *Anthurium magnificum*; 2, *Peperomia Saundersii*; 3, no specimen; 4 and 5, *Begonia Rex* varieties; 6 and 7, *Codiaeum*, garden varieties; 8, *Cordylone terminalis*; 9, *C. species*; 10, *Diefenbachia Corderi*; 11, *Oncidium incurvum*; 12, *Arundinaria Fortunei*; 13, *Pteris cretica*; 14, *P. c. variety*; 15, *Asparagus plumosus nanus*; 16, *Nephrodium Filix mas cristatus*; 17, *Aspidium angulare*; 18, specimen too poor to name; 19, *Thuya orientalis*.



CALCEOLARIA GOLDEN GLORY.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and, where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

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WEeping ROSES.

WEEPING Roses are so beautiful in the garden that a few general notes upon their cultivation may be serviceable to amateurs, particularly as the planting season is now in full swing. The name is comprehensive but applicable, though one might as fairly describe them as shower Roses, seeing that the long, pendulous shoots when flower-laden form, as it were, perfect cascades of bloom. The best stocks for forming weeping standards are those of the Polyantha or Dog Rose; the latter is the common Briar of our hedgerows. These should be fairly straight and strong, averaging 10 feet to 12 feet in height. November is a good month to obtain Briars, as when planted at that season they recover from the check of removal before spring. After gathering the roots are shortened back to 6 inches and all branches cut clean to the stem, leaving a long, straight shoot, and all dormant buds are removed, leaving four or five at the top of the stem. Plant the stocks in any good garden soil and stake firmly and well above the head; then shorten the stocks to 8 feet to 10 feet and tie securely. As the buds begin to swell in spring, remove all except those selected for forming the shoots to bud into, and any growths which show from the roots must be carefully pulled out, as cutting with the knife tends to increase suckers. When the Briar shoots begin to lengthen they must be supported by cross stakes securely fastened to the upright pole; this prevents any damage being done to the head by winds. July is the best month for inserting Rose buds into the stocks; generally from the middle to the end of the month will find the bark running freely, and while the shoots are in this condition success can almost be guaranteed. Select plump buds; those near the base of a shoot are preferable to those from the top, as the latter are too soft, but the former soon "take" and ultimately develop strong growths. A fortnight after budding the ligatures may be loosened to examine the buds, and if these are progressing favourably the budding cotton or raffia is replaced, not tied quite so tight, and in four or five weeks this can be dispensed with entirely. At this season the pole which supports the stock should be made perfectly rigid, as also the cross stakes, after which no further attention is necessary until spring. Some time in March or early April the plants are pruned, by cutting the Briar shoots back to the inserted buds, and when these have grown long enough they are tied to the cross supports, to prevent rupturing, until the union becomes thoroughly hardened.

Good examples of weeping Roses may be had in two years by this system, provided a good foundation is laid, first by selecting strong Briars, then securing a limited number of strong breaks from the stocks, and by employing good sound buds. After two seasons' growth they can be permanently placed in the garden, planting as early in November as is practicable. Use a good stout painted iron stake to support the stem, to which by four or six arms a light iron hoop is attached; this ensures perfect rigidity, while it materially assists in developing the drooping habit. The foregoing notes will be most serviceable to amateurs who can procure and bud their own stocks; others must, necessarily, buy their plants ready formed through the channel of trade growers. The positions in which weeping Roses become effective are well-nigh innumerable and vary in almost every garden. It is best to avoid positions where any depression marks the ground, but a slight eminence increases the weeping effect; angles of walks or those formed by shrubberies are suitable, while central positions or marked points within the Rose garden may gain both in variety and picturesqueness by introducing standards in weeping form.

Almost any well-enriched garden soil grows this type of Rose well. The ground should be dug two spades deep and manured—decayed farm manure and bone-meal—previous to planting. The soil under the Rose should be carpeted with Violas or similar plants until the Rose shoots touch the ground. In no instance would I recommend turfing up close to the stem. Subsequent manuring must be according to the vigour of the plant and at the discretion of the cultivator, increasing the stimulants either by liquid manures in summer or as solids worked into the ground during winter.

Pruning will be confined to shortening back a few of the shoots at planting, after which some of the old growths may safely be removed every year after flowering.

The best varieties are, unquestionably, those having wichuraiana blood. Not only does the natural disposition of these lend themselves to this form, but their extended season of flowering combined with the bright glossy semi-evergreen foliage gives them priority, as these are features so marked as to be almost essential in a plan where the plants must often be conspicuous for the greater part of the season. To this group belong such beautiful Roses as Alberic Barbier, Dorothy Perkins, François Foucard, Lady Gay, Hiawatha, Minnehaha, Jersey Beauty, Paul Transon, René André and White Dorothy.

Some of the climbing Roses can also be so grown; a few of the Ayrshire Roses are

excellent, but their flowering period is, unfortunately, brief. Among the best are Dundee Rambler, Félicité Perpétue, Longworth Rambler and The Wallflower.

Two Roses which have been grown successfully in this form here are Mrs. F. W. Flight and Perpetual Thalia, the former a new semi-double pink Rose, which lasts in full beauty over six weeks at midsummer.

THOMAS SMITH.

Walmsgate Gardens, Louth, Lincs.

NOTES OF THE WEEK.

FORTHCOMING EVENTS.

* * The dates given below are those supplied by the respective Secretaries.

January 12.—Royal Horticultural Society's Meeting and Exhibition of Flowers, Fruits and Vegetables, Vincent Square, Westminster, S.W., 1 p.m. to 5 p.m.

January 23.—French Gardening Society of London Annual Dinner at the Café Royal, Regent Street.

British-grown fruit show.—It will come as a surprise to many growers of fruit in this country to know that the Royal Horticultural Society has decided not to hold the great autumn show of British-grown fruit in 1909. The reasons given by the council are that this annual autumn show is every year practically a replica of the previous year's show, and that many British-grown fruits cannot possibly be shown, or, at least, shown in perfection, at any one show of fixed date, and also that vegetables are somewhat neglected. To make up for the absence of this popular show the council have substituted in its place a somewhat similar series of prizes for British-grown fruit and vegetables, but these are spread over the whole year, so that every fruit may be shown at its best. Prizes will therefore be offered at every fortnightly show held at Vincent Square during the year 1909, particulars of which are included in the society's "Notices to Fellows," which appear in the current issue of the journal.

National Dahlia Society.—It will, we think, be a matter of general satisfaction to Dahlia growers to learn, as reported on another page, that the National Dahlia Society and the London Dahlia Union have amalgamated. For some time past the advisability of such an amalgamation has been recognised, but unfortunately difficulties cropped up, hence it is pleasing to find that these have been removed. With the joining of the forces of the two societies we hope that a new era has dawned for the Dahlia, and that its many merits will be recognised more fully than they have been in the past. It is a pleasure to note that Messrs. J. Green, William Cuthbertson and E. F. Hawes, who have been such enthusiastic workers for the now defunct London Dahlia Union, have been elected to official positions in the amalgamated society, and we congratulate the members on securing their services.

East Anglian Horticultural Club.—This club still continues to prosper, as was shown by the report presented by the secretary, Mr. W. L. Wallis, at the annual meeting held on Wednesday, the 9th inst., at the Boar's Head Hotel, Norwich. The report congratulated the club on the useful work it had carried out in the matter of educating its members by means of essays, lectures and the monthly exhibitions. It stated that the membership now stood at 343 and had the substantial balance of £139 16s. 6½d. to its credit. The thanks of the club were accorded to F. W. Harmer, Esq., for his gift of books to the library. In the aggregation of points gained at the exhibitions, Mr. W. Shoesmith proved to be the champion of the year, and he also secured the sole possession of the Girling Challenge Cup, having won it on two former occasions.

The auditors, Messrs. J. F. Betts and H. Perry, presented their financial statement, which was most satisfactory. The election of officers next took place. Mr. J. Powley was elected president, Mr. T. B. Field acting vice-president. The vice-presidents were all re-elected as before. Mr. Charles Daniels was elected treasurer, and the indefatigable secretary, Mr. W. L. Wallis, 11, Royal Arcade, Norwich, was re-elected with acclamation. Six vacant places on the committee were filled by Messrs. H. Goude, W. Rush, C. Hines, H. J. Cowell, E. Goldspink and R. Abel. Mr. J. C. Abel was re-elected librarian, with thanks for his past services. Several alterations of rules and competitions were adopted. A syllabus of lectures and essays for the ensuing year was announced. Miss Dawson Paul, Eaton, Norwich, has generously presented a silver cup for competition to replace that won outright by Mr. Shoesmith. It was decided to hold a dinner the second Wednesday in January.

French gardens.—We learn that M. Aquatias, the well-known French gardener, has accepted an engagement to forthwith undertake the development of French gardens at Tiptree, Essex. Tiptree is a place noted for small holdings, there being no fewer than 250 small holders there operating areas varying in extent from one to fifty acres, and growing chiefly fruit, seeds and flowers. The laying-out of three French gardens has already been begun at Tiptree, and in a few days M. Aquatias will personally superintend the creation of a fourth. The introduction of this system into Tiptree by Mr. F. Mynott of Brook Hall has provided employment at what is usually a slack season of the year, more than fifty men having been engaged in laying water mains, building houses on small holdings, and preparing the soil for French gardens during the last three months.

A new magazine.—From all accounts the Garden City is fast becoming a centre of public spirit and enlightened citizenship. It is, therefore, natural enough that a new illustrated magazine called "The City," and mainly devoted to matters of civic growth and life, should be produced there. It is printed at the Arden Press and published by Messrs. J. M. Dent and Co., two houses which were among the first to remove their works to Letchworth. In the first number articles by Miss Hope Rea on the "Civic Spirit," and Mr. J. H. Wicksteed on the "Results of Five Years' Work," contrast vividly with a description of the solitudes of the Syrian Desert by Dr. Adrian Fortescue. The new monthly is edited by Mr. Henry Bryan Binns; the price is 6d. net.

Lady Veronica Bruce and a gardeners' society.—Lady Veronica Bruce, daughter of the Right Hon. the Earl of Elgin, like the other members of the family, takes a great interest in gardening, and showed her zeal to help the affairs of a local horticultural society—that of Charlestown, Limekilns and Pattismuir—by taking the chair at the annual meeting, which was held in the Queen's Hall, Charlestown, the other day. Lady Veronica Bruce made a graceful and competent chairman, and at the close of the proceedings was heartily thanked for her presence and services. The report of the committee was a highly satisfactory one, and much of this is due to the interest taken in the society by the Earl of Elgin and his family. Lord Bruce was also present at the meeting, and took part in the proceedings.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Spring bedding.—Your correspondent "A. W.," on page 618, raises a much-debated question as to the uses of spring plants for bedding purposes; but there are one or two points which, although of the greatest importance from a

practical standpoint, he ignores altogether. In the first place, perhaps I am permitted to point out that Tulips or Daffodils, carpeted with other dwarf-growing plants, are not carpet beds as the term is generally understood, but rather are they combinations of one or more colours. The question, however, that most concerns practical men is, What would "A. W." do with his beds of Forsythias, Flowering Currants, Cydonias, Daphnes, &c., after the plants have finished flowering? Perhaps to his tastes these shrubs are beautiful when out of flower; but I fear few employers would care to see them in prominent places. A gardener, rightly or wrongly, is expected to keep certain beds bright and well furnished for as many months as possible in the year, and consequently has to arrange his spring combinations accordingly. I fully recognise the beauty of the shrubs in question, and if we could afford to dig them up and discard them after they have flowered, or, better still, induce them to flower almost continuously throughout the summer, they would be admirable for the beds. Now that the Editor has given him the opportunity, "A. W." should certainly give fellow-readers the benefit of his cultured tastes; but may I remind him to be, above everything else, practical?—E. M. D.

Lilies of the Valley in the winter. First buy as many roots as can be afforded, remembering always to order them with flowering crowns and continue to do so for four or five years, when the cultivator will be independent of salesmen. Force them as desired for these years, always giving sufficient water, otherwise miserable flowers and few leaves will be the result. As soon as they have flowered, harden them off and plant them out in a shaded border 1 foot apart, each year successively. In the fourth year begin with the first planted, taking them up with a turf spade 4 inches thick. They may be put into shallow boxes, or, better still, planted out in the inside vinery border just at the time that heat is applied to the Vines. Never attempt to force these plants before they have been submitted to cold nights or frost. Before winter begins, short horse manure may with advantage be spread over the beds outside. The Editor will no doubt recollect a law suit some years ago, when a customer sued a firm; a few blooms appeared among the lot ordered, simply because they were not flowering crowns to be sold at a cheap rate. It takes three years for flowering crowns to grow. They, when housed, would be syringed at the same time as the Vines, and these slabs of roots will be put under glass in succession once a fortnight, or otherwise, according as they have bloomed. The grower will be able at least twice a week to pull out, not cut, enormous bunches of flowers and perfectly-coloured leaves, which are just as beautiful. May I ask how to get rid of a certain kind of thrip which spoils the Christmas Roses out of doors, and how to make the plants throw up longer stems? *Tropæolum speciosum* has given me much trouble for years, as they never seemed to thrive or grow to any length. These last two years, however, they have done perfectly, rising full of bloom up to about 14 feet, simply because they were planted out with a north aspect, only getting a little sun in the evenings. Use light moist soil with plenty of drainage and a little peat if any is available. They cannot stand sun at their roots, as the soil, if heavy, gets baked.—X.

Muscat of Alexandria Grape and the Royal Horticultural Society's fruit committee.—This Grape has attained to very high distinction, not only as the richest-flavoured variety in cultivation, but also as one of the handsomest and most prolific. It has many other characteristics, but its chief one, I think, lies in its difference of growth under varying conditions of soil, temperature, quality of wood, age of Vine, &c. So marked and often have these changes been, and still are, that no Grape has ever given rise to

greater doubt and controversy regarding its identity. Its eccentricity in this respect is, doubtless, responsible for the many other claimants to the title of distinct varieties of Muscats having come forward from time to time to contest its claim to be the only Muscat, such as Bowood, Archerfield Early Muscat, Charlesworth Tokay, Tottenham Park Muscat, Tynninghame Muscat, &c. Most Grape-growers now agree that mistakes have been made in the past in giving distinctive names to these various forms of Muscat of Alexandria. The slight variations noted are solely due to the varying conditions under which the Vines (as noted above) have been grown. It is time that this question was set at rest and the claim of these so-called varieties be disallowed. The only other distinct Muscat is Cannon Hall. I am led to make these remarks about this Grape by an incident which happened at the fruit committee's meeting of the Royal Horticultural Society on the 24th ult. It appears that Mr. Vert of The Gardens, Audley End, had exhibited these Grapes in a class provided for the variety at a country show held recently. The first prize was withheld, the judges coming to the conclusion that it was not the Muscat of Alexandria. Mr. Vert, having some doubt in the matter and wishing to have it set at rest, took a bunch off the same Vine and placed it before the fruit committee on the above date, with the result that some members contended that the variety was the true Muscat of Alexandria, others expressing doubt on the subject. The matter ended in a proposition being made and carried inviting Mr. Vert to send another bunch to the next meeting, which took place on Tuesday, the 8th inst., other members of the committee bringing other samples of the true variety for comparison. The question was soon settled, the committee coming to the unanimous conclusion that the variety was the true Muscat of Alexandria; indeed, it proved to be the richest-flavoured Grape of the samples presented. Had Mr. Vert not taken this step, probably his Muscat Grapes would have been tabooed at this and other shows afterwards. Looking back, it seems now a pity that a similar course was not taken in respect to the incident of Muscat judging at the 1907 autumn fruit show of the Royal Horticultural Society, seeing that the fruit committee in the first instance were undecided respecting the identity of Mr. Vert's Grape. No judge, however well up he may be in fruit culture and knowledge, need reproach himself on his inability to fix the identity of this variety in all cases.—X. Y. Z.

Mistletoe.—As great quantities of this parasite are in great demand at this season, a word or two as to how to grow it will not be out of place. At this season and during the early months of spring the berries wanted for inoculation should be covered over with a small-meshed net in order to keep away birds, or if the weather be frosty the birds will devour them. In the month of April take a berry and make an incision in the bark of the tree in which it is wanted to grow, squeeze in a berry, which must contain a seed, tie a piece of gauze over it and the operation is complete. Mistletoe is well berried this season, but, strange to say, Hollies, which were so full of bloom, have now scarcely any berries on them. I think the tropical weather in the autumn started a second growth and so forced the berries from the branches.—W. A. COOK.

Flower shows at the Crystal Palace.—The complaint of a "Visitor" that the National Chrysanthemum Society held a beautiful flower show at the Crystal Palace early in the month and that visitors were very few indeed reads interesting in face of the fact that the National Dahlia Society has arranged to hold its early autumn show at the Palace next year. Certainly at the Palace the committees of these societies meet with very liberal treatment. In addition to a good pecuniary contribution,

their advertising is done for them, and every possible accommodation, with some medals to boot, is found. That is far more liberal treatment than is shown by the Royal Horticultural Society to similar societies. But of what use is all this liberality if visitors are not there to see the show and, especially, of what benefit is it to the trader to incur the heavy expense he does to exhibit? Is it the case that the many very fine and wonderfully cheap shows provided all the year round by the Royal Horticultural Society have killed attendance at other London shows? Certainly flower shows without visitors are indeed folly. How is public interest to be created?—D.

The best fifty herbaceous plants. Although Mr. Reynolds Hole's article on page 611 is interesting and his list contains many precious and indispensable subjects, I think there are several serious omissions. Surely one would rather grow *Campanulas persicifolia* and *lactiflora* (a neglected but exquisite plant) in preference to *Coronilla Varia*, which, I take it, is only suitable for a rough, dry bank. Instead of *Anthemis tinctoria* (pale yellow) the bright yellow variety *Kelwayii* should be tried. No herbaceous border should lack the lovely *Kämpferi* Irises, for although they are recommended for pond banks, they succeed admirably in ordinary soil providing plenty of water is given them during the growing season. And can one imagine a collection of perennials which does not contain that showy plant *Doronicum plantagineum excelsum* (Harpur Crewe), the first perennial to bloom that is useful for cutting. Ought not *Centranthus coccineus* to be omitted, and where are the *Veronicas*?—E. TESCHEMACHER.

PERPETUAL-FLOWERING OR AMERICAN CARNATIONS.

A VISIT TO TANGLEY NURSERIES, HAMPTON.
NOTES AND REFLECTIONS.

ACCORDING to a tale which used to be current in North Wales, two gentlemen were one day travelling on the Cambrian Railway. Presently one asked the other whose property they were passing through. "Mine," was the reply. The question was repeated several times and the same answer given. Soon the train stopped, and the questioner got out and went to the guard and told him he thought he had been travelling with a mild lunatic who thought all the country was his own. "Oh," said the guard, "don't you know who that is? Why that is Sir Watkin." Substitute *Lilium longifolium* for the country, Christmas flower-markets in England and Scotland for the train, the Brothers Page for Sir Watkin and myself for the disturbed questioner, and you get an idea of the quantities grown by the four brothers at Hampton and my own surprise at the vastness of their undertaking. I had journeyed down one lovely day at the end of November to see the American Carnations at Mr. W. H. Page's. For a long time I had noticed how good his blooms invariably were whenever they were shown in public, and I wanted to see them growing, as I have a little collection myself.

It is nearly twenty years since the first Page boy left the old home at Teddington and settled down at Hampton, to be joined in due course by three brothers, not as partners, but as friends, who buy and sell together as much as possible. *Lilium longiflorum giganteum* by the hundred thousand and *Lilium speciosum* varieties by the ten thousand! This gives an idea of the immense trade they do between them in this one kind of flower alone. Roses come next; then *Narcissi*, mainly *Golden Spur*, *Emperor* and *ornatus*. The brother to whom my visit was paid grew last season 660,000 *ornatus* himself. To hold his flowers he has twenty large glass houses, ranging in size from 190 feet by 30 feet to

100 feet by 12 feet. At the time of my visit about half were full of the healthiest Carnations one could wish to see. The only sign of anything amiss was in a batch of that brilliant but rather difficult variety *Brittania*, and this was nothing serious. In the stress of work it had not been housed in time and the ends of the leaves looked withered. It has a very thin skin, which makes the plant susceptible to damp and change of temperature.

HISTORY.

Mr. Page used at one time to grow such varieties as the once celebrated *Miss Joliffe*, and later on the equally well-known *Uriah Pike*, but after an interregnum, in which practically no Carnations were grown, he started with the new American varieties, realising as he did their superiority over any existing types as market flowers for cutting and decoration, because of their long stems and perpetual-flowering properties. This new type had for its ancestors the "Remontant" Carnations of France. These were first imported to New York, in 1852, by a French florist named Charles Marc. Four years later the firm of Dailledouze, Zeller and Gard received some seed from a Lyons florist, and also some plants of *La Purité*, described as a lovely rose; *Mont Blanc*, white; and *Manteaux Royal*, variegated red and white. From these beginnings, favoured and, it may be, made possible by the brighter sunlight and drier air of the States, the new race has been built up, not by one but by many patient and painstaking workers in the New World, until at last in 1896 the famous sale of Mrs. Thomas W. Lawson for \$30,000 took place, and by its notoriety brought before the flower-loving public of England the fact that such a grand type was in existence, and that their own British "trees" must look to their laurels.

NAME.

At present there is a good deal of undecidedness as to the name by which this vigorous and distinct race should be known. A front page of a weekly gardening paper is before me as I write, and it contains two advertisements, in one of which they are called "American" and in the other "Perpetual-flowering." There is a decided tendency to the same uncertainty in the schedule of the Perpetual-flowering Carnation Society, and, if I may venture an opinion, the name I incline to myself is that adopted in its pages by the chairman of the floral committee (my friend Mr. S. Mortimer), who heads his advertisement "American Perpetual Carnations." The latter word denotes their peculiar characteristic, for it is a mistake to suppose that they only bloom in winter, and I feel sorry when the term "winter-flowering" is applied to them in lists and advertisements, as it is misleading. The true type with proper management will give us flowers all the year round. I hope the Perpetual-flowering Carnation Society will be most rigid in requiring this essential in their distribution of awards. "American" denotes the country of their origin. Mr. Smith has given us the *Brittania* and Mr. H. Burnett the delicious *Mrs. H. Burnett*; but let us not forget that our inspiration came from the far side of the "herring-pond." Moreover, the fringed and their somewhat crowded-looking arrangement of the petals (and would that I could add, their invariable strong clove scent and non-splitting calyx), mark them off as distinct and leave room for another type of perpetual flowers, of which I think I see the small beginnings, when the outline of the petals and their arrangement will more nearly resemble the old English type that has delighted our florists from the days of Maddocks and Thomas Hogg down to those of Dodwell and Douglas, a type which might then be called "British." I have dwelt upon this point because there is something in a name, and if it can be suggestive, so much the better. JOSEPH JACOB.

(To be continued, when culture and suitable varieties will be dealt with.)

THE FRUIT GARDEN.

SOME AUTUMN FRUITS WORTH GROWING.

FIRST on the list come the autumn Strawberries, and the past autumn has been one of the most favourable on record for these, as the rainfall in August and early September caused the fruits to swell freely, and the warmth later ripened the fruits. It does not occur to many amateurs that the ordinary fruiting summer Raspberry, if the canes of last year are cut down to within 6 inches of the soil in February or March, will fruit freely in the early autumn, especially such varieties as Superlative, Hornet and Semper Fidelis. The Strawberry also, if planted late in the spring and the first blossom removed, will make a fresh growth and fruit later, and forced plants put out in the open crop grandly in September; but my note more concerns the true autumn fruits, such as the alpine Strawberries, autumn Raspberries, cultivated Blackberries and, in the northern parts of the country, the hybrid or Loganberries are valuable for autumn fruiting, and of late some excellent sorts have been added to the last named.

Strawberries of the perpetual or alpine type, that fruit freely through the autumn, are well worth amateurs' attention, as though the fruits, as regards size, do not compare with the large summer varieties, they are, as regards crop and flavour (the season considered), well worth room in all gardens where fruit is appreciated. The culture is most simple, the plants being easily raised from seed or propagated from runners like the summer varieties. The runners are planted out in deeply-dug, well-enriched soil on an open, sunny border early in the spring, in rows 18 inches apart and 12 inches between the plants. For late fruits the flower-trusses must be removed till July.

The best autumn Strawberry is St. Antoine de Padoue. It is one of the largest, is a free grower, and from beds made in the early spring a crop, as stated above, may be gathered till November if the weather is open. A new variety that promises to make its mark as an autumn fruiter is Laxton's Perpetual; this is a large fruit, and was obtained by crossing Monarch, a summer variety of great excellence, with St. Joseph, a perpetual of French origin, and the result is a very late fruit of the perpetual race. There are others, such as the older St. Joseph referred to and Louis Gautier, a white variety shading to pink, and La Constante d'Automne. These are all French varieties. The alpine are smaller but delicious autumn fruiter and well worth growing. There are several, the best being Belle de Meaux Bergeri and the Gunnersbury Alpine; they require the same culture as the perpetuals.

The distinct types of autumn Raspberries are not numerous; but recently we have had a splendid addition to these fruits in the new Veitch's November Abundance, recently awarded a first-class certificate by the Royal Horticultural Society. It is a very fine autumn fruit and a great bearer. Of older varieties there are Belle de Fontenay, a large fruit and very prolific; October Red and October Yellow. These do well if trained to fences or hurdles in an open position, providing the canes are cut down to the ground in February and the growths that are made later trimmed, only leaving a few of the strongest at each stool.

The Blackberries cultivated are worth room when space is available, and one of the best, viz., the laciniatus or Parsley-leaved Blackberry, is very good, but it requires plenty of room. It is a grand subject for a fence and should be planted 10 feet apart. It is often called an American Blackberry, but it is of British origin and far superior to the American type, at least, in our climate, as it fruits much more freely. In a warm soil and with a good summer Wilson

Junior and Best of All are the best of the American varieties.

The Wineberry is a plant that everyone can grow, and though an earlier fruit than the Blackberry, it is really first-rate. It is a novelty from Japan, but it has been grown sufficiently long in this country for one to know its value, its correct name being *Rubus phoenicolasius*. The berries are Mulberry-shaped, grow in clusters, are very sweet and juicy and much liked by birds. It makes an excellent preserve, and grown no a fence or post fruits freely.

Another berry less known is a new introduction from North China by Messrs. J. Veitch named *Rubus innominatus*. It bears long panicles of orange red fruits in great profusion in September and has very handsome foliage. The fruits somewhat resemble a Blackberry in flavour, but are larger. It does well on a wall or warm fence. G. WYTHES.

APPLES FOR ORNAMENT.

IN small gardens the custom of planting varieties of Apples that are of high and conspicuous colour for ornament is on the increase. In addition to their flowering value in spring, the richness of the fruit colouring in the autumn, especially upon the late sorts, gives a pleasing tint to the landscape that is much appreciated, especially, too, when the trees are planted as standards in the ornamental portion of the garden. I would ask, What could be more ornamental on the lawn than a perfect standard tree of Worcester Pearmain, for example? Not only does this form of planting give beauty to the surroundings, but it is quite of an utilitarian character also. I append a list of desirable Apples as well as being of a high colour. As a guide to those who do not know the varieties, I attach the time of season as well as place them in their proper classes—kitchen or dessert. Dessert: Lady Sudeley, August; Worcester Pearmain, September; Ben's Red, October; Duchess of Gloucester, October; James Grieve, October; Viscount Castlereagh, October; and Baumann's Red Winter Reinette, January. Kitchen: Barnack Beauty, November; Gascoyne's Scarlet, December; Paroquet, December; Wagener, March; Wealthy, October; and Mère du Ménage, January. E. MOLYNEUX.

TREES AND SHRUBS.

RARE AND GOOD SHRUBS FOR PLANTING.

A FEW hints to intending planters regarding some of the more choice and select shrubs may be of interest. There are now many beautiful shrubs that will grow as freely as Laurel, and which should be made use of instead in the gardens of small suburban residences.

Desfontainia spinosa.—This is a Chilean plant and a most charming evergreen, with prickly, Holly-like foliage. The flowers are of great substance and very beautiful, being scarlet tipped with orange. They are pendulous and tubular, and 2 inches to 3 inches in length. The plant looks well when grown on a wall or planted in the open. It requires good rich soil and not too wet a position, and should be sheltered from the north and east winds. The flowers appear after midsummer, and a plant in good condition will continue to flower till the end of October. The best time to plant is from the beginning of March till April.

Escallonia macrantha is a beautiful species with dark, glossy, shining leaves and flowers of a crimson-red colour, which are produced all the summer. It is a valuable plant for covering a wall. It requires good open soil and thorough drainage to grow it well, and is easily propagated

by cuttings planted in the open in some very light sandy soil. It may well be planted in November or February.

E. exoniensis is a hybrid of great merit and of upright habit, with handsome foliage retained through the winter. It has large spikes of white flowers, which are produced in the autumn, and it stands the winter well. *E. rubra* is also a fine variety.

E. langleyensis is a most desirable plant for a wall, the branches being furnished their whole length with bunches of rosy carmine flowers.

Berberis Darwinii.—A common but beautiful ornamental shrub, well worthy of a place in the garden, and when planted several dozen together the sight from a distance is very entrancing. It is easily propagated from seeds or layers. The plants should be pruned hard to keep them in bounds.

B. Thunbergii.—This is a most lovely plant in spring, with myriads of golden pendulous flowers, and more charming still in the autumn, as few, if any, shrubs excel this for colour. A few plants in elevated positions show to much advantage. It is an easy plant to grow and is not particular as to soil.

Andromeda floribunda.—A compact and rather dwarf shrub. It has small evergreen foliage, and the flowers are white, Lily of the Valley-like blooms, these appearing early, sometimes by the end of February should the weather prove mild. It is easy to cultivate and not at all particular as to soil, but prefers one that has been trenched and enriched with leaf-soil and cow manure. It can be layered or struck from cuttings. It is an easy plant to move, as it usually carries a good ball of earth.

A. japonica is very hardy and ought to be well known, as it is one of the very best for effect. It has evergreen leaves, and the flowers, which are creamy white, hang in long racemes. The best time to transplant this is October or November, as it then has a fair chance to settle down and root before it flowers.

Choisya ternata.—A good evergreen plant with masses of lovely white flowers resembling Orange blossom. It is very free-blooming and growing if planted in rather light soil, but is apt to get cut back by frost if exposed too much. It blooms in May and often again in September and October, the flowers being very sweetly scented. It is rather impatient of removal, as it does not make fibrous roots and nearly all the soil falls away, especially from large plants.

Olearia Gunnii.—This is a charming small-leaved evergreen shrub, compact and neat in habit, and in spring is covered with a mass of white Daisy-like flowers. It is quite hardy and a most desirable plant for any portion of the garden. It can be struck from cuttings, which should be put under a hand-glass. A very good plan to increase the stock is to split up a plant, as it quickly makes good specimens treated thus. October is the best month for replanting.

Clerodendron trichotomum is a Japanese deciduous shrub, but quite hardy and flowers in September and October, the blossoms being white with red discs. It grows freely and soon makes a good-sized shrub 8 feet to 10 feet and more in height.

C. fortidum is a species that should be planted in a sheltered position. It has large foliage and flowers on the terminal shoots, the blossoms being pretty rosy pink and beautifully scented. The foliage, however, has a pronounced disagreeable odour.

Chimonanthus fragrans grandiflora.—This is one of the most beautiful and remarkable shrubs from Japan, as it flowers in midwinter and the blossoms are delightfully fragrant. It succeeds best planted against a wall in a south position and should be pruned immediately after blooming, as it flowers on shoots of the current year's growth.

Desmodium penduliflorum is a lovely plant when in flower. It flowers late, when blossoms on shrubby plants are scarce, the blossoms being

produced in long, pendulous racemes of a reddish purple hue, the individual flowers of which are Pea-shaped. It sometimes needs a little litter or ashes over its roots in winter. February is a good time for removing or transplanting.

Eucryphia pinnatifida from Chili is a most beautiful deciduous flowering shrub, growing 8 feet to 10 feet high and bearing white flowers with yellow anthers, and in August is certainly the most welcome of all shrubs. It requires fairly rich soil, and will not bear removal very well. It may be raised from seed or layers, but takes two years or more to root from the latter. Nice little plants can be got from seed in two years. The largest plant here seeds very freely.

Fremontia californica.—This plant is only semi-deciduous, although it is often called a deciduous plant. It is a good climber and bears large bright yellow flowers 2 inches to 3 inches across in the spring. It should be somewhat protected in severe weather.

Philesia buxifolia from Chili is an evergreen of great beauty when in flower, and it likes a peaty soil. It bears Lapageria-like flowers during the summer and grows about 2 feet high.

Solanum crispum.—This has proved hardy and is an interesting shrub of strong growth, as it often grows 8 feet or 10 feet in a year. It bears pretty blue flowers with yellow centres in the spring and is good for a wall or the open.

S. jasminoides is a white-flowered plant and very handsome on a wall. This flowers in July, August, September and October, and should be allowed to ramble at pleasure, when it is a perfect climber. W. A. Cook.

Leonardslee Gardens.

RHODODENDRON HERCULES.

This is one of the largest-flowered, and certainly one of the richest-coloured, of the hybrid set known as Javanico-jasminiflorum, and in addition to producing a very handsome truss of shapely campanulate flowers is, by reason of its colour, one of the most distinct of the race to which it belongs. The predominant shade of colour is golden orange with apricot, mingling with which is a suspicion of rose that lends additional warmth and beauty to the flower generally. Other charming varieties of this group—and for which gardeners are indebted to Messrs. James Veitch and Sons, Limited, Chelsea—are Ne Plus Ultra, crimson-scarlet; Aphrodite, blush pink; Cloth of Gold; King Edward VII., bright yellow; President, clear buff yellow, tinted with rose; and Baroness Henry Schröder, delicate rose and the best of this shade. A special value attaches to these hybrids by reason of their flowering throughout the winter months, the blooms continuing a long time in perfection.

THE ROSE GARDEN.

A LOVELY TEA ROSE.

DURING the autumn months the beauty of many Roses is brought prominently into notice, for then they show themselves to be real acquisitions for their late-flowering propensity. Such a one is General Gallieni. It is a Rose one would not find in many catalogues, yet it is one of the best varieties sent out by M. Nabonnand, a raiser who has given us such precious gems as G. Nabonnand, Comtesse Festetics Hamilton, Comtesse Panisse, Papa Gontier, Marie d'Orleans and General Schablikine, a variety that charmed the late Dean Hole so much. All of these the amateur would do well

shy flowering, and should be given a dry, open position to obtain the best results. In such positions it would be best on a wall or pergola. A friend with a small garden in the north of London planted it some years ago, giving it a good larder to start in, which induced a most vigorous growth. In the spring he pruned it back, and as a result had but few flowers. This autumn, when chatting with him about it, he said that this last spring he resolved to allow the shoots to remain 6 feet or 8 feet long, and he had a glorious show of flowers for months. These long shoots all produced trusses of bloom the entire length, and sent up strong shoots from the base for another year. I am convinced that many good Roses suffer from the too free use of the knife. Sorts that are prone to make long, strong shoots should be allowed to have their head if blooms are wanted. J. Crook.

Camberley.

ROSE THERESA BEVAN.

AMONG the Roses seen at the National Rose Society's exhibition on September 17 few were more striking than Theresa Bevan. It is of very free growth, and certainly one of the best late-flowering sorts in the Teas or Hybrid Teas. I should hesitate to say which class it belonged to without seeing more of it, but it is evidently a grand novelty. A flower brought from the exhibition lasted quite a long time and was very attractive. In the bud stage this Rose is a good coat flower, opening to a large decorative bloom. The colour is difficult to describe—coppery red, intermingled with salmon. We sometimes find this shade in the brightest blooms of Beauté Inconstante and Souvenir de William Robinson. The Rose is quite distinct, and as a decorative variety would most probably have gained a medal of the National Rose Society, only Messrs. Garraway of Bristol distributed it a little too long ago to enter for this distinction. It is still quite new, being, I believe, sent out two or three years ago. Anyhow, it is a most striking colour, and the habit of the plant is all that can be desired. A. P.



THE BEAUTIFUL WINTER-FLOWERING RHODODENDRON HERCULES, SHOWN BEFORE THE ROYAL HORTICULTURAL SOCIETY RECENTLY BY MESSRS. J. VEITCH AND SONS. (Reduced one-third.)

to add to his collection, for they are very vigorous. General Gallieni has a sort of old gold centre with the outer petals crimson and blood red. The flower varies in its colouring, but it is always charming. P.

ROSE GRUSS AN TEPLITZ.

Few Roses have been more widely planted than this, and rightly so, its bright crimson flowers attracting all Rose lovers. Another recommendation is its free growth. In our light soil it blooms abundantly. Roses that are of a vigorous habit are most suitable for these soils. In those of a cold, heavy nature, this Rose is prone to be

ROSES KONIGIN CAROLA AND CAROLINE TESTOUT.

THERE is a similarity in the flowers of these two grand Roses, but yet sufficient difference to stamp them both as first-rate. I should call Konigin Carola a more refined flower, both in colour and in petal. The pink shade is wonderfully clear and beautiful, and the insides of the petals, also the reflexed edges, are a clear, silvery white. One does not find the jagged edge of the petals that somewhat mars Caroline Testout, and the

centre is inclined to be pointed. If anything, the flowers are larger, with a superb spread of the petal that makes the bloom appear even larger than it is. In the matter of growth Caroline Testout is superior, and if it were a question of vigour I should certainly recommend the older Rose. It would be a good plan to plant both sorts, using Caroline Testout for the centre and Konigin Carola for the outside of the bed. If standards of Caroline Testout were used, then the groundwork could be made with bushes of Konigin Carola. Although some individuals profess to be able to detect fragrance in Caroline Testout, I must say I cannot do so, and unfortunately the newer Rose has little, if any. This is rather surprising seeing that that sweet Rose Viscountess Folkestone was one of its parents. P.

ROSE ISABELLA SPRUNT.

I do not think we see nearly enough of this Tea-scented Rose. It is one of the most free-flowering, a vigorous grower, not liable to mildew, but really a hardy desirable Rose. The orange yellow buds are most useful in a cut



PINK AND WHITE GLORIES OF THE SNOW IN A SCOTTISH GARDEN.

state, especially for bouquets. As the flowers fully develop the colour is a pleasing canary yellow.

A plant growing on the west side of the Post Office here is a remarkable sight every June; the 15 feet height of space and 12 feet wide is one mass of pale yellow, which lasts a long time in flower. The same plant gives a heavy successional crop again in September and an occasional bloom during the autumn.

Swanmore.

E. MOLYNEUX.

ROSE MISS GLEGG.

Does anyone know the history of this Rose? I had it from Messrs. Rogers and Son, Red Lodge Nurseries, Southampton, but I cannot see it noted elsewhere. I call it a free-flowering, very fragrant, cluster Rose, which opens its flowers early in July. In colour the buds are bluish white, changing to pure white with age. It gives clusters of twenty to thirty blooms on each shoot. I do not call it a climbing variety, as the growths made annually are not more than 4 feet long. The foliage is deep green and not evergreen. I grow and recommend it as a standard on the common Briar. E. M.

THE FLOWER GARDEN.

PINK AND WHITE GLORIES OF THE SNOW.

THESE are yet some of us who remember with pleasure the interest taken in the introduction of *Chionodoxa Luciliae*, *Lucilia's Glory of the Snow*, through the bulb merchants (although it had been in a few botanic gardens before that) and the rapidity with which it leaped into favour. It was a welcome flower with its lovely blue white-centred blossoms, and I question if any one of the other *Chionodoxas* which have since found their way to our shores has ever attained an equal favour or has given such delight to its grower. But, although the typical *Chionodoxa Luciliae* has blue and white flowers, like such allied plants as the *Scillas*, it is of a sportive character and breaks away from its normal hues into shades of white and pink. Some of these are exceedingly beautiful, and the bulbs of pink or white varieties which have been imported have been readily purchased by

to 6 inches, or even 8 inches deep. It may be added that there are also pink and white varieties of the other *Glories of the Snow*.

Dumfries.

S. ARNOTT.

THE SCILLAS.

THE *Scillas* are an important race of spring and summer flowering bulbs with bright and interesting flowers. Two types are generally grown—the starry-flowered type, of which *S. bifolia* is a familiar example, and the bell-flowered type, well represented by our native *Bluebell*. A third group is neither so popular nor so useful. This is *S. peruviana*, which has broad leaves and a spreading inflorescence in summer. There are many *Scillas*, quite unknown to gardeners, that one could recommend as useful plants; and there are others, which were introduced long ago, that we ought to contrive to do without now that so many beautiful bulbs are available, particularly *S. autumnalis* and *S. italica*, both of which are of poor colouring and weedy. The native *Bluebell* enjoys, as we know, the half shade of the open copse rather than full sunshine, and probably many kindred species would appear to better advantage in open shrubberies, planted in Nature's own lavish way, than they do as tufts in the plant border. Most of the cheaper *Scillas* produce seeds so freely that one often regrets the need for destroying seedlings in cultivated soil, which would speedily clothe many an unsightly patch of worn turf beneath trees and help to make bright and cheery spots in spring if they could have their own way. Rarities, of course, would have places selected for them on rockeries or elsewhere; but the majority of *Scillas* should be grown rather in colonies than separately. Even in border planting it is better to have a broad sowing of bulbs that would be satisfying in their rich coloured display than a thin line or a series of little tufts.

S. amona.—This, the Star Hyacinth, is too often confounded with the Siberian Squill, and there are many who regard the two names as synonymous. There is a resemblance between the two plants and a great colour distinction. The flowers of *S. amona* are royal purple or plum coloured and they appear late in spring. It is effective on rockeries when well massed.

S. autumnalis is a slender plant with thin spikes of rosy lilac, starry flowers, but it is not an effective garden plant. Its white form, *albus*, is choicer and a neat plant to group on rockery slopes. Any soil suits it.

S. bifolia is a well-known little plant and very charming in the mass; it grows well in any soil that is not very heavy and wet. The flowers are deep ultramarine in colour, starry in outline, but wonderfully pretty when produced from short turf. *Alba*, its white form, is a refined little plant that everyone would appreciate when growing on a rockery slope. It does not increase fast, but is comparatively long-lived. It does not promise to be useful as a grass bulb, and it cannot well be naturalised, as seedlings revert to the type. *Carnea* is a poor little plant—a pallid, weakly rosea of little garden worth; the colouring is a dull flesh tone. *Rosea* is a better plant, not wholly rose coloured, but with a lilac tint. It is effective when planted in a setting of *Herniaria* or similar mossy plant. *Taurica* is a rich violet-coloured form, inexpensive, free of growth, and will prove more useful than the type; the colouring is better and more decided. These little Squills are among the first flowers of spring, and they are excellent rock plants that one would not care to be without.

S. chimensis (*Barnardia scilloides*) is a pretty but quite neglected autumn-flowering Scilla, producing spikes of rosy pink flowers, small individually, but closely arranged in a dense spike 9 inches high and lasting well till quite late in the year. One could recommend it for rockeries and raised borders. It prefers a damp soil and a warm position.

lovers of the flower. Some of the shades of pink are not altogether what one would desire, but raisers have been at work to select the prettiest and to secure seedlings from these.

The group of which the accompanying photograph shows a part is composed of a number of bulbs sent me some three years ago by that benefactor to flower-lovers, Herr Max Leichtlin of Baden-Baden, and all are seedlings raised by him. All are beautiful, the whites being, as a rule, of the utmost purity and the pinks ranging from almost blush to a warm pink.

The group is cultivated among the plants of a small collection of hardy Ferns, which I grow on the east side of a hedge, and before the Ferns have assumed their foliage the *Glories of the Snow* deck the rough border with their beautiful flowers. Here one may, in passing, point out the value of early bulbs among hardy Ferns. Although the *Chionodoxa* generally likes a fairly moist soil, it is not particular in this respect, and that in which this group is growing is partly robbed of its moisture in summer by the roots of the hedge. With deep planting, such as the *Glory of the Snow* likes, however, the flowers are excellent and the plants thrive well. In planting the *Chionodoxas* may be put from 4 inches

S. hispanica (the Spanish Scilla), better known perhaps as *S. campanulata*, embraces in its forms some of the best May-flowering bulbs of its class. They are better adapted for border planting, for shrubberies and for naturalising in the same way as the Bluebell, but in open, sunny places where the latter would not appear so effective. The type plant is light blue in colour, very floriferous and vigorous, often throwing spikes 18 inches high in good cultivated soil. Alba is pretty, excellent in colonies in the plant border, but there is a larger form with very large bells which I have distinguished as *grandiflora*. It is the white counterpart of *Excelsior*, and the spikes curve gracefully as in *S. patula*. *Atrocærulea* is a dark blue selection, differing only in its richer colouring from *S. hispanica*. *Excelsior* is a giant, and quite the best Squill for border planting; the colouring is not very distinct, but the large size of the bells and the enormous spikes are excellent features. This plant, treated like the common Hyacinth in pots, is worthy of extended use in conservatory decoration. It requires good culture to maintain its vigour. *Rubra* resembles the type except in colour, which is a clear pale red; but the best of the reddish forms is *Rose Queen*, a delightful variety, still somewhat rare; the colouring is a pale rose, soft in shade and very clear, becoming silvery as the flower ages. It is none too vigorous and its increase in a heavy soil is slow, but under more favourable conditions it would doubtless thrive better. It is an excellent plant of refined colouring, quite distinct from the many nondescript roses and reds that one finds in this family and which are so much overrated.

S. italica is a starry-flowered Scilla, blooming in late spring. Its flowers vary somewhat from lilac purple to slate blue, the latter predominating. As now available the species is hardly worth garden room, but there are several shades in chance seedlings that one could welcome, notably a pretty lavender-coloured form and a turquoise blue, which, when available in quantity so that they can be massed, will re-establish the popularity of this species. The better types hail from Cilicia. Alba, a rare white form, is one of the gems of the spring flora. The flowers are quite colourless and very dainty. These Squills require a warm slope and a thorough ripening in autumn, otherwise the bulbs decay at the base.

(To be continued.)

IRIS WARLEYENSIS.

AMONG the hardy bulbous Irises there are many flowers of rare beauty, and there are few which cannot be recommended to admirers of these fascinating flowers. Among the different classes, those of the character of *Iris orchioidea* will commend themselves to all. Within recent years we have had some additions to their ranks, and that called *warleyensis*, after the famous garden of Miss Willmott's, has acquired much favour since its introduction, especially as its cost is quite a moderate one, and places it well within the reach of those of slender means.

It is a charming flower, with blooms of a pleasing purplish blue, adorned with a yellow

blotch and having their beauty heightened by a white crest, with various little markings, such as are possessed by the prettiest of the Irises, and which add so considerably to their beauties. Its merit may be gauged by its being awarded a first-class certificate by the Royal Horticultural Society.

Iris warleyensis grows with me to nearly 1 foot high and is quite hardy, although its early flowering makes it desirable that its flowers should have some little glass protection in spring in case of severe frost occurring while they are open. This can be easily given by means of a bell-glass or hand-light.

I cultivate it on a low rockery facing almost due south, and in what is practically sandy loam. Planted in early autumn about 3 inches



IRIS WARLEYENSIS GROWING IN A SCOTTISH GARDEN.

deep, it will flower in spring and be certain to give pleasure to its owner and his friends.

Dumfries.

S. ARNOTT.

SOME BEDDING ARRANGEMENTS.

(Continued from page 622.)

YELLOW BEDS.

HERE as the principal plants, precisely on similar lines as before, *Calceolaria Burbidgei* or *C. amplexicaulis*, yellow Tufted Pansies, yellow *Antirrhinum*s and *Celosias* may be used. We do not know of any plants to equal the first-named for profuse flowering and general effect. Tall plants 3 feet high, set out in their pots and arranged five or more in a group, will during the season form an informal pyramid 4 feet high at least, and by reason of its restricted root-space the leaf-growth is but moderate. It

should be stated clearly, however, that these pot-plunged plants require a little more attention in dry seasons.

SCARLET BEDS.

Here we have a greater range of subjects probably than in any other shade of colour, and standard or pyramid Fuchsias and *Pelargoniums* occur at once as the principal plants for grouping as in the last-named colour. Then in dwarf *Pelargoniums*, double *Begonias*, *Verbenas*, scarlet *Salvia Gloire de Zurich*, *Celosias*, the rich-leaved *Begonia Triomphe de Lorraine*, *Cannas* either of leaf or flower to match, *Antirrhinum*s and the like we have a variety difficult to surpass. *Iresine* and *Coleus*, if available, may be also of good effect.

PINK BEDS.

The chief plants in this shade of colour will be pink Fuchsias and pink Ivy-leaved *Pelargoniums*, than which we have nothing more beautiful when arranged informally as tall pyramids, several in a group. A very large oblong bed could be filled with such at intervals of 4 feet over its entire area. If bold pillars of the rambler *Rose Lady Gay* occupied the central part at like intervals or rather more, a bright picture would result. The groundwork of such a bed should be *Begonias*, *Verbenas*, or the same Ivy-leaved *Pelargoniums* pegged down. There are many other plants which are most effective when used as a judicious mixture. For example, a large bed may be ideally beautiful if simply planted with the blue and white *Plumbago capensis*, while another effective combination would be Ivy-leaved *Pelargonium Charles Turner* and *Calceolaria Burbidgei*. The hardy *Fuchsia gracilis*, 2½ feet high, with pink, cream and crimson *Begonias* covering the soil, is most striking. A good early bed, say, for June, July and August, would be *Rose Liberty* and a white *Viola*; again, scarlet Fuchsias, variegated *Cock's-foot Grass* and white *Alyssum* as groundwork. *Scarlet Salvia Gloire de Zurich*, with *Dactylis elegantissima* as groundwork throws out the intensity of the scarlet. *Plumbago capensis alba*, *Lobelia Queen Victoria* and white *Alyssum* form a most effective combination, and equally good a rich dark-flowered single *Fuchsia* as *pyramida*, variegated *Ribbon Grass* on the ground and edged with white

Alyssum. A striking bed may be had by first arranging variegated *Dactylis*, and subsequently grouping and interspersing crimson *Celosias* and the dwarf crimson *Begonia Lafayette*. The *Celosias* in this case should appear in small circles, the variegated *Grass* occurring between these and the *Begonias*.

Instances such as these could be multiplied indefinitely; but still deserving of mention for great freedom of flowering are the orange-flowered *Streptosolen Jamesoni* and the blue *Ageratum*. In many gardens the Summer *Cypress (Kochia scoparia)* finds favour, but the formal columnar outline of the plants will not be appreciated by those who are in search of informal subjects for bedding. The above combinations are given more as suggestions than anything else, because we fully realise that tastes differ considerably. Readers can, however, modify these suggestions to suit their own requirements.

GARDENING FOR BEGINNERS.

GARDEN WORK WEEK BY WEEK.

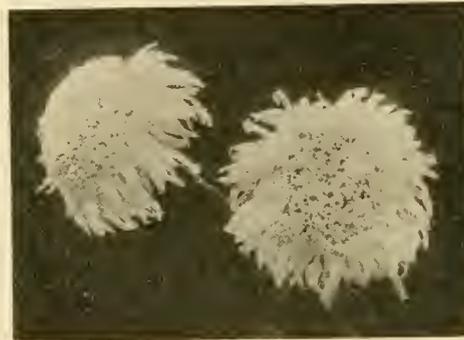
THE WINDOW GARDEN.—Small evergreen shrubs may be planted in empty window-boxes at the present time. The watering of indoor plants requires care. Succulents and Cacti should not be watered until the end of January. Pots of bulbous plants should be placed in the windows of the warmest room, maintaining the soil in a moist condition, using slightly tepid water. Sponge the foliage of ornamental-leaved plants occasionally, using tepid water mixed with soft soap. Other flowering plants will benefit by receiving similar treatment.

The Vegetable Garden.—In frosty weather, when the ground is hard, see that the wheeling on of manure is proceeded with apace. These opportunities should be watched for and immediate advantage taken of them as they arise. On the other hand, keep off the ground when it is wet. On no account spread the manure until the soil has thawed and has also become fairly dry; then proceed with the digging without delay. Potatoes intended for seed should be examined; those with long, attenuated sprouts should have the latter removed and care taken to spread out the tubers less thickly. Sturdy, short sprouts are desirable. Seakale, Rhubarb and Asparagus that it is desired to force should be lifted forthwith, placed in boxes and removed to the greenhouse at once. The roots may be planted quite close to one another, as space must be economised at this period. Endive pays for care in the blanching process, and this may be effected by placing a large flower-pot in an inverted position over each plant. The hole in the bottom must be covered to exclude light, otherwise the blanching will not be successfully accomplished.

The Greenhouse and Conservatory.—Chinese Primulas and Cyclamens are now looking quite gay. To maintain them in a healthy condition care must be taken not to water the plants too much. Watering is the all-important item in successful culture at this season. Less will be required by the plants now than at any other period of the year. Roses under glass must have attention. Those planted out or in pots in the cool greenhouse should be pruned now. Shorten back this year's shoots of the Hybrid Perpetuals

to 2 inches, 3 inches or 4 inches, according to their strength and size. Cut the less vigorous Tea-scented Roses back to 3 inches, 6 inches or 9 inches, according to the vigour of the current year's growth. I usually remove 1 inch or so of the surface soil of Roses in pots, and give a top-dressing of some good, rich lasting soil in which is incorporated a small quantity of concentrated manure of some sort. Bulbs growing freely may be moved to a light position on shelves in the greenhouse. As growth becomes more pronounced, plenty of water will be required. The warmth of a cool greenhouse or conservatory may be kept in in very cold weather by covering the ends and sides and the lower portions of the roof with mats, &c., until the cold snaps have passed. For forcing, I am potting up a number of Lily of the Valley crowns, and boxes are also being used for the same object. In the warmer glass structures look out for the attacks of aphides; the points of shoots of *Lilium Harrissii* are very susceptible to the attacks of this pest. Fumigate the greenhouse with vapourising compound or dust the affected parts with Tobacco powder. Climbing Roses should be pruned at this period. Shorten the growths about one-fourth of their length.

Trees and Shrubs.—When the ground is free from frost, plant all kinds of trees and shrubs.



2.—TYPICAL JAPANESE ANEMONE CHRYSANTHEMUMS.

Hedges in variety should also be planted now. In this connexion Yews, Laurels, Holly, Hawthorn, Thuja, Cupressus and Privet should be dealt with. Continue to plant climbers and creeping plants. Should the roots of trees and shrubs be dry, give them a good soaking with water if frost is absent. On no account plant these subjects when the roots are very dry. Heel in the trees should the weather be frosty, and wait until the next favourable opportunity to plant them. In shrubberies and borders where a plant has perished, remove the same at once, and replace it with a good specimen of some other or a similar subject.

Hardy Fruit Garden.—Raspberries must be pruned without further delay. I have just cut out old and weakly canes, also removed the tops of those retained, leaving a good plump bud at the top. These canes are secured to wires strained to uprights, and others are having the support of stout stakes. Recently-planted fruit trees are being treated to a mulching of good, partially-decayed manure. I am completing the pruning and nailing of Pears and Plums on walls. That the latter may be done quite satisfactorily, the young shoots laid in have ample



3.—A DECORATIVE JAPANESE CHRYSANTHEMUM.

room to swell by adjusting the shreds with more than ordinary care. Neglected trees in the orchard should have immediate attention. Thin out crowded growths in the centre, and also side branches that cross and interfere with one another.

D. B. CRANE.

TYPES OF CHRYSANTHEMUMS.

Hairy Chrysanthemums.—Varieties that may be placed within this category are few in number, and new sorts are seldom raised. Chrysanthemums of the description under notice chiefly belong to the Japanese or Japanese incurved sections, and their chief peculiarity consists in a covering of short, glandular hairs on the reverse of the petals. These Hirsute appendages are more pronounced in some varieties than in others. The plants are not difficult to grow if second crown buds are retained; these are the third series of buds that appear on the plants in the course of a season's growth, and they invariably produce blooms of good colour with the glandular hairs well developed. Few sorts can be recommended, the better ones being: *Hairy Wonder*, large, colour deep fawn; *Louis Boehmer*, soft rose-pink, dwarf; *Mrs. C. B. Freeman*, deep golden yellow sport from the last named; *Mrs. Dr. Ward*, bronze, large full flower; *King of Hirsutes*, pale lemon yellow; and *Princess Henry*, beautiful silvery pink.

Reflexed Chrysanthemums.—This type is seldom seen now at the shows, although sometimes in market or cottage gardens. The flowers are of medium size, more or less spherical in form and notable for their bright colours; the petals reflex, building a bloom of reflexed or recurving form. Good typical varieties are: *Cullingfordii*, brilliant crimson, with golden reverse to the petals, rather late flowering; *King of Crimson*, rich crimson, large full flower; *Elsie*, pale canary yellow; *Golden Elsie*, rich yellow (the two last-mentioned sorts are free flowering and of easy culture); *White Christine*, white; and *Pink Christine*, light pink. A good outdoor sort is *Cottage Pink*, the true name of which was originally Emperor of China.

Pompon Chrysanthemums.—This is a much-neglected type and embraces what are known as early-flowering Pompons, Pompons and miniature-flowered Pompons. They are all very pretty, developing their flowers on plants of bushy growth and in the greatest profusion. Their diminutive character adds to their charms, both as cut flowers and as plants. The blooms are either somewhat flat or nearly globular, averaging



1.—A LARGE-FLOWERED ANEMONE CHRYSANTHEMUM.

1½ inches in diameter, neat and compact in form, and formed of short, flat, fluted or quilled petals; very pretty when gathered in free-flowering sprays that have had some of the buds thinned out. Early-flowering varieties are: Orange Pet, golden orange, tinted bronze; Mme. Ed. Lefort, reddish bronze; Yellow Mme. Ed. Lefort, a bright yellow sport from the last named, dwarf; Mr. Selly, pretty rosy lilac, dwarf; Veuve Clicquot, beautiful bronzy fawn; and Lyon, rosy purple. Pompons that flower in November are the following: William Westlake, golden yellow, slightly suffused red; Mlle. Elise Jordan, soft lilac pink, pretty globular flower; Prince of Orange, light orange amber; Rosinante, blush rose, should be disbudded; Osiris, pretty shade of soft rosy purple, tipped gold; and William Kennedy, a beautiful crimson amaranth.

Miniature-flowered Pompons are miniature representatives of the type. Some of the flowers are not more than three-quarters of an inch in diameter, and others, generally speaking, seldom exceed 1 inch in diameter. They are dainty in form and make excellent decorative material when cut in free-flowering sprays. Representative sorts are: Snowdrop, pure white, height 3 feet; Primrose League, pale yellow sport from the last-named, flowering in November; Katie Mannings, rosy bronze, of beautiful form; Victorine, rosette-like flowers of a maroon crimson colour; Little Pet, deep bronze, very free flowering; and Lilac Gem, pale rosy lilac. Two good early sorts are: Anastasio, soft purple violet, very free and branching; and Little Bob, a very effective crimson brown sort. Both are useful for border culture.

Anemone-flowered Chrysanthemums.—These flowers are very quaint, and as plants for decorative uses should be more largely in request. They are divided into three sections, viz., large Anemones, Japanese Anemones and Pompon Anemones.

Large Anemones have two distinct sets of florets, one quilled and forming the centre or disc, and the other flat and more or less horizontally arranged, forming the border or ray (Fig. 1). Good sorts are Descartes, bright crimson-red, very fine disc, early; Cincinnati, blush guard florets with paler disc; Mrs. Judge Benedict, rose-tinted guard florets and sulphur-yellow disc; Gluck, golden yellow guard florets and disc, high in the centre; Mme. Robert Owen, pure white self, free flowering; and M. Charles Lebocqz, buff and suffused yellow ray florets and bright yellow disc, rather tall.

Japanese Anemones are noted for their large size and fantastic form. The disc is more or less regular in outline, the ray or guard florets varying considerably in length and character. In some cases the florets are narrow and prettily twisted, and in others they are broad and curled. In some instances the ray florets droop and form a beautiful fringe or tasselling to the flowers (Fig. 2). The best sorts are: John Bunyan, light yellow guard florets, deeper yellow centre; Mme. Lawton, rosy white guard florets, yellow centre; Sir Walter Raleigh, pale blush guard florets, deeper coloured centre, very large; Queen Elizabeth, fluted guard florets of a lemon yellow colour, disc rich yellow; W. W. Astor, blush guard florets, yellow disc; and Duchess of Westminster, silvery blush guard florets and lilac disc.

Pompon Anemones.—These are miniature forms of the large-flowered sorts, and for decorative uses are very beautiful. They are of easy culture and dwarf growth, and have small leaves. A good selection should comprise Marie Stuart, pale lilac guard florets, sulphur yellow disc or centre; Emily Rowbottom, creamy white sport from the last named and ideal for decorative uses; very free flowering; Antonius, a beautiful golden yellow self, dwarf; Regulus, cinnamon guard florets, brownish disc, dwarf; Eric, a charming orange buff, dwarf; Calliope, ruby red guard florets and red disc, dwarf; Gem of Earlwood, rosy blush guard florets and citron disc, lovely in sprays, late flowering; and Magenta King, a

pretty flower with magenta guard florets and yellow disc. Many of the plants are not more than 3 feet in height and are charming for greenhouse or conservatory.

Spidery Chrysanthemums.—These are flowers with horned, forked, notched, wire-like or thread-like petals, and embrace some of the most delightful of all the decorative Chrysanthemums. With few exceptions the flowers are small and are borne on plants varying between 3 feet and 4 feet in height. Another of their characteristics is that the plants are late flowering. Throughout December they are much sought after. The better varieties are: Mrs. Filkins, bright yellow, horned variety; Mrs. James Carter, pale yellow, thread-like petals; Chevenx d'Or, rich golden yellow, very fine; Mrs. W. Butters, white fluffy variety; Sam Caswell, pink, pretty and distinct; Bertie Bindon, pure white, thread-like petals; Jessie M. Cole, soft canary yellow, a pretty variety for cutting; Lovely, pure white of spiral formation; and Crimson Tangle, crimson and gold, with silk-like florets. Two large-flowered sorts are King of

pressed back again it will assuredly fail. As a matter of fact, it is wise to examine all recent planting after frosts in case of trouble, as it does not demand much time and often spells the difference between success and failure, and is therefore thoroughly repaid.

LAWNS.—It is not now the season for devoting much time to the cherished grass plot, as the weather is never so genial that we can sit about and enjoy the greenness of the sward. We may, however, if we feel so disposed, do much now to favour a fine lawn later on. As we cannot walk or stand about on the grass, the opportunity may be taken to apply a top-dressing to it, which will, for the time being, completely spoil its appearance, but will eventually do it a vast amount of good. There is almost always some old potting soil at disposal, and from this all crocks should be riddled out; then mix it with about its equal bulk of refuse manure, such as that which has done service in a Cucumber or Melon pit or a Mushroom bed, and spread the whole evenly over the entire surface of the grass. The rains will steadily wash the food virtues of the material



4.—A NATURAL SPRAY OF MEDIUM-SIZED SINGLE CHRYSANTHEMUMS.

Plumes, a deep yellow flower with notched and cut petals, and What Ho, a large flower with few, long, stout, tubular petals almost 5 inches long, colour pale buff yellow.

THE TOWN GARDEN.

PLANTING SHRUBS.—It is comparatively common for a spell of pleasant, open weather to come during the first and second weeks of January, and when this does occur those who have two or three shrubs waiting to be planted should get them in forthwith. To commence a large operation of planting would be unwise, but for odd plants it is excellent practice to take advantage of all the opportunities that present themselves. The soil must neither be sodden nor frozen, and it must be sufficiently friable to permit of working well in between each set of roots; firmness in finishing off the task is imperative to success. If any planting is done now it will demand incessant watching during frosts coming shortly afterwards, for these will penetrate deeply into the freshly-moved ground and possibly lift the plant out of it; unless this is at once firmly

into the soil and just as surely wash away all traces of the application, so that when we want the use of the grass again we can have it without the smallest fear that any objectionable particles will be apparent. In the event of this course of procedure being inconvenient, one of the finest things for the grass is to dress it with basic slag at the rate of 6oz. to the square yard, and the sooner this is put on the better, as it is slow in yielding up its food virtues, which will therefore be ready when the roots of the grasses are actively searching for food in spring.

STAKES.—After they have done service for a few seasons there are not many stakes which do not show signs of giving out, and this should be accepted as indicative of the necessity for renewal. It is not a difficult operation, and it is essentially one that can be put in hand at this quiet season. Unless it is imperative no attempt should be made to bore new holes, as it will answer the purpose just as well and will be much easier if the new supports are pressed well down into the old holes. The new stakes must be of at least the same thickness, and preferably rather larger than those removed.

WALKS.—Those which are made of gravel demand a considerable amount of attention

during the winter, for it is at that season that they are worked thoroughly and firmly down so as to remain in perfect condition in the summer. It is, of course, necessary that considerable judgment shall be exercised in rolling and other operations, but if things are put in hand when the weather is right nothing other than good can accrue. If the walk is dull and it is impossible to sprinkle on a little fine gravel, the surface should be lightly pricked over with a pick and then rolled heavily down again; it is wonderful how much this will brighten it up. For rolling successfully it is necessary to have the gravel wet, but it must not be in such a state that it will pick up beneath the feet or on to the roller, or far more harm than good will inevitably be done.

HORACE J. WRIGHT.

GARDENING OF THE WEEK.

FOR THE SOUTH AND SOUTH MIDLANDS.

PLANTS UNDER GLASS.

FORCING DEPARTMENT.—This will now be a busy time, as in most places flowers and vegetables are in great demand in the early months of the year. Such subjects as Seakale, Chicory, Dandelion, Endive, and Mustard and Cress must be placed in pots or boxes now every week, in order that the demand may be met. An Asparagus bed should be made up about every month on the same lines as recommended for the first. Some stools of Rhubarb may be taken up if Apples are likely to become short, securing good big roots from which the small side crowns should be taken off and planted subsequently to fill the spaces.

Continue to introduce to the forcing house Lilacs Mme. Lemoine and M. Louis Spathe, Spiræas, Azaleas mollis and indica, Tulips, Hyacinths, Narcissi and Roses. Do not attempt hard forcing at the outset or it may prove fatal.

The latest batch of Poinsettias should be removed to a cooler structure when the bracts have thoroughly developed. The warm conservatory or nice airy rooms where there is continual heat suit these to a nicety, and I know of no plant that looks better in rooms at night, as it can be arranged with almost anything. A good combination is with a foreground of Lily of the Valley, Roman Hyacinths, yellow or white Chrysanthemums, Ferns and Bouvardia. Euphorbia jacquiniæflora is now useful and can be used similarly to Poinsettias.

Carnations.—Keep a little air on the house and maintain a temperature of 50° to 55°. Young stock coming on should be pinched as soon as the plants have grown enough, so that they will break low and secure a good foundation for fine plants. Cuttings may be taken off soon where they have not been propagated and for later plants. Malmaisons should be kept as dry and cool as possible, giving heat only during frosty weather. Plants in flower or showing buds should be kept at the same temperature as recommended for Tree or winter bloomers, viz., 50° to 55°.

LAWNS AND PLEASURE GROUND.

Keep the lawns swept and rolled weekly, so that the turf shall be maintained in good and pleasing condition. Keep the beds containing spring-flowering plants and bulbs in respectable order. Muleh Roses, and, if the weather is severe, shake a little Bracken over the heads of Tea and other tender varieties. Bulbs and plants peeping through the ground should be protected from the ravages of insects by using soot, which, however, must not be smeared over the foliage,

and black cotton forms a barrier against sparrows if put on soon enough.

HERBACEOUS BORDERS.

In dry weather these borders may now be rearranged and trenched; if they are too large to be done in one season, do a section each year. These borders require to be trenched about once in every five or seven years, and if done well there is no necessity to disturb them more often. Take a plan of the border and improvements required, so that the plants can be reinstated as the work proceeds; if the border exceeds 20 feet wide, tall plants are necessary for a fine effect. Bulbs should be put back as soon as possible, or they may feel the effects of shifting. Thin out very much Montbretias and heavily manure, as the plants respond to high feeding more than many imagine.

HARDY FRUIT GARDEN.

Continue to prune and train all trees in the open and Apples, Pears, Plums and Cherries on walls. Thoroughly spray all trees. Do not puddle the ground in wet weather by trampling, but use some planks to get on it where necessary. Finish planting if there is still some to do and if the weather is open. In severe or wet weather prepare stakes, labels and everything which may be required; look over netting and repair, and put on one side for rough work. When a large net becomes unfit for its purpose, it is most useful for cutting up to be put over isolated trees or seed-beds. Examine the stores in the fruit-room and eject all unsound fruits.

KITCHEN GARDEN.

Continue to trench in fair weather. Examine stocks in the store-room, reject all unsound specimens and look out seed Potatoes. Prepare sets of Horseradish and Seakale, and write labels. Turn out store and shed and thoroughly clean them, as there is a time for discarding and making a fire, and gardeners should learn when this is necessary. W. A. COOK.

(Gardener to Sir Edmund G. Loder, Bart.)
Leonardlee, Horsham, Sussex.

FOR THE NORTH AND NORTH MIDLANDS.

PLANTS UNDER GLASS.

CYPRIPEDIUM INSIGNE.—At this period of the year very few Orchids are of greater value than this well-known kind. Its general hardiness, vigour, freedom of flowering and simple requirements fit it for those who have but little time at their disposal. A cool greenhouse suits it admirably, and during the summer months a partially-shaded frame or pit is better still. With this treatment it is possible to retard the flowering very considerably and secure a fine display of blooms in the winter season. The advantages on the side of cool treatment are considerable, not the least being a good display of flowers at Christmas. Hardily grown throughout, the plants do not suffer in the same proportions when subjected to the uncongenial conditions of the sitting-room as do those grown in warmer structures.

KITCHEN GARDEN.

Forcing Rhubarb.—Now is a good time to cover up roots in their permanent quarters, and I am quite in favour of this mode of culture, as the produce is of better flavour than that from lifted roots forced in a warm house. Any material at hand will suffice for covering the roots, but Rhubarb pots are best if expense is not studied. Old cement casks answer well, and in cases where hard forcing is not intended only a slight covering is given to hasten growth. In covering it is advisable to use material that retains warmth and in sufficient quantities. Roots not intended for forcing early are none the worse for a covering of light litter. These will give earlier growths than those left fully exposed.

FRUITS UNDER GLASS.

Vines.—The greater portion of the pruning should take place by Christmas, even though the Vines are not to be started for some months, as there is no need for further delay when the crop is off and the leaves have fallen. Early pruning relieves all anxiety as to bleeding, and there is then no need for using styptic afterwards.

HARDY FRUITS.

Mulching Raspberries.—This work should be attended to now. Many wait till spring, when the soil between the rows on stiff land is wet and cold from the winter rains. They then dig in a quantity of cold spit manure, mangling all the best surface roots, which every practical fruit-grower well knows are the best. True, fair crops of fruit are produced under these conditions, but the fruit is small and flavourless compared with that produced from canes rooting near the surface. I get the best results from thinning out all the old fruiting canes early in autumn, raking off the stale unused mulching, giving a good broadcast sprinkling of burnt garden refuse and re-mulching with spent refuse from old hot-beds.

FLOWER GARDEN.

Spring Bedding Plants.—Now is a good time to take stock of the various kinds of bedding plants required for the flower garden next spring, as there will be ample time to increase the stock of many of the soft-wooded plants, such as Fuchsias, Pelargoniums, Lobelias, &c. Zonal Pelargoniums will strike most readily at this season, providing a temperature of about 60° can be given them. These should be inserted singly in 3-inch pots, choosing ripe, hard wood, in a light sandy compost. Old plants which have been growing in pots for autumn flowering will supply good cuttings for this season, and the old plants will break away and make good material for filling vases in the spring.

Complete the planting of bulbs. Hyacinths, Tulips and Narcissi planted now will flower well in April next. There must, however, be no delay, or the season will be lost. Cut down hardy Fuchsias. I spread a thin coat of dry flaky manure over beds of choice Pansies, Pentstemons and Phloxes, both to protect from frost and afford nourishment by the solvent action of snow on the manure.

T. B. FIELD.

(Gardener to the Baroness Berners.)

Ashwellthorpe, Norwich.

SWEET PEA NOTES.

THE TELEMELY SWEET PEAS.

THESE Sweet Peas still seem but little known. As they flower about three months from the time of sowing, plants raised under glass in September may be had in bloom by Christmas, if carefully managed in a house which receives as much light as possible. The time is, therefore, not far distant when we shall be able to cut these precious flowers all the year round, for there is no reason why the large-flowered varieties grown in pots during the summer (and cut back once or twice) should not bloom throughout the autumn if housed on the appearance of rough weather. The Telemely Sweet Peas produce very pretty, though small, flowers in many delightful shades of colour, some sorts being particularly brilliant. Sown under glass or in a cold frame about the middle of January, and planted out early in April, they will bloom quite a month ahead of the popular summer-flowering sorts, autumn sowings, wintered in a frame, opening their blossoms even earlier. I should certainly advise amateurs to try this new and interesting race of annuals, for although much remains to be done in the way of selecting and improving them, they are even now well worth extended cultivation.

E. TESCHEMACHER.

BOOKS.

The Book of Garden Pests.*—There is yet another book on insect pests. This volume, however, includes, which many do not, a certain number of fungus pests, which is very useful as far as it goes, but it is quite impossible in a book of this size to describe all the fungi which fairly come under the designation of pests, and the same may be said of the insect pests. This work is divided into eleven chapters. The first is headed "Friends and Foes," the next "Insecticides," then "Fungicides," "Pests Common to Many Species of Plants," "Tuberous and Bulbous Plants," and so on, closing with one on "Concluding Generalities." The author says in an introductory note: "More space has been allotted to preventive and remedial measures, which are of practical value to cultivators, than to details concerning the life history of each pest or disease." This is as it should be, for many details in the life history of insects or fungi are only of interest to entomologists or mycologists. As so many insects attack a large number of different kinds of plants, it is by no means the most convenient arrangement to describe the insect under the name of a certain plant. For instance, the bulb mite, which, however, is not an insect, does not confine its attention to bulbous plants, and many caterpillars are very omnivorous. The chapter on "Friends and Foes" is a very good one, particularly the paragraph on "Cultivation and Hygiene." Directions are given for compounding certain insecticides. It will, however, generally be found that buying the mixtures ready made will save much trouble and in the end be more satisfactory, unless they are required in large quantities, when the question of expense comes in. Care should be taken to obtain such compounds from reliable firms or their agents. In the recipe for making "Eau celeste" on page 27, the word sulphate is omitted after the word copper; the direction should read, by dissolving 2lb. of copper sulphate. It is mentioned on page 84 that "Eau celeste is a proprietary remedy," but this can hardly be the case, as the directions for making it have just been alluded to, and in most books giving recipes for fungicides one will be found for this compound. An interesting photograph is given facing page 105 of an Apple infected with mussel scale. This insect, no doubt, sometimes attacks the fruit, but more usually confines itself to the branches and young wood. In alluding to the Black Currant mite, it is stated that "it is uncertain whether a very similar mite which infests the Hazel is the same species. Experiments, however, have been made which prove that they are not the same species, and that they will not attack the Black Currant. No mention is made of the Currant aphid (*Aphis ribis*), which at times is the cause of much injury to the leaves of that plant by causing them to curl, thus preventing the pests from being sprayed. As soon as any of this insect is detected on the bushes, the under-sides of the leaves should be at once sprayed with some insecticide containing soft soap if the leaves are not already too much curled; if they are, the best thing is to gather and burn them. Under the heading of Vine weevils it is recommended as a means of catching these beetles that freshly-tarred paper should be spread under Vines to catch them when they fall on being disturbed. A simpler plan, which is quite as effective, is to lay a white cloth under the Vine or other plant which is being attacked; the weevils, when they fall, lie quite motionless for a minute or so, feigning to be dead, with their legs closely drawn to their bodies, giving the operator plenty of time to pick them up. In the account given of mealy bugs, we read of "the white cottony material that grows on the dead bodies of

the bugs"—this surely is a mistake, for the material is a secretion of the insect and not a fungus; the former could not be produced after the insect's death. The bugs are of a dark pinkish colour, covered with a white mealy secretion, except just where the joints of the body join, where the colour of the insect may be seen. The eggs are laid in a kind of bag known as an ovisac, composed of loose white fibres secreted by the mother; often a number of these ovisacs are found massed together with the parents on the plants. In the account given of wireworms on page 168 no mention of their size is made; nor is any indication given on the plate containing figures of this insect that they are very much enlarged. This is very misleading. The warty disease of Potatoes is spoken of as (*Edomyces leproides*). This fungus was at one time thought to be the same as the Beetroot tumour fungus (*O. leproides*), but it has since been found to be a quite distinct organism, the name of which is *Chrysophylyctis endobiotica*. Among the pests mentioned as surface caterpillars, those of the great yellow underwing moth, which are very common and destructive, are omitted. The description of the Asparagus beetle (*Crioceris asparagi*) is very inadequate; it is said to be a "greenish coloured insect," whereas it is one of our most beautiful beetles. The head and antennae are bluish black, the thorax or fore-body is of a deep red colour, and the wing-cases and legs are steel blue; on each of the former there appear to be three yellow spots, but the outer edges of the wing-cases are yellow, to which the supposed spots are joined. The Bean weevil (*Bruchus germanus*, or rather *B. rufimanus*), is said to be a very small beetle, but as beetles go it is not, for it is two tenths of an inch in length and bulky for its length. The author uses the word chrysalids, but the plural of chrysalis is chrysalides. There is a mistake on page 190, for we read "the beetle known as leather jacket"; this should read, the grub known as leather jacket. The last chapter on "Concluding Generalities" is a very interesting one, and should be read by every one who has the opportunity of doing so. The author excuses himself for not giving a glossary of the botanical and chemical terms used by him; but as far as we have noticed the book is unusually free from technical terms and has a good index. We can strongly recommend this book, as it is one of the most practical which has come under our notice. It is of a handy size, well printed and illustrated. There is a great omission in many of the figures, namely, that the natural size of the insect is not shown. Unless this is done no proper idea of what the insect looks like can be formed.—G. S. S.

British Mosses.†—The reissue of this admirable little book on a much-neglected subject is very welcome. Though hardly coming into the category of a handbook, it is a masterly sketch of the structure, reproductive methods and family history of the Mosses. The author sets out by quoting Lord Bacon and Ruskin on the Moss plant, the former as having expressed the opinion that a Moss "is a rudiment between putrefaction and a herb," the latter, in sublime ignorance, seeing no reason why the Pineapple should not be included in the Moss family. Sir Edward pursues his subject with much method and with almost Huxleyan lucidity; so that he who reads and ponders can hardly fail to grasp the leading facts in the life-history of this humble but interesting plant. Not the least important feature in the book is the breadth of survey in so little compass; thus we find not only classification and morphological details, but an interesting sketch of all that is anomalous in the Moss family. We learn that reproduction may be normally, by means of spores, by gemmæ, by budding from the protonema, and by offshoots from the plant itself, as in the sphagnum. The author emphasises the "vast gulf" that

exists between the Mosses and Ferns, "the widest in the whole vegetable kingdom," and describes it from the evolutionary standpoint, but refrains from suggesting any bridge with which to cross the chasm. He gives us much suggestive matter on the part played in Nature by the Moss, particularly in connexion with the growth of peat and its action as a devastator of forest land. Many illustrations, diagrams and tables elucidate the text, and the work concludes with a bibliography of the subject. Just the book to whet the appetite for more knowledge on a fascinating subject, but why entitle it "British" Mosses?

Gardens, Past and Present.‡—Mrs. Davidson is a well-known authority on the subject, and this book should prove a most useful addition to the library. It is most pleasantly written, interesting to a gardener, while to an amateur with a wish to know more on the subject it should be of great value. In the words of the author, her object is not to be technical but suggestive. The book is divided into three parts. Part I. gives a most interesting history of the various kinds of gardens from the time when England, under Agricola, was the granary of the then known world, showing the debt we owe to the Romans for the grains, and vines, and trees they introduced, to the last chapter in this section, describing the Wisley Gardens, now the home, through the generosity of the late Sir Thomas Hanbury, of the Royal Horticultural Society. The chapter on the Physic Garden is full of charm and interest. In ancient times our doctors went to Italy to study medicine—many of them to Padua—where, in 1545, was established the first physic garden. Nearly 100 years later our first physic garden was founded at Oxford, and the stories of the visits there of Tradescant, John Evelyn, and the famous meeting between Dillenius and Linnaeus form pleasant reading. What we owe to the Flemish and Huguenot refugees who flocked to England is well told in the chapter "Rural England in the Past." They not only brought their textile industries with them, but established all kinds of gardens, notably vegetable ones. Mrs. Davidson tells us that in the reign of Henry VIII. the Queen's table had to be supplied with vegetables and "sallets" from the Low Countries, six Cabbages and a few Carrots costing £1 of our current money, so that these old foreigners paid for the hospitality we accorded them when they taught us the art of cultivating vegetables. The chapter devoted to the history of the introduction of trees into England is attractive reading. The authoress speaks of Gerard, who "sows his seeds, attending God's leisure, for flowers and fruit." Part II. is devoted to various kinds of gardens—formal, wild, Rose, bog and water gardens and bulb and herb gardens—each and all having their own special chapter, and in every case suitable plants, with their names and habits, are given by this charming writer. Possibly in this section "The Garden of Herbs" is most interesting, because it is not so frequently treated. Part III. is devoted to the seasons of the year and the arrangement of a succession of plants, not in their separate gardens, but as a harmonious whole. It treats of borders, names of plants, the grouping of colours and foliage, and is altogether a good finish to a most delightful book. We wish Mrs. Davidson would contribute even more to the apparent overflow of books upon gardening, many of which are not worth a moment's perusal. The authoress of "Gardens, Past and Present" is never dull. There is a sweet charm in her work, though, we believe, this is the first publication under her name. We have known and advised her contributions to the Press for many years. Here we have a book that is instructive which should bring a sense of comfort to the fireside in the long winter evenings. If the rain beats against

* "The Book of Garden Pests." By R. H. Pearson; 2s. 6d. net. John Lane, Vigo Street.

† "British Mosses." By Sir Edward Fry.

‡ "Gardens, Past and Present." By K. L. Davidson. Illustrated from photographs by F. Mason Good. (F. Werner Laurie).

the window, or the garden is shrouded in snow, we can still think of the flowers that give beauty to the garden in spring, summer and autumn.—E. T.

LEGAL POINT.

Gardeners' partnership (B. T. F.). A great deal of what is seen in an ordinary partnership deed or agreement is merely the law of partnership put into the form of ordinary covenants or promises. In any other kind of deed this would be considered bad conveyancing, but it is defended on the ground that it informs the partners of their rights and duties without always running to a lawyer, although it is difficult to see why this object could not be attained equally well by purchasing a copy of the Partnership Act for a few pence. Notwithstanding, it is not wise to dispense with the services of a solicitor, and, of course, I cannot draw such a deed in this column. If, however, you attempt to draw up an agreement, after fixing the term the partnership is to last, by far the most important point is to provide that on the death of one of the partners during the term his share shall be valued and paid out by certain instalments, and that on giving a proper bond to secure the amount the business and assets shall become the property of the survivor. Unless some arrangement of this kind is made, the business will have to be wound up and the goodwill sold, and, although the survivor has the best chance of purchasing it, surprises sometimes occur.—BARRISTER.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

FLOWER GARDEN.

Violas diseased (H. Ridout).—The Violas are attacked just at the collar by the fungus Sclerotinia. The source of infection by this parasite is the soil, and it is usually worst in soils in which there is an insufficiency of lime. When once a plant is attacked there is no probability of a cure. The plants are best burned and the place from which they are taken treated with quicklime. The fungus forms resting bodies on parts of the plant, and in the soil when there is much organic matter present, where it passes the winter.

Growing Dahlias (Hazel Grove).—It is common practice with the best growers of Dahlias to pinch or cut out the leading shoot of a plant when it is 12 inches or so in height, and to carry up later three stout main branches, setting stakes to each branch to draw them out from the centre, thus leaving to each one ample space to side-branch freely, which they do. Later, while each main branch is secured, but not too tightly, to its stake, side shoots are thinned out if found to be too dense. But when the plants are grown in garden borders to flower as profusely as they like, very little thinning out of branches is done. If good flowers are wanted, not only

should side shoots be thinned, but flower-buds also. When so treated a mulch of manure is placed round each plant, and in dry weather liberal overhead waterings are given; then Dahlias as a rule do well. Dahlia plants from cuttings should be got into 5-inch pots, well rooted and hardened ready to plant out the first week in June.

Nelumbium out of doors (J. W. Matthews).—It is quite improbable that you will be able to get the various forms of Nelumbium speciosum to thrive out of doors, even under the most favourable conditions in the British Isles. You may, however, obtain pink, red, yellow and white Water Lilies which would thrive out of doors in most parts of the country, and these would probably answer your purpose. It is impossible to say what the bulbous plant you mention is. Cannot you send us a specimen?

Herbaceous plants (M. A. Dawkins).—The Michaelmas Daisies are very free growing, and make a great mass of needless shoots each year where opportunity for so doing is afforded. In dealing with such plants, therefore, only the more vigorous outer-placed shoots should be utilised in the replanting, and by taking single bits of such as these and arranging them a few inches asunder over a large area of ground, a rare picture results at flowering time. A large number of subjects may be similarly treated.

Violas with leaves curling (A. D. Z.).—We cannot say what is the cause of the curling, unless the plants are attacked by mildew; the shoot was too withered when received. The old stems may be cut off without further delay, pruning back the plants so that only the young shoots forming a central tuft remain. The cause of the falling of the Clematis is sometimes regarded as innate weakness; at others it is probably due to fungus or injury. We think Lady Londesborough would be a better variety, and pot plants may be planted at once. The Rose Fortune's Yellow will not prove a success with you, but you should retain Mme. Berard, which should do itself credit another year. Spray the plants with sulphide of potassium, 2oz. to three gallons of water. The Wistaria would be too vigorous, we think, for the wall, and such flowering plants as Jasminum nudiflorum, Pyrus japonica, Ceanothus azureus and Crataegus Lelandii would be better suited. Rose Almée Vibert, an old yet valuable sort, is free and hardy.

TREES AND SHRUBS.

Planting Rhododendrons (Ashdown).—If your soil is moderately light and Rhododendrons thrive well in it, you need only trench the ground 1½ feet deep before planting them. You may prepare the ground now and plant in the spring. It is hardly advisable to plant in the depth of winter. The following will thrive well and can be procured cheaply. None are scarce and all will thrive in a wood. R. ponticum, catawbiense, fastuosum flore-pleno, Sappho, Lord Palmerston and the Queen. When you plant, be careful to keep the roots near the surface of the soil and give each bed a top-dressing of decayed leaves as soon as the planting is done.

Self-clinging climbers (W. Roland Peck).—Your choice of self-clinging climbers is very limited and consists of Ampelopsis Veitchii, Ampelopsis Engelmanni, Ivies in variety and Hydrangea petiolaris or H. scandens as it is sometimes called. If you have your walls wired or covered with trellis-work, you can have a much wider choice. The following is a suitable selection:—Clematis montana, Ceanothus veitchianus, Crataegus Pyranantha, Myrtus communis, Jasminum nudiflorum, Escallonia macrantha, E. langleyensis, Camellia japonica, and Roses such as Gloire de Dijon and W. Allen Richardson. It is quite probable that the evergreen, red-flowered shrub you allude to is Escallonia macrantha or E. rubra; both form excellent wall plants, and in the south-west counties they form large bushes in the open ground. If you can send a small piece in flower the correct name can be given.

How to prune Buddleia variabilis (M. J.). You may go over your Buddleia now and prune it sufficiently to make it look tidy for the winter, but do not cut the growths more than half-way back. Then in March cut the shoots back to within 6 inches of the base of the wood which has been made this year. By cutting the plant hard back each spring you will obtain strong young shoots which will produce much larger panicles of bloom than would be produced if the plant was left unpruned or only pruned slightly. As the plant is a rank

feeder, you had better give it a surface dressing of well-rotted farmyard manure at pruning time, or not later than the end of April. An application of liquid manure occasionally during summer will do good.

Treatment of the Bilberry (Mrs. E. P. Keep). It is not absolutely necessary that Vaccinium Myrtillus, the Bilberry or Whortleberry, should be grown in peat to get it to fruit. Although it thrives most satisfactorily in peaty soil, it also succeeds in loam, providing lime is not present in any serious quantity. When you first plant it, make the soil firm about the roots and put the plants in fairly close together. The great thing is, with this class of shrubs, to get them to grow dense enough to shade their own roots, for, although the branches like sun, the roots require to be well shaded without being buried deeply in the soil.

FRUIT GARDEN.

Spots on Muscat Grapes (O. H.). The stalks of the berries of the Grapes sent are dead and the berries are over-ripe. The cause of the spot is natural decay, consequent on decay being accelerated, we think, by the air of the vinery being too damp and the atmosphere too low. We do not think that the painting of the pipes or whitewashing the walls has had anything to do with bringing about the spots. If it is necessary for you to keep Muscat Grapes for any considerable time after they are ripe, a little heat in the hot-water pipes must be used to keep the air fairly dry and warm, with ventilation. The berries are a good average size.

Filling up holes in old fruit trees (Atomizer).—You cannot use anything better than cement for this purpose. The cavities must be thoroughly cleaned out, scraping and paring all decayed wood right down to the living tissue, then fill in with cement mixed stiff and bring it out flush with the trunk of the tree. The caustic winter wash referred to is made by dissolving 1lb. of commercial caustic soda (95 to 98 per cent.) in water, then 1lb. of crude potash or pearl ash in some more water. When both have been dissolved mix them well together and add three-quarters of a pound of treacle or soft soap, stir well, and add enough water to make the whole mixture up to ten gallons. This wash has a burning effect on the hands, and it is wise to wear old clothes and rubber or at least leather gloves when using it. If care is taken to get as much to windward as possible the operation is without danger.

Peach trees in greenhouse (Susan).—The border of soil for the Peach trees will require to be at least 2½ feet deep and 8 feet wide. If your Peach-growing venture is to turn out a success, you must make everything else subservient to the Peach. For instance, when growth is dormant during winter the trees must be kept perfectly cool with plenty of air circulating among them, and also when in bloom air must be admitted on all favourable occasions, no matter what other things may suffer. Bearing these points in mind, no doubt the house can be made to yield useful service in the way you wish, as well as in bearing good crops of Peaches.

ROSE GARDEN.

Rose Rosel Klemm (A. F. R.).—This is undoubtedly the name of the Rose you saw. It is a Hybrid Tea and was raised by Herr Huiner. You could possibly obtain it from Herr Peter Lambert, Rose-grower, Trier, Germany. The selection for your new Rose-bed is on the whole a good one. We should, however, omit Grüss an Teplitz, as it is too strong in growth; and Mme. Hector Leuilliot and Mme. Jules Gravereaux would need to be supported by sticks and planted in the centre of the bed, as they are of climbing habit, although they will bloom well if pruned back to about 3 feet from the ground each year. Marquise de Salisbury does not yield very beautiful buds. We would suggest Liberty or Richmond instead, and in place of Grüss an Teplitz we would recommend Joseph Hill or Paul Ledé. For the three climbers on your fence you could not do better than plant Mme. Hector Leuilliot, Mme. Jules Gravereaux and Grüss an Teplitz, replacing the two former in your bed with Lady Ashtown, Earl of Warwick, Mme. Ravary or Killarney.

